



## *Cameron County Parks & Recreation*

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July 8, 2013

Gulf Coast Ecosystem Restoration Council  
c/o U. S. Department of Commerce  
1401 Constitution Avenue, N.W.  
Room 4007  
Washington, DC 20230

**Re: Draft Initial Comprehensive Plan: Restoring the Gulf Coasts Ecosystem and Economy Submission of Comments – Cameron County, Texas**

Gentlemen:

This letter provides our comments on the above referenced document. Cameron County is the southernmost Texas Coastal County that borders the Rio Grande River and U.S.-Mexican border region. This barrier island in Cameron County, including the various communities, are located along the Texas Gulf of Mexico Coastline and includes the expansive Laguna Madre Bay System and barrier island dune complexes. This barrier island eco-system also provides some of the riches Gulf of Mexico-barrier island habitat of importance to the various threatened and endangered marine turtles, and the endangered piping plover. As the Cameron County Parks Director, I am responsible for managing large areas of the barrier island to meet the public need while also helping protect our coastal natural resources.

As a coastal political subdivision the County manages the beachfront, dune system, and our County Park System, and is also a key owner of barrier island habitat. Cameron County, as a Texas political subdivision, incorporates public comments and also resource agency comments into the development and management of its park system, beachfront maintenance, and dune protection in a manner to provide for the public need while protecting the ecological/coastal natural resources of this barrier island and coastal mainland. The RESTORE Act provides an opportunity to enhance these barrier island management programs and thereby enhance the Gulf Coasts' Eco-system and related economy.

We are providing the following comments:

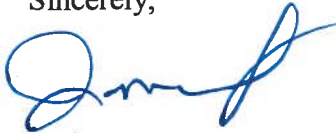
- Cameron County is in the process of further developing and expanding the scope of projects located in Cameron County and identified in Appendix A of the Draft Initial Plan and which will include community and resource agency participation to ensure projects respond to the public need.

- The Cameron County Coastal Impact Assistance Program "Projects" and also the projects recently submitted to the National Oceanic and Atmospheric Administration will serve as the baseline for continued project development to satisfy RESTORE Act goals and objectives.
- Projects located within Cameron County and submitted by other interests and listed in Appendix A while seeking public input to ensure compatible eco-system enhancement with park public access and economic development.
- Cameron County requests to be included in Advisory Committees developed as part of the Texas RESTORE Act Plan and other Council Advisory Committees to help ensure Texas political subdivision are "involved" with project development.

Cameron County has already developed a model program for involving the public and communities in a needs assessment and project development, involving not only our Park Master Plans but also project development for our Coastal Impact Assistance Program and other beachfront and dune protection programs. By involving Cameron County more directly in the RESTORE Act we have the best opportunity for helping Texas restore the gulf's eco-system and economy. We would like to further develop these projects and partnerships and request your acknowledgement to consider these projects as part of the overall Comprehension Plan.

I appreciate this opportunity to comment and can be reached at (956) 761-3700 or [jmendez@co.cameron.tx.us](mailto:jmendez@co.cameron.tx.us)

Sincerely,



Javier Mendez  
Cameron County Parks Director



June 18, 2013

VIA ELECTRONIC & US MAIL

Chair of the Gulf Coast Ecosystem Restoration Council  
United States Department of Commerce  
Attn: Teresa Christopher  
Senior Advisor for Gulf Restoration  
1401 Constitution Ave  
Washington, D.C. 20230

Dear Ms. Christopher:

Recognizing the importance of working together, not as silos of government but as partners for full restoration, Florida has taken a unique and collaborative approach in its implementation of the RESTORE Act. Last year, Florida's 23 Gulf Coast counties formally executed a partnership to establish the Gulf Consortium and develop the State Expenditure Plan (Impact Allocation Component). Through a Memorandum of Understanding, the Gulf Consortium will also be working with the State of Florida and its many agencies to ensure that as projects and programs are reviewed for the State Expenditure Plan, they meet not only local needs but also regional, state and federal objectives and requirements.

According to the Draft Initial Comprehensive Plan, the Gulf Consortium's State Expenditure Plan must be consistent with the plan's goals and objectives. To further consistency and collaboration, the Gulf Consortium is requesting an extension from the Department of Commerce to the deadline for comments to the Draft Initial Comprehensive Plan. An extension will allow the Gulf Consortium to coordinate with its 23 coastal member counties at its next public meeting scheduled for June 28, 2013, and provide its collective comments to the Gulf Ecosystem Restoration Council. July 12, 2013 is the requested extension date.

The Gulf Consortium is fully supportive of the Council and is ready to participate in the planning at all levels. Favorable consideration of this request for extension will ensure public participation and is greatly appreciated.

Sincerely,

Grover Robinson, Chairman  
Gulf Consortium

cc: Gulf Consortium Members  
Mr. Chris Holley, Executive Director, Florida Association of Counties  
Mr. Douglas Darling, Interim Manager, Gulf Consortium  
Ms. Sarah Bleakley, Interim General Counsel, Gulf Consortium



## OIL SPILL COMMISSION **ACTION**

13-031788

Bob Graham, Co-Chair  
William K. Reilly, Co-Chair  
Frances Beinecke  
Donald Boesch  
Terry D. Garcia  
Cherry A. Murray  
Fran Ulmer

July 3, 2013  
2013 JUL 16 PM 2:08  
U.S. EXECUTIVE SECRETARIAT

The Honorable Penny Pritzker  
Secretary of Commerce and  
Chair, Gulf Coast Ecosystem Restoration Council  
U.S. Department of Commerce  
1401 Constitution Ave., NW  
Washington, D.C. 20230

Dear Secretary Pritzker:

First let us congratulate you on your confirmation as Secretary of Commerce. The nation is fortunate to have someone of your ability leading this very important agency.

On behalf of all the members of the National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling, we offer the following comments on the "Draft Initial Comprehensive Plan" (the draft Plan) that the Gulf Coast Ecosystem Restoration Council issued on May 23, 2013.

Our Commission emphasized the importance of restoring the health and sustainability of the Gulf ecosystems and made the proposal that 80 percent of the Clean Water Act Funds be allocated to this effort. From the Commission's perspective, the compelling rationale for doing this was the need to reverse the long term degradation of Gulf of Mexico ecosystems. Long before the BP spill, the federal government was an active partner in the destruction of this productive resource, allowing the destruction or degradation of wetlands and other coastal environments to promote shipping, oil and gas development, agriculture, and other economic activities.

We appreciate that the Council's responsibilities for implementing the RESTORE Act are extremely complex and there are a number of questions about what Congress intended and how the legislation should be implemented. We also realize that Congress established some unrealistic deadlines for getting the process under way, particularly since no resources have been made available to support these efforts. Given these difficulties and limitations, we are very impressed by what the Council has accomplished to date, even though it has not been able to meet all of the deadlines set forth in the legislation.

Nevertheless, we do have some concerns about what we have seen so far, and more about what directions this effort may take in the future. Our concerns pertain not only to the Council's efforts but to the NRDA (Natural Resource Damage Assessment) processes, the National Fish and Wildlife Foundation program and the North American Wetlands Conservation Fund as well. In our report *Assessing Progress: Three Years Later* that we released in April, we set forth seven questions pertaining to the Gulf restoration efforts. We intend to monitor and evaluate all the restoration efforts with a continued focus on these seven questions.



**Will the different programs be coordinated and how?**

With separate organizations attempting to disburse such large sums of money for restoration, there could be substantial overlap or duplication or divergent interests that need to be reconciled. The draft Plan recognizes the need for coordination but sets forth no specific proposals for how this will be accomplished. We understand that some efforts are being made to coordinate the different efforts, but fear that, in the rush to get programs underway, this is not being given as much attention as it needs. Later in these comments we recommend that the Council, in cooperation with the other restoration efforts, establish two panels – a science advisory panel and a citizens advisory panel – to oversee these several programs. These panels could substantially help in the coordination effort.

**Will the programs have clear goals and will there be robust monitoring of how well they are achieving those goals?**

Before beginning such massive expenditures, it is essential that all parties agree on what they are trying to accomplish. It may be that the goals may differ somewhat among the programs – the RESTORE Act has a particular diversity of “eligible activities”. Nevertheless, it is important that all the programs establish clear, measurable goals, and that these goals be coherent and consistent among the programs. And for each goal there should be clear, quantitative metrics for measuring progress being made in achieving the goal, clear milestones to which this progress can be compared, and a robust monitoring program to measure and guide progress toward these goals.

The draft Plan recognizes the desirability for establishing objectives that are “more specific and measurable” than those set forth in that report. We believe that it is important that this process begin as soon as possible.

We recommend that the Council work with the other programs and with the National Academy of Sciences to define these goals and establish the milestones and monitoring programs. The Academy, which is now engaged through its newly endowed Gulf Program, has undertaken such efforts for a number of other programs and would provide a respected, independent venue for this effort.

**Will the projects selected under the programs be based on the best available science?**

Although the RESTORE Act and the draft Plan emphasize that the restoration projects should be “based on the best available science” none of the several restoration programs has established a scientific advisory committee. Whether the Council should establish such a committee is one of the questions raised in the request for comments.

Our response is an emphatic yes. Sustainable restoration in the Gulf is complicated scientifically and technically and the programs would benefit from having a standing committee of scientists to review proposed projects and ensure the rigor of their design. We recommend that the Council work with the other restoration programs to establish a scientific advisory process that would review all the restoration efforts to ensure that they are all based on the best available science.

Here again, the Council should seek advice from the National Academies about how that oversight might best be provided. And, as we said above, having an overarching review process could substantially help coordinate the various efforts and ensure they remained focused on the restoration goals.

The draft Plan is silent on coordination by the Council on the Gulf Coast Ecosystem Restoration Science Program and Centers of Excellence in Research Grants Program supported by the Gulf Coast Restoration Trust Fund. We realize that the Council lacks direct authority for these programs. However, the RESTORE Act does indicate some expectations for consultation and coordination among these elements, and the federal agencies and states represented on the Council do have some responsibility for these science programs. The Plan should be more explicit and innovative on how the two science programs will work to achieve synergies with the Council's activities, particularly with regard to how the programs can support the research, monitoring and observations to ensure the "best available science" is used in effective project design and adaptive management.

**To what degree will the RESTORE Act funds be used to restore the resilience of Gulf of Mexico ecosystems degraded over the long term as a result of national policies?**

From the Commission's perspective, this was the compelling rationale for allocating Clean Water Act fines to a Gulf Coast restoration trust fund in the first place. While the RESTORE Act allows use of these funds for economic development and infrastructure improvements as well as ecosystem restoration, it would be tragically short-sighted if the primary emphasis were not on rebuilding resilience in the natural systems that are critical to the regional economy and well-being. Furthermore, there should be diligence against using these funds for unrelated purposes such as to balance budgets or replace revenue sources for ongoing expenditures.

The RESTORE Act divides the money it makes available for restoration into three components. The first is the Direct Component in which the monies are allocated directly to the states. Although the Council has no responsibility for overseeing the expenditure of these funds, we believe that it should be fully aware of how these funds are being used so that the projects the Council supports can be coordinated with the Direct Component projects. For instance, if the Direct Component funds are spent predominately on economic development projects, the Council would have less need to consider such projects when considering proposals for the other two components.

The second component is the Council-Selected Restoration Component. We strongly believe that this component should be restricted to ecosystem restoration as is implied by your conversion of the four priorities set forth in the legislation into your four "evaluation criteria". These four criteria appropriately refer only to ecosystem related improvements, and this indeed should be the sole focus of the second component.

The Council's role regarding the third component, the Spill Impact Component, is murkier. A broader array of activities is eligible, and therein lies the risk of loss of emphasis on restoring the degraded ecosystems. The draft Plan states that projects, programs and activities included in State Expenditure Plans must be consistent with the goals and objectives of the Comprehensive Plan

although the draft Plan identifies the “objectives” as pertaining to the Council-Selected Restoration Component, not to the third component. Frankly we found the distinction between goals and objectives confusing. Several of the objectives are only minor restatements of the goals while others seem only loosely if at all related to the goals. It is also unclear how the approval process for State Expenditure plans will work. Will each plan be voted up or down as a whole or could there be objections to specific projects, programs, or activities included in a plan?

**Will there be adequate financial controls and auditing of expenditures to ensure the funds are well spent and to minimize the potential for waste or fraud?**

There have already been several cases of fraud tied to payments made pursuant to the spill. We recognize that the RESTORE Act tasks the U.S. Department of the Treasury with developing rules to ensure that funds are spent appropriately, but were dismayed to read the Inspector General’s report indicating that it is disagreements among the federal agencies that has delayed these rules. Avoiding waste, fraud, and abuse is likely to be a major challenge, but meeting this challenge will be critical to the success of the program.

We would recommend that the Council make two modifications in the draft Plan to address these issues.

The first is to require that certain information be provided by the sponsor for each project before it is considered for approval. The draft Plan provides a list of information that “may” be provided for projects in the State Impact Plans. We recommend that the same information be provided for Council approved projects, and in both cases the provision of this information be mandatory not discretionary. Under the discretionary approach in the draft Plan, the Council could be expected to approve state plans with no information about what they will cost or what they will accomplish.

The second modification we recommend is that all the projects in the second and third components should be evaluated on the basis of how well they fulfill all five of the goals set forth at the beginning of the draft Plan, not on whether they respond to any one goal. Projects which help implement several goals should result in a more effective restoration program. Including independent evaluation to inform Council decisions would improve the credibility, transparency and accountability of these decisions.

**Will the projects be selected and implemented expeditiously?**

We are concerned about the delays that we have already observed in implementing the programs. We recognize, of course, that Congress provided the Council with no resources to carry out its preparatory work, that it is impossible to prepare a meaningful “comprehensive plan” before the amount of funds available for implementing the plan has been determined, and that Louisiana and Florida appear to be the only states to so far have prepared a proposed list of projects to be included in such a plan. We also recognize that some of our other recommendations such as establishing clear goals for the program and coordinating the Council’s efforts with the other programs may cause further delays. Nevertheless, it is important that restoration efforts be started as quickly as they can. As you know, the Gulf is continuing to lose wetlands at a distressingly high

rate. It will be much easier to try to prevent additional losses than to try to bring back those that have already occurred.

**Will there be adequate opportunity for public review and comment?**

We believe that it is important for the restoration programs to adopt transparent operating procedures and be open to public comment, and commend the Council on the initiative you have demonstrated in holding public meetings throughout the gulf coast. We recommend, again in response to one of the questions raised in the request for comments, that the Council continue this effort at transparency by establishing a public advisory committee. Here again it would make sense for such a committee to provide advice on the several restoration programs. This would help in their coordination in such a way that the public could obtain a full and clear view of all the efforts and how they fit together.

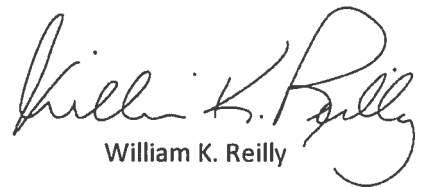
We also recommend that, once the Council has taken account of the comments submitted during the current review period and assembled all of the components the law specifies should be included in the Initial Comprehensive Plan, including the three-year project and program list and ten-year funding strategy, that you reissue the complete draft plan for public review and comment rather than finalizing it in pieces. Given the importance of the Council's activities and the amount of money that will be involved, it is more important that the initial plan be done well rather than it be issued according to arbitrary deadlines.

Several of our comments focus on the need for coordination among the programs. One excellent mechanism for accomplishing this would be for the programs to sponsor a coherent, well-crafted comprehensive planning process for the Gulf (sometimes called marine spatial planning), as the Commission recommended in its final report. This would substantially advance the development of sustainable management and coordinated restoration.

We appreciate the opportunity to comment on the Council's draft comprehensive plan and would be happy to answer any questions you might have. Again, we congratulate the Council on what it has accomplished and we stand ready to assist you in your efforts to implement an effective ecosystem restoration program in any way we can.



Senator Bob Graham



William K. Reilly

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July 8, 2013

Secretary Penny Pritzker  
Department of Commerce  
1401 Constitution Avenue, NW  
Washington, DC 20230

Dear Secretary Pritzker:

Ocean Conservancy, in partnership with many organizations across the Gulf region, continues to work to ensure that the intent of Congress—restoring the Gulf ecosystem after the Deepwater Horizon oil disaster and reversing decades of ecosystem decline—is realized. Thank you for this opportunity to provide our input on the Gulf Coast Ecosystem Restoration Council (Council) Draft Initial Comprehensive Plan (Plan). We respectfully offer the following recommendations for your consideration.

Given the additional detail that must be included for the Plan to be implemented from a practical standpoint, we request that the public be given an opportunity to comment on the final initial plan and project list that the Council will release prior to beginning project implementation. The ability of stakeholders to comment on this project list before the final plan is adopted is critical. We appreciate the time you have spent thus far soliciting feedback from residents and businesses across the Gulf Coast, and we urge you to continue to incorporate meaningful public engagement moving forward.

The Plan serves a critical role in providing a blueprint that will help guide restoration of the region and ensure a healthy and sustainable future for the Gulf. In order to fulfill this role and be fully effective, restoration decisions must adhere to clearly defined principles and criteria. Ocean Conservancy bases our comments to the Council on the following principles and makes additional recommendations, which are further described in the attached document:

- Principle: Sound management

- Recommended Actions:*

- Restoration is conducted on an ecosystem scale and is comprehensive in scope, addressing coastal and marine environments, as well as coastal communities
    - Develop project selection sideboards guided by specific, objective criteria

- Principle: Predictable and coordinated funding for restoration projects and monitoring programs

- Recommended Actions:*

- Creation of an endowment to support long-term ecosystem-scale research and monitoring
    - Project budgets include funding for monitoring and evaluation of results

- Principle: Feasible objectives for projects

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Ocean Conservancy is a nonprofit organization that educates and empowers citizens to take action on behalf of the ocean. From the Arctic to the Gulf of Mexico to the halls of Congress, Ocean Conservancy brings people together to find solutions for our water planet. Informed by science, our work guides policy and engages people in protecting the ocean and its wildlife for future generations.



*Recommended Actions:*

- Require project objectives that are specific, measurable and achievable
- Identify restoration benchmarks at the program level to continually gauge success and make changes as necessary

- Principle: Coordination among partners to maximize results

*Recommended Actions:*

- Identify additional partnership opportunities for local, state and federal stakeholders to align and coordinate efforts

- Principle: Integration of science—including monitoring and research—throughout the process

*Recommended Actions:*

- Create a science advisory board to inform program-level decision-making
- Subject all projects to independent scientific peer review
- Identify mechanisms and activities to facilitate coordination of science across various processes and funding sources (e.g., RESTORE Act, NRDA and NFWF)

- Principle: Public engagement

*Recommended Actions:*

- Provide continued opportunities for public participation in shaping the program, setting milestones and specific outcomes
- Identify opportunities for coastal residents to take part in the creation of a restoration economy
- Conduct Council meetings in public

We have organized our detailed comments by the sections of the Plan and address the specific questions the Council asks regarding next steps in the appropriate section. Our comments provide additional considerations that will help the Council members develop a final initial plan that meets the criteria above and that encourages and facilitates coordination across political boundaries to move the Gulf ecosystem forward to its rightful place as a national treasure.

Ocean Conservancy submits these comments with the aim of helping the Council develop an effective and enduring restoration strategy. Council members have a historic opportunity to advance restoration of the Gulf of Mexico, which will significantly improve the health of our coastal and marine environments as well as the health of coastal communities.

We look forward to continuing to engage with you and other Council members as the final initial plan is developed and implementation of restoration projects begin. I am happy to discuss any of these recommendations or provide additional detail to you at your convenience. I can be reached at 504-208-5814.

Again, thank you for your commitment to the Gulf Coast and for your continued efforts to engage the community in shaping the future of the Gulf.

Regards,



Bethany Kraft  
Director, Gulf Restoration Program  
Ocean Conservancy

Enclosures (online):

*Restoring the Gulf of Mexico: A Framework for Ecosystem Restoration in the Gulf of Mexico*  
<http://www.oceanconservancy.org/places/gulf-of-mexico/restoring-the-gulf-of-mexico.pdf>

*The Gulf of Mexico Ecosystem: A Coastal and Marine Atlas*  
<http://www.oceanconservancy.org/gulfatlas>

CC: Justin Ehrenwerth

Harris Sherman

Rachel Jacobson

Jo Ellen Darcy

Vice Admiral John Currier

Ken Kopocis

Mimi Drew

N. Gunter Guy, Jr.

Garret Graves

Trudy Fisher

Toby Baker

## **Ocean Conservancy Comments and Recommendations for the Draft Initial Comprehensive Plan**

### **Overarching Comments**

We commend the Council members and staff on their efforts to create a plan that is comprehensive in scope, recognizing that a fully functioning Gulf ecosystem requires addressing systemic stressors and restoration needs in both coastal and marine environments. The interlinked nature of coastal and marine resources, combined with the fact that environmental stressors are associated with both land- and ocean-based activities, underscores the importance of a holistic approach to restoration, which is essential to ensure that the Gulf of Mexico is able to provide the services essential to the region and the nation.

The Council's emphasis on using the best available science (see Appendix I for additional information on the use of best available science) and adaptive management principles to inform decision-making and restoration planning is critical to achieving long-term success. To achieve desired restoration outcomes, it is imperative that decision-makers and the public have the best possible information to guide project planning, implementation and refinement. The importance of meaningful investments in science to support an effective restoration program is one important lesson learned from past restoration processes. To this end, the Council should dedicate a portion of its operating budget to internal science capacity and consider funding high-priority science activities in its 3-year funding cycle consistent with its Comprehensive Plan or a companion science plan.

Section 1604 of the RESTORE Act, which provides 2.5% of RESTORE Act dollars to a long-term science, observation and fisheries monitoring program, is a stand-alone program that was neither intended to be the Council's supporting science arm, nor will be sufficiently funded to meet the Council and region's science needs. We believe the staff administering the 1604 program should coordinate with the Council to avoid duplication of investments, leverage resources and ensure scientific findings are communicated to the Council for integration into decision making. However, the Council should establish and rely on its own internal science capacity for day-to-day operations support.

Ocean Conservancy recommends the Council develop and implement a science plan to support the Council's goals of achieving Gulf ecosystem recovery using the best available science. It is a good practice for a restoration body like the Council to use a science plan that clearly establishes how science will be structured and used to support decision-making and priority-setting at the program level. A science plan will help the Council establish internal and external review processes, identify performance benchmarks, develop monitoring-consistent protocols for projects, evaluate progress at the project and program levels, and identify and prioritize gaps in knowledge key to funding Council science projects. The Council should ask the National Research Council (NRC) to review the initial science plan and have the NRC independently review the science plan on a periodic basis (e.g., every five years). The role and feedback provided by NRC would support the Council's commitment to a science-based approach to restoration.

The Plan recognizes that the work of the Council is related to the ongoing work of the Deepwater Horizon Natural Resource Damage Assessment (NRDA) Trustee Council and the National Fish and Wildlife Foundation (NFWF). Taken together, these three processes represent an opportunity to fund efforts to better understand the Gulf ecosystem and undertake a broader effort to restore and protect these vital natural resources. We recognize that this Plan cannot possibly address the entire suite of restoration needs in this vast ecosystem, but rather, we believe that the Plan can and should serve as a guide to help shift our focus from a localized and issue-specific perspective to one that recognizes the interdependence of communities and coastal and marine resources.

As the restoration process moves from the planning phase to the implementation phase, the rigorous application of project selection criteria will ensure that only the best and most appropriate projects are funded. It is incumbent upon the Council to develop those criteria before restoration begins in earnest.

A program of this scale must be supported by a core staff independent of any participating agencies. To that end, in addition to the selection of an Executive Director, Ocean Conservancy recommends the Council hire a Chief Scientist, who would lead development and implementation of the science-related aspects of the Council's program, such as hiring other supporting science staff, forming a scientific advisory body (see Appendix II), developing a science plan, establishing and managing a peer review process for projects, and liaising with other restoration science programs. The Chief Scientist should be independent of the Council member agencies and serve the Executive Director and Council at a senior level. The Chief Scientist would work closely with the scientific advisory body, participate in its meetings and draw on its experts to address and make recommendations on key issues.

#### Additional Administrative Recommendations:

- All participating agencies should devote adequate resources, including a full-time staff person dedicated to the Council from each agency, to enable robust participation and to function as a liaison between the independent staff and the agency.
- The Council should set forth clear policies for how it will govern itself and should have the authority to hold participating agencies accountable for project implementation.
- The federal agencies should establish a procedure to ensure that the actions and votes of the chair take into account and reflect the views of the relevant federal agencies.
- The Council should establish or adopt a conflict resolution mechanism.

Finally, we thank the Council for its efforts to engage the public regarding their vision for restoration throughout the process of developing this document. Public support for a lasting restoration initiative will ensure that decision-makers continue to have the support they need to implement restoration projects. Investing time and effort to engage citizens in meaningful ways throughout the implementation process will increase public buy-in and contribute to the long-term success of projects. As you prepare the final initial plan, please continue to identify opportunities to engage the public and ask them to invest their time, energy and talents in the effort to preserve and protect our Gulf resources.

#### **Section by section comments**

##### Section II Overview

##### **Commitment to Science-Based Decision Making**

We commend the Council's commitment to fund projects that "implement or improve: science-based adaptive management and project-level and regional ecosystem monitoring; including the coordination and interoperability of ecosystem monitoring programs..." However, the specific process and objectives needed to achieve this goal are missing from the Plan. As science and adaptive management are the core underpinnings of a successful restoration program, the Council must articulate in the final plan how science will inform restoration decision-making and measure project success over time.

The importance of adaptive management to successful restoration through the scientific activities of monitoring, modeling and research (i.e., restoration science) cannot be overstated. However, without a significant and sustained funding source for restoration science, agencies implementing restoration measures will not have the resources to measure project or program performance, and key environmental changes may go undetected, which will affect ecosystem services and impact livelihoods.

**Recommendation:** The Council should devote the necessary resources to provide or obtain the science needed to support effective restoration, as well as to promote long-term sustainable use of the Gulf ecosystem. This program should be cooperative in nature, taking advantage of existing and new efforts, including but not limited to the Gulf Coast Ecosystem Restoration Science, Observation, Monitoring and Technology Program and the Centers of Excellence, both established under the RESTORE Act, as well as any ongoing science program related to the Deepwater Horizon NRDA process. Use of the best available science is paramount. This should include environmental science, social science and the incorporation of local and tribal knowledge, regardless of official federal or state recognition.

Ocean Conservancy supports the Council's inclusion of the need for adaptive management as a key factor of restoration planning and implementation. It is important to make the distinction between sufficient funding needed to support and implement science associated with the Council's work and an endowment for funding monitoring and research on a permanent basis. A meaningful and effective science-based adaptive management framework must have sufficient funding. In addition, an endowment would provide a reliable source of funding for recommended monitoring, modeling and scientific research. Such an endowment would be one of the positive legacies resulting from the Deepwater Horizon disaster.

**Recommendation:** Include in your initial Funded Priorities List a project to endow a Gulf of Mexico ecosystem monitoring, modeling and applied research program. A significant and sustained source of funding is critical to the timely evaluation of restoration projects on a long-term basis, so that progress toward overall restoration goals is maintained. Taking the pulse of the Gulf through monitoring and research will improve predictions of ecosystem function, support adaptive management and give coastal communities more warning when ocean conditions change and related ecosystem services (e.g., fisheries) might be affected.

**Recommendation:** Develop and implement a science plan to support the Council's goals of achieving Gulf ecosystem recovery using the best available science. It is good practice for a restoration body like the Council to use a science plan that clearly establishes how science will be structured and used to support decision-making and priority setting at the program level. A science plan will help the Council establish internal and external peer review processes, identify performance benchmarks, develop monitoring-consistent protocols for projects, evaluate progress at the project and program levels, and identify and prioritize gaps in knowledge key to funding Council science projects. The Council should ask the National Research Council (NRC) to review the initial science plan and have the NRC independently review the science plan on a periodic basis (every five years). The role and feedback provided by NRC would support the Council's commitment to a science-based approach to restoration.

**Recommendation:** Ocean Conservancy recommends the Council establish a scientific advisory body (see Appendix II) to serve in an independent, scientific advisory capacity, providing program-level, ecosystem-wide perspectives. In close cooperation with the Chief Scientist, the scientific advisory body should help shape the science plan, provide input on restoration plans and programs, evaluate progress toward restoration goals, identify gaps and conflicts, and otherwise address issues important to successful restoration efforts. Ocean Conservancy recommends the scientific advisory body integrate new science into the Council process by reviewing the science plan and restoration plan before the end of the first three



years. The body would take stock of the latest science, identifying emerging issues, science gaps and research needs and recommend that the Council consider these in setting restoration priorities and projects for the next three-year cycle. The body should review projects on an annual basis as well, identifying problems and recommending adjustments. Both of these represent adaptive management in practice.

#### Commitment to a Regional Ecosystem-based Approach to Restoration

We commend the Council's commitment to an ecosystem-based approach to restoration. To accomplish this goal, the Plan must demonstrate an integrated, regional approach and include specific objectives and detailed information on how progress will be monitored to ensure that projects are contributing to an overall approach that addresses restoration of both coastal and marine environments as well as coastal communities.

**Recommendation:** The Council should enter into a formal agreement with the BP Deepwater Horizon NRDA Trustee Council, the National Fish and Wildlife Foundation, NOAA (1604 Program), North American Wetlands Conservation Fund and the National Academy of Sciences to link and coordinate restoration efforts in response to the oil disaster, as well as to the decades of degradation in the Gulf.

#### Commitment to Engagement, Inclusion and Transparency

Sustained, meaningful public participation is critical to the long-term success of the Council's goals and objectives. Meaningful public participation includes: meetings open to the public (except for occasional executive sessions when necessary), advance public notice of meetings, opportunities for public comment at meetings, and opportunities for comment on draft strategies, plans and projects. Council meetings should be rotated across the Gulf states to afford opportunities for the public to attend meetings in person. Additionally, adequate notice (a minimum of 15 business days) of meeting dates and locations must be provided to ensure meaningful public participation and input.

The Council should ensure transparency in terms of its project selection process, grant and contracting procedures and awards, and project status. Preferably, an easily accessible online data source should be created to track the Council's decisions and their progress.

#### Establishment of Advisory Committees

The Council should establish the following advisory committees: a scientific advisory committee (see Appendix II) to provide advice on the best available science and on restoration at a programmatic level; a public policy committee to address issues of existing policy impeding restoration; and a public advisory committee (see Appendix III) with regional stakeholder representation to ensure public participation and transparency in decision-making.

#### Commitment to Leveraging Resources and Partnerships

Utilizing existing partnerships and building new relationships will be essential if we are to achieve long-term success in implementing a restoration plan. In the Gulf region, there are several bodies that are important partners in the restoration effort, including: the Gulf of Mexico Alliance (GOMA), the NRDA Trustee Council,

NFWF, the Hypoxia Task Force, the National Ocean Council and the Gulf of Mexico Fishery Management Council (GMFMC).

**Recommendation:** Include specific language in the Plan that details how the Council plans to interact, coordinate and share information across the various bodies engaged in Gulf restoration efforts.

**Recommendation:** The Council should seek to leverage existing federal, state and local discretionary funding and interagency, intergovernmental or public-private partnerships to promote job and skills training opportunities to help local workers find economic opportunities in the restoration economy, particularly among underemployed and socially vulnerable populations. The Council should utilize its authority to develop appropriate preferences in procurement and grant policies that promote the hiring of local workers and collaboration between grant recipients and/or contractors with local workforce development agencies and programs to promote the training and placement of local workers, particularly those from disadvantaged, underserved and resource-constrained communities.

### Commitment to Delivering Results and Measuring Impacts

#### **Recommendations:**

- All projects should be monitored for performance and results using standard methods and as much integration and efficiency as possible.
- The status of the entire ecosystem should be monitored, synthesized and communicated to the public every 5 years, with biennial symposia reporting out on projects and program progress in coordination with other restoration programs (NFWF, NAS, NRDA, NOAA/1604, etc.)
- Monitoring results should inform restoration actions and priorities at both programmatic and project levels.

### Section III Goals

The Council's Plan recognizes five overarching goals for the Comprehensive Restoration Plan, four of which focus on environmental restoration and one on economic recovery. Ecosystem restoration projects benefit the economy and communities by generating demand for goods and services provided by local contractors or by supporting local jobs. However, economic development projects might not be compatible with environmental restoration goals, with some potentially resulting in undesirable environmental impacts. Therefore, the Council should select projects for funding with the intent of maximizing environmental benefits and avoiding or minimizing project impacts on natural resources it aims to restore. This requires the commitment of all of the Council members to think beyond political boundaries to ensure that restoration projects are coordinated to create an outcome that is larger than the sum of the individual projects.

### Section IV Council-Selected Restoration Component

#### **Objectives**

Ocean Conservancy believes the objectives outlined in the plan are the right ones. The task before the Council is to identify specific outcomes and milestones in the Plan to ensure that we are moving towards achieving one or more objectives with every project. We look forward to working with Council members in

that effort, because a restoration strategy without specific measures of success or timelines for implementation will not be a sufficient guide to drive restoration planning and implementation.

**Recommendation:** Develop a matrix to track projects from both a geographic and ecosystem perspective to ensure that each Project List contains a number of projects that meet multiple objectives from the freshwater to offshore environments and across the entire Gulf Region.

## Evaluation Criteria

As we move from the development of overarching goals to the planning and implementation of restoration projects, success—which must be measured by the health and resilience of the ecosystem—relies on the selection, implementation and evaluation of a series of integrated projects, consistent with a Gulf-wide plan and rigorous application of criteria to ensure that only the best and most appropriate projects are funded.

The Council is in a strong position to make recommendations as to how best prioritize projects that will accomplish our restoration goals. The criteria described below can be applied at the strategic level, as well as at the level of individual projects. They are based in part on those developed and tested by the *Exxon Valdez* Oil Spill Trustee Council (1994).

**Recommendation:** The Council should adopt additional selection criteria. See Appendix IV for our recommended project selection criteria.

## Submittal of Proposals to the Council

## Section V State Expenditure Plans

There is some concern the Plan does not include clear definition from the Council as to what qualifies as economic restoration, particularly when it comes to infrastructure—funding for which is limited under the RESTORE Act. Economic restoration in the context of RESTORE must consider project sustainability and environmental impact. Since RESTORE Act funds will flow through penalties for violation of an environmental law, the Council must commit to ensuring that economic restoration projects, whether funded through the Council-controlled or state impact components, will not degrade the environment nor negatively impact ecosystem restoration projects funded under the RESTORE Act, NRDA or NFWF.

We have several concerns about the Plan’s proposed process for soliciting and evaluating project proposals (p. 16), as explained in detail below.

1. There is a lack of specificity in the Plan regarding the project submission sponsorship requirement. The word “sponsorship” as used on page 16 of the Plan is not defined within the RESTORE Act. As such, we encourage the Council to clearly describe what duties and obligations project sponsorship entails, including the following clarifications:
  - The extent to which sponsorship conveys responsibility for long-term monitoring, evaluation, and stewardship of projects, including the acquisition of land or other rights and adaptive management measures;

- The extent to which sponsorship requires the same agency that sponsors a project or program to implement it;
  - If sponsorship necessitates any level of local, state or other matching requirements;
  - The extent to which sponsorship affects pass-through grant or subcontracting requirements.
2. Requiring proposed projects to be sponsored by individual Council members may restrict the implementation of large-scale, collaborative, and/or regional projects. We are concerned that requiring that projects or programs be sponsored by a single Council member may, in essence, pigeonhole potential projects/programs into single agencies' geographic regions or priorities and thereby impede the Council's ability to realize its stated commitment to "promot[ing] ecosystem-based and landscape-scale restoration without regard to geographic location within the Gulf Coast region." To address this concern, we recommend that the Council consider the following:
- Allowing for projects or programs to have one or more agency "sponsors," thereby enabling two or more Council members to work together to propose and implement large-scale, cross-boundary projects; and/or
  - Allowing for the responsibility for the implementation and/or the long-term monitoring, evaluation and stewardship of projects or programs to be delegated by the project sponsor to another appropriate entity with mutually agreed upon terms of commitment.
3. Varying requirements and standards among project sponsors may lead to inconsistent practices relating to project subcontractors, grantees, and/or project partners. To address this concern, we propose:
- Including provisions in the final plan that require any policies or requirements associated with pass-through grants and subcontracting opportunities to be consistent among all the agencies involved in the restoration of the Gulf Coast; and
  - Including provisions in the final plan which require that any policies or requirements associated with matching requirements should be applied uniformly among all implementers and projects/programs involved in the restoration of the Gulf Coast; and
  - Considering the possibility of appointing a lead agency from the Council members' affiliations to administer all restoration programs and serve as a single point of contact and central support unit throughout the project selection and implementation processes. Administration would include ensuring projects/programs are implemented according to the Final Comprehensive Plan, benchmarks and completion occur on schedule, budgets are evaluated for accountability, and general oversight is provided throughout the process.
4. There is a lack of specificity in the Plan regarding the timing of project solicitations. The current text of the Plan indicates that the Council will "periodically request proposals from its eleven state and federal members." We urge the Council to specify in its final plan the following:

- The general time frame for which the Council will solicit project and program proposals (annually, semi-annually, etc.). We recommend that project solicitations be made at least semi-annually and follow a schedule similar to established federal restoration grant programs that have been successfully proven over time, such as the NOAA Community Restoration Program or the USFWS Coastal Program.
- The timeline of review for project or program selection.
- A schedule for scientific and public input and review.

## Environmental Assessment

Given the uncertainties at this early stage of the restoration process and the generality of the PEA's impact analysis, it will be critical to perform additional NEPA analysis as restoration efforts begin to solidify. The PEA itself appropriately recognizes that additional "NEPA analysis will be performed on subsequent updates to the Plan." (p. 44). The Council should make clear that a PEA-level analysis may not be sufficient. As the Plan is updated, NEPA may require the Council to prepare a more comprehensive Programmatic Environmental Impact Statement to fully assess potential impacts.

The PEA also acknowledges that specific proposed projects will require their own NEPA analyses. The PEA rightly points out that future NEPA analyses for individual projects must "take into account site-specific conditions and identify the environmentally preferable alternative, as applicable." (p. 8). In particular, analyses of future projects must include careful evaluation of potential direct impacts, as the PEA does not even attempt to cover this category of impacts. Analysis of future projects must also include a much more detailed analysis of indirect and cumulative impacts than that which is found in the PEA. While NEPA regulations allow for subsequent analyses to "tier" to a programmatic assessment to avoid duplicative assessments, it would be inappropriate to tier to the extremely generalized analysis contained in the PEA. As more and more information about potential projects becomes available, the cursory impact analyses in this PEA will quickly become outdated, and more detailed analyses will be required.



## **Appendix I: Best Available Science in the RESTORE Act**

(27) the term ‘best available science’ means science that—(A) maximizes the quality, objectivity, and integrity of information, including statistical information; (B) uses peer-reviewed and publicly available data; and (C) clearly documents and communicates risks and uncertainties in the scientific basis for such projects;

(1) STATE ALLOCATION AND EXPENDITURES.—(E) CONDITIONS.—As a condition of receiving amounts from the Trust Fund, a Gulf Coast State, including the entities described in subparagraph (F), or a coastal political subdivision shall—(ii) certify in such form and in such manner as the Secretary of the Treasury determines necessary that the project or program for which the Gulf Coast State or coastal political subdivision is requesting amounts—(IV) in the case of a natural resource protection or restoration project, is based on the best available science;

(2) COUNCIL ESTABLISHMENT AND ALLOCATION.—(B) COUNCIL EXPENDITURES.—(i) IN GENERAL.—In accordance with this paragraph, the Council shall expend funds made available from the Trust Fund to undertake projects and programs, using the best available science, that would restore and protect the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, coastal wetlands, and economy of the Gulf Coast.

(D) COMPREHENSIVE PLAN.—(iii) RESTORATION PRIORITIES- Except for projects and programs described in subclause (ii) (IV)(bb), in selecting projects and programs to include on the 3- year list described in subclause (ii) (IV)(dd), based on the best available science, the Council shall give highest priority to projects that address 1 or more of the following criteria:...

### **Best Available Science in various statutes**

#### **MSA**

The Magnuson-Stevens Act requires that “[c]onservation and management measures shall be based upon the best scientific information available.” 16 U.S.C. § 1851(a)(2).

According to case law, “[i]t is well settled ... that the Secretary can act when the available science is incomplete or imperfect, even where concerns have been raised about the accuracy of the methods or models employed.” *General Category Scallop Fishermen v. Secretary, U.S. Dept. of Commerce*, 635 F.3d 106, 115 (3rd Cir.2011) (citing *North Carolina Fisheries Association, Inc. v. Gutierrez*, 518 F.Supp.2d 62, 85 (D.D.C. 2007)).

#### **ESA**

The Endangered Species Act requires the Secretary to make determinations as to listing species as endangered or threatened “based solely on the basis of the best scientific and commercial data available.” 16 U.S.C. § 1533(b)(1)(A).

The Court of Appeals for the D.C. Circuit has found that under the ESA’s “best data available” standard, agencies have no obligation to conduct independent studies, and are entitled to rely upon the best data available to it. In *Southwest Center for Biological Diversity v. Babbitt*, the court found it acceptable that the agency relied on existing scientific estimates of the species’ population, rather than conducting its own population count in order to determine whether a species is endangered. The requirement for best data available “merely prohibits the Secretary from disregarding available scientific evidence that is in some way better than the evidence he relies on.” *Friends of Blackwater v. Salazar*, 691 F.3d 428, 435 (D.C. Cir. 2012)

(citing *Southwest Center for Biological Diversity v. Babbitt*, 215 F.3d 58, 60–61 (D.C. Cir. 2000) (internal quotation marks and citation omitted)).

### Other

Holly Doremus, *Listing Decisions Under the Endangered Species Act: Why Better Science Isn't Always Better Policy*, 75 Wash. U. L.Q. 1029, 1033–34, FN 9 (1997) (internal citations omitted):

This phrase [best available science], or a close variant, occurs in the following statutes: the ESA, the Magnuson-Stevens Fishery Conservation and Management Act, the Marine Mammal Protection Act, the Salmon and Steelhead Conservation & Enhancement Act of 1980, the Pacific Salmon Treaty Act of 1985, the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, the Wild Bird Conservation Act of 1992, the Atlantic Coastal Fisheries Cooperative Management Act, and the National Fishing Enhancement Act of 1984.

Although they occur with particular frequency in conservation statutes, best available science requirements are not limited to that context. A provision of the Toxic Substances Control Act concerning removal of asbestos from school buildings requires consideration of the best available scientific evidence. The Safe Drinking Water Amendments of 1996 require that the Environmental Protection Agency use “the best available, peer-reviewed science.” A Clinton Administration executive order detailing general procedures for internal executive branch review of proposed regulations requires that agencies base regulatory decisions on the best reasonably obtainable scientific and other information.

### **Courts give deference to the expertise of the agency**

In deciding whether scientific information is the “best available,” substantial deference is accorded to the Agency’s assessment of the quality of what is available. See *General Category Scallop Fishermen v. Secretary, U.S. Dept. of Commerce*, 635 F.3d 106, 115 (3<sup>rd</sup> Cir. 2011); *Washington Crab Producers, Inc. v. Mosbacher*, 924 F.2d 1438, 1448–1449 (9<sup>th</sup> Cir. 1990); *C & W Fish Co., Inc. v. Fox*, 931 F.2d 1556, 1562 (D.C. Cir. 1991) (a court’s task on review is simply “to determine whether the Secretary’s conclusion that the standards have been satisfied is rational and supported by the record.”).

### **Law Review Articles on Best Available Science**

- Robert L. Glicksman, *Bridging Data Gaps Through Modeling and Evaluation of Surrogates: Use of the Best Available Science to Protect Biological Diversity Under the National Forest Management Act*, 83 Ind. L.J. 465, 472–474 (2008) (internal citations omitted):

Some of the federal environmental laws require that agencies base their decisions on the “best available science,” thereby recognizing that complete information may never be available. In such situations, the statutes charge the agencies with doing the best they can to mine the information that it is practical to obtain before discharging their statutory responsibilities. Some agencies, including the Forest Service, have interpreted statutory provisions requiring that decisions be based on science as permitting decision making based on the best available science.

...

Provisions requiring that federal environmental and natural resource management agencies base their decisions on consideration of the “best available science” are common. Perhaps the best known of these is the provision of the ESA requiring the Interior and Commerce Departments to base their decisions on whether or not to list a species as endangered or threatened “solely on the basis of the best scientific and commercial data available.” 16 U.S.C. § 1533(b)(1)(A). But Congress has used the same or similar language in a variety of other pollution control and natural resource management statutes.

Although Congress has never defined the term “best available science” in any of the environmental statutes in which that term is used, it has explicitly recognized that, in directing that agencies make

decisions on that basis, the optimal amount of scientific evidence for making the decision involved may not be available. As Holly Doremus has explained, a “best available science” mandate may serve multiple purposes. These include ensuring that an agency's decisions accurately reflect known scientific information, imposing a mandate on the agency to make its best efforts to ferret out available information, placing an imprimatur of objectivity on agency decisions to increase public trust and enhance the agency's credibility, and creating a basis for resolving judicial challenges to agency decisions. Ultimately, it is possible for the adoption of a statutory or regulatory mandate that an agency base its decisions solely on the “best available science” to make it harder for environmental agencies to weaken environmental and natural resource protection mechanisms by relying on political opposition or on factors, such as economic considerations, that tend to cut against stringent pollution control requirements or meaningful constraints on natural resource development.

- Holly Doremus, *The Purposes, Effects, and Future of the Endangered Species Act's Best Available Science Mandate*, 34 *Envtl. L.* 397, 424-426 (2004) (internal citations omitted):

In terms of improving decision making, the ESA's best available science mandate might impose at least one thing that the APA and other background requirements do not--an affirmative obligation to find data, rather than to simply evaluate what others present. A few courts have interpreted the best available science mandate to impose precisely such an obligation. For example, in *Roosevelt Campobello International Park Commission v. EPA*, the First Circuit read the ESA's best available science mandate to require real time simulation studies of navigation in an area proposed for an oil refinery and tanker terminal before a permit allowing construction could be granted. All parties agreed that such studies “would contribute a more precise appreciation of risks of collision and grounding,” which could result in an oil spill harmful to listed species. The court concluded that the simulations were feasible, could be financed by the permit applicant, and would provide information needed to assess the risks of a catastrophic oil spill. Those studies and others, the court wrote, “obviously represent as yet untapped sources of ‘best scientific and commercial data.’” Similarly, the Ninth Circuit held in *Connor v. Burford* that ESA section 7 required the agency to develop projections of the impacts of oil and gas development, even if those projections would be imprecise estimates.

Following *Roosevelt Campobello*, the district court for the District of Massachusetts required that a biological opinion await the results of ongoing, “demonstrably feasible” studies bearing directly on the impacts of a proposed action in *Conservation Law Foundation v. Watt*. Similarly, noting that a congressional report on 1978 amendments to the ESA explained that the best available science mandate requires that biological opinions prepared under section 7 be based on the best evidence “that is available or can be developed during consultation,” a federal district court concluded in *Village of False Pass v. Watt*, that the action agency has a duty “to continue acquiring information until an affirmative finding of no jeopardy can be made.”

A more recent decision, however, rejects the claim that the best available science mandate requires development of new information. In *Southwest Center for Biological Diversity v. Babbitt*, the D.C. Circuit overturned a trial court's requirement that FWS conduct a population census before deciding whether or not to list the Queen Charlotte goshawk. According to the appellate court, “The ‘best available data’ requirement makes it clear that the Secretary has no obligation to conduct independent studies.” Despite that broad language, the *Southwest Center* decision can be distinguished from the earlier ones on two bases. First, there was no claim in *Southwest Center* that the study demanded by the trial court was feasible. Second, *Roosevelt Campobello* and the decisions that follow it deal with the section 7 duty not to jeopardize the continued existence of listed species, whereas *Southwest Center* deals with the listing requirements of section 4. The two are different in important respects. Section 7 requires that the action agency “insure” that its actions are not likely to cause jeopardy. That word, which does not appear in section 4, can be read to impose a stronger duty to gather information. The purposes of the two sections support that distinction. Listing provides protection for species thought to be dwindling. If existing

information indicates that the species needs protection, it should be listed. Demands for additional information should not stand in the way of listing, which will provide an incentive for affected parties to gather and reveal information that might show that the species does not in fact need protection. Section 7, on the other hand, protects species already shown to be in critical condition from extinction. Requiring the collection and analysis of reasonably obtainable information will enhance, not undermine, conservation efforts.

- Michael J. Brennan, et al., *Square Pegs and Round Holes: Application of the "Best Scientific Data Available" Standard in the Endangered Species Act*, 16 Tul. Env'tl. L.J. 387, 402-404 (2003) (internal citations omitted):

Standards similar to the best scientific data available standard have been utilized in a number of statutes other than the ESA. Indeed, the concept of best scientific data available (with some permutations) recurs throughout the United States Code. Standards similar to the best scientific data available standard are found in several federal acts, including the Marine Mammal Protection Act, the Safe Drinking Water Act, and the Magnuson-Stevens Act.

Perhaps the most interesting example from other federal acts for our current discussion is the Safe Drinking Water Act (SDWA). Section 300g-1 of the SDWA establishes the framework for national drinking water regulations, which form a water quality baseline. A critical part of the water quality baseline is the establishment of National Primary Drinking Water Regulations and National Secondary Drinking Water Regulations. Because both sets of regulations are keyed to human health, the process of developing the regulations involves an analysis of potential health risks. While the SDWA requires that the science employed by the United States Environmental Protection Agency (EPA) is "the best available," the Act goes on to further require that the science be "peer reviewed" and "in accordance with sound and objective scientific practices." Accordingly, unlike the stand-alone best scientific data available standard in the ESA, the SDWA standard attempts to impose objective criteria on utilized science.

## **Appendix II: Establishment of a science advisory body**

Ocean Conservancy recommends the Council establish a scientific advisory body to serve in an independent, scientific advisory capacity, providing program-level, ecosystem-wide perspectives. In close cooperation with the Chief Scientist, the scientific advisory group would help shape the science plan, provide input on restoration plans and programs, evaluate progress toward restoration goals, identify gaps and conflicts, and otherwise address issues important to successful restoration efforts. See the attached Graphic, Page 4. To be effective and credible, a scientific advisory body should be representative of different scientific disciplines and have expertise from both within and beyond the Gulf region. The Council should take the necessary steps to avoid perceived or real conflicts of interest.

A key responsibility for the scientific advisory body is to obtain input on the restoration plan and groups of project proposals as they are advanced through the decision-making process. Members can look at the overall Comprehensive Restoration Plan and comment on its sufficiency from the standpoint of the Gulf ecosystem, and they can look at groups of projects to consider how they do or don't fit the Plan, serve the ecosystem in a comprehensive way. This body reviews the major scientific thrust and elements of a science plan and guides development of monitoring and performance benchmarks at the project and program level. Advisory body members can identify gaps and priorities, looking through their scientists' lenses. They also can point out needs and opportunities for coordination between and among programs.

### **a. Science advisory body development, membership and relationship to the Council**

Ocean Conservancy recommends the Council adopt the following elements when considering the scientific advisory body's development, membership and relationship to the Council:

- i. The Council should appoint 12 to 15 members to the science advisory body to provide independent, scientific advice to the Council. Members of the scientific advisory body should not be affiliated with any agency (or its bureaus) represented on the Council (this is critical for avoiding conflicts of interest and maintaining the advisory body's integrity and credibility.);
- ii. The Council should establish a third-party process by which candidate members are nominated for Council appointment. The Gulf of Mexico University Research Collaborative (GOMURC) may be able to nominate individuals from the Gulf region and the National Academy of Sciences (NAS)<sup>1</sup> a few individuals from outside the region. Some members should be selected from outside the Gulf region to provide a different perspective that could be beneficial;
- iii. Members' expertise should reflect the full range of scientific disciplines required to restore the Gulf ecosystem from the coast to the offshore environment; and
- iv. The scientific advisory body should report directly to the ED.

### **b. Composition of scientific advisory body**

Ocean Conservancy recommends the scientific advisory body have the full complement of technical expertise needed to help the Council implement its commitment to a "regional ecosystem-based approach to restoration." In general, this means having a body capable of advising the Council on issues and projects as diverse as upland, estuarine and marine resource

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<sup>1</sup> Specifically, the Restore Council might explore with Chris Elfring, Director, NAS Gulf Program, the role her program might have in helping the Council establish a scientific advisory body. [CElfring@nas.edu](mailto:CElfring@nas.edu)



restoration, while helping the Council take an ecologically integrated, landscape-level and coast to offshore approach to ensure restoration has the broadest possible impact. Specifically, the following disciplines should be represented on the body:

- I. Physical oceanography
- II. Plankton ecology (biological oceanography)
- III. Fisheries science (finfish and shellfish)
- IV. Hydrology
- V. Marsh/estuarine ecology
- VI. Ornithology
- VII. Marine mammal expert
- VIII. Conservation biology
- IX. Restoration science
- X. Resource economics
- XI. Social science

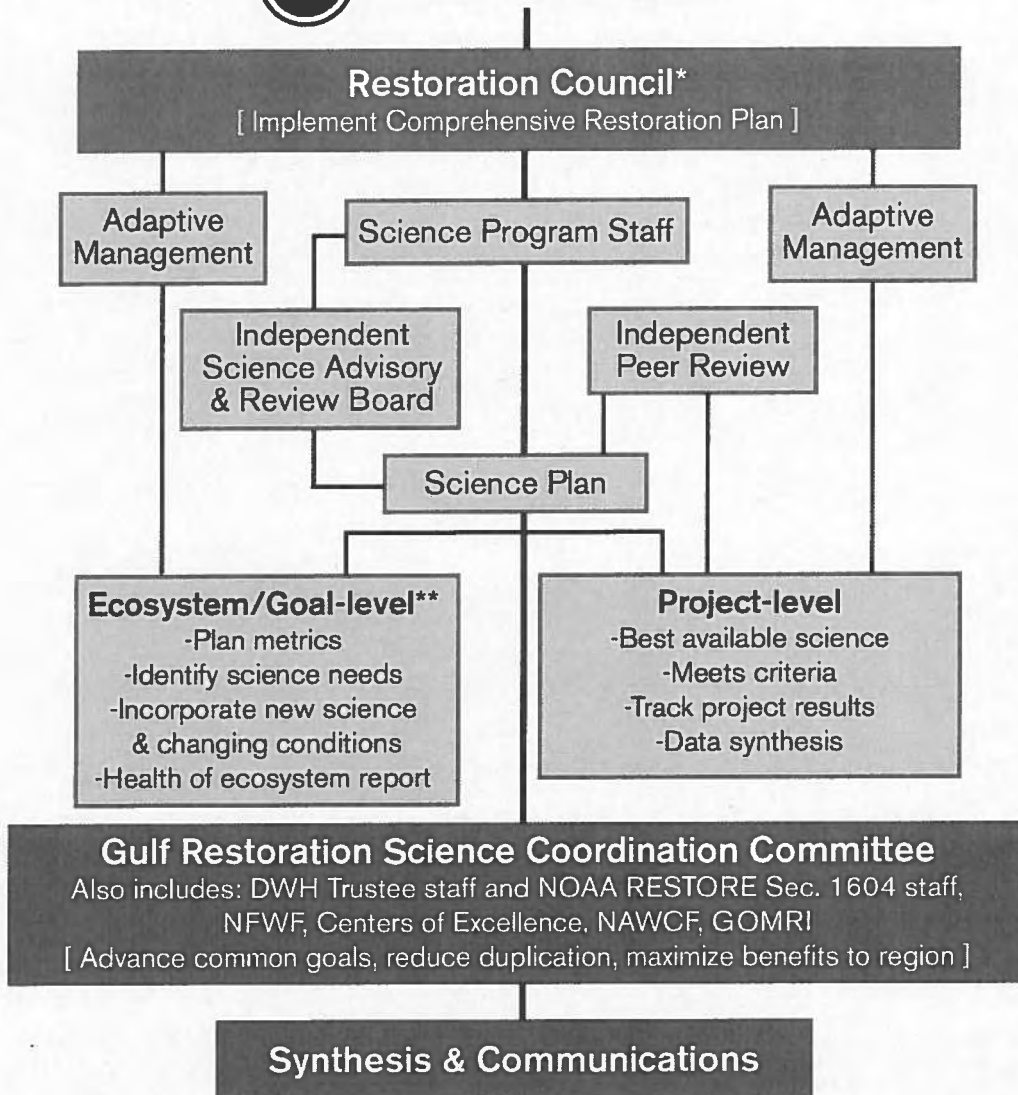
# Defining Restoration Science under the Gulf Coast Ecosystem Restoration Council

**DRAFT**

04/05/2013



**RESTORE Act**



\* Public Input on Plan and Projects

\*\* Based on overarching goals identified in the *Path Forward*



### **Appendix III: Public Advisory Committee Structure**

#### **I. Commercial Fishing (Five members: One representing each state)**

1. Representative of a regional commercial shrimping association (not processors);
2. Representative of a regional commercial oyster harvesting association (not processors);
3. Representative of minorities in the commercial fishing/processing enterprise;
4. Representative of small family owned commercial fishing/processing enterprise; and
5. Representative of a multi-cultural fisher owned cooperative.

#### **II. Conservation/Environmental Advocates (Five members: One representing each state)**

1. Representative of a nonprofit with expertise advocating for marine habitat conservation;
2. Representative of a nonprofit with expertise advocating for addressing coastal land loss or with expertise in wetlands ecology and restoration;
3. Representative of a nonprofit with expertise advocating on behalf of water quality/quantity;
4. Representative of a nonprofit with expertise advocating for land acquisition and habitat conservation; and
5. Representative of a nonprofit with expertise in climate change and coastal resiliency.

#### **III. Socially Vulnerable/Community-based Organizations/Affected Community (Five members: One representing each state)**

1. Representative of a community-based nonprofit representing an affected coastal Southeast Asian American Community;
2. Representative of a community-based nonprofit representing an affected coastal African American community;
3. Representative of a community-based nonprofit representing an affected rural coastal community;
4. Representative with expertise in environmental justice and land use; and
5. Representative with expertise in community-based workforce and economic development.

#### **IV. Recreational Water Use/Tourism/Business (Five members: One representing each state)**

1. Representative of charter boat operator association or recreational fishing;
2. Representative of coastal real estate owners;
3. Representative of coastal ecotourism operators;
4. Representative of recreational water use community, other than recreational fishing, with experience in habitat restoration; and
5. Representative of regional coastal business association.

#### **V. At Large Members (Five members: One representing each state)**

1. Tribal/Indigenous and cultural/historical/traditional communities;
2. Expert in social resiliency;
3. Scientist or Academic either chosen from the general public or representing a nongovernmental organization with expertise in marine restoration/marine biology;
4. Scientist or Academic either chosen from the general public or representing a nongovernmental organization with expertise in coastal ecology / coastal restoration; and
5. Scientist or Academic either chosen from the general public or representing a nongovernmental organization with expertise in ecosystem services valuation.

#### **Caveats:**

1. Exclude from membership any person, including but not limited to anyone who benefits from oil and gas development or any contractor involved in wetland restoration, who has a financial interest

or a regulatory conflict relative to any activities or projects upon which the CAC would provide advice.

2. Consider attorneys with knowledge in these fields to provide broader understanding of the policy or legislation behind the issues;
3. Fishing is defined as crabbers, shrimpers, trappers, oyster harvesters, fin-fishing at a minimum and there is a strong request to ensure the fishing component includes as many actual family fishers as possible as opposed to a larger contingent of processors;
4. CAC representatives should have knowledge about the importance of wetlands and the best methods to protect them.
5. Since elected officials are adequately represented elsewhere in the process, there is no reason for them to be represented on the Citizens Advisory Committee. Ensure impacted communities are well represented across all five states. In large & diverse coastal states like Florida and Texas, council members should come from areas that had the greatest ecosystem damages;
6. Ensure citizens are drawn from and connected to the community; and
7. Selected candidates should have the ability to speak for his/her specific community and state, but also have at least a general understanding and of the broader Gulf Coast issues, e.g. by being connected through networks.

## **Appendix IV: Criteria for Defining the Restoration Program and Selecting Projects under the Gulf of Mexico Comprehensive Restoration Plan**

### **Introduction**

The RESTORE Act specifies that 30 percent of the total amount made available to the Trust Fund each year shall be disbursed to the Gulf Coast Ecosystem Restoration Council (Council) to carry out the Comprehensive Restoration Plan (Plan). The Council will also have responsibility for administering another 30 percent of Trust Fund funds that are to be spent in accordance with individual state expenditure plans consistent with the Plan. The Plan will define the program and guide development of the types of projects, using the best available science, to be implemented with the Council's portion of Trust Funds, focusing on restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast.

To help the Council restore and protect the Gulf ecosystem, the RESTORE Act directs the Council to use the "best available science" in defining the restoration program and selecting and undertaking relevant projects. The RESTORE Act also states that the Council shall give preference to projects that address one or more criteria addressing key restoration priorities. Therefore, the Plan should: 1) serve as a guide for selecting preferred projects; and 2) contain science-based criteria to ensure that only the best and most appropriate projects are funded by the Council.

The ultimate success of the restoration program and the projects selected to implement it—which must be measured by the recovery and resilience of the ecosystem—rests on selection, implementation, evaluation, and adaptive management of a series of integrated projects. The Council has an unprecedented opportunity to develop a Plan that embraces a comprehensive, integrated ecosystem approach to restoration and that strives for results that are greater than the sum of the individual projects.

### **Guidance for Selecting Preferred Restoration Projects**

- The proposed project addresses at least one of the following criteria specified in the RESTORE Act aimed at restoring or protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region:
  - Projects that are projected to make the greatest contribution without regard to geographic location within the Gulf Coast region;
  - Large-scale projects and programs projected to contribute substantially to Gulf ecosystem recovery;
  - Projects contained in existing Gulf Coast State comprehensive plans; and
  - Projects that restore long-term resiliency based on impacts resulting from the Deepwater Horizon oil spill.

### **Science-based Project Selection Criteria**

The criteria listed below are based in part on the Council's duties as specified in the RESTORE Act or were adapted from other natural resource restoration plans. The criteria can be applied at the strategic and programmatic level as well as at the level of individual projects. *Threshold* criteria represent a minimum standard, and all threshold criteria must be met in order for individual projects to be considered further. *Supplemental* criteria are those intended to help decision makers further prioritize projects based on benefit and other attributes. That is, the greater the number of supplemental criteria met, the greater the contribution of projects to ecosystem recovery and to the local economies and communities.

## Threshold Criteria

### Restoration Benefit Defined

- The proposed project clearly defines the expected benefits and is consistent with and contributes to fulfilling comprehensive ecosystem restoration plans and objectives.

### Feasible

- The proposed project is appropriate under federal and state law, technically feasible and can realistically be implemented within a reasonable timeframe;

### Meets Minimum Design Standards

- Project sponsors demonstrate due diligence that includes scientific, technical, economic and social evaluation of design, design alternatives and implementation;
- Restoration activities should have clear, measurable and achievable end points;
- The proposed project incorporates a monitoring plan that will enable evaluation of its progress and ultimate success;

### Likely to Succeed

- The proposed project is likely to result in a successful outcome, measurably contribute (even if indirectly) at an appropriate scale to the recovery of a natural resource or ecosystem service, or is a small-scale pilot intended to demonstrate effectiveness before larger scale funding or implementation is considered;

### Cost Effective

- The cost to carry out and monitor the proposed project or program is reasonable relative to benefits and available funds; and

### Implementation Impacts

- *Environmental restoration projects:* Any potential harmful effects on non-target resources and services are evaluated and deemed as acceptable given the project's benefits or can be mitigated by restoring, replacing, rehabilitating or acquiring the equivalent of the same or similar resources harmed by the project;
- *Economic recovery projects:* Any possible harmful effects on natural resources are identified upfront or can be avoided or mitigated by restoring, replacing, rehabilitating or acquiring the equivalent of the same or similar resources harmed by the project;

## Supplemental Criteria

### Benefits Multiple Resources

- Priority will be given to projects or programs that benefit multiple species or resources; and
- The project contributes to an ecologically balanced (coast to offshore environment), integrated approach to restoration.

### Benefits to Economy, People and Communities

- Priority will be given to projects or programs that:

- give a preference to individuals and companies that reside in, are headquartered in, or are principally engaged in business in a Gulf Coast State;
- protect or restore livelihoods in any of the following economic sectors: tourism, fisheries, maritime, and recreation; and
- build community resiliency and benefit communities vulnerable to disasters.

#### Addresses Root Causes of Degradation

- The project addresses underlying sources of environmental stress and seeks long-term approaches and solutions to restoring natural processes rather than addressing the symptoms of environmental degradation through short-term fixes.

#### Climate change

- The project should yield long-term ecological benefits commensurate with investment and with due consideration of sea-level rise; and
- The project would enhance resilience and adaptation of coastal and marine environments and species with respect to climate change impacts;

#### Proposal Quality and Scope

- Competitive, innovative, collaborative and cost effective proposals for restoration projects or programs will be encouraged;
- Projects or programs that leverage funding from public or private sources outside the restoration process will be encouraged; and
- Projects or programs that are scalable may be funded in part, provided that the funded component stands alone in terms of its benefits, even if the rest of the project is not funded.

#### Public Support

- The project represents a restoration approach for which the public has expressed support or would likely support based on previous public comment or input; and
- The project contains a public education component such as on-site interpretation, signage or some other means to inform the public about the project's importance and results.

10-031360  
2013 JUL -5 AM 9:05

OS EXECUTIVE SECRETARIAT

John E. Manning  
*District One*

Cecil Pendergrass  
*District Two*

Larry Kiker  
*District Three*

Tammy Hall  
*District Four*

Frank Mann  
*District Five*

Doug Meurer  
*Interim  
County Manager*

Andrea Fraser  
*Interim County Attorney*

Diana M. Parker  
*County Hearing  
Examiner*

June 25, 2013

Via email: [RestoreCouncil@doc.gov](mailto:RestoreCouncil@doc.gov)

Cameron F. Kerry, Acting Secretary of Commerce, Chair  
Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

**Re: Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy - Lee County, Florida Comment Letter**

Dear Chair Kerry:

On behalf of Lee County, Florida we thank you for the opportunity to comment on the Gulf Ecosystem Restoration Council's ("Council") Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy ("Plan.") We applaud the Council for developing this draft Plan and appreciate that the Council will continue to build more detail into the Plan and its associated processes as existing uncertainties are resolved. From Lee County's perspective as a member of the Florida Gulf Consortium and an active participant at both the State and Federal levels of government in efforts to protect and restore our natural resources, we appreciate the challenge of developing a Plan of this magnitude. Additionally, the level of uncertainty surrounding the timing and amount of penalty dollars that will ultimately be available to expend on ecosystem recovery in the Gulf Coast Region has made this even more challenging. Below you will find our general comments on the current schedule for reviewing and adopting the Plan and more specific comments on certain elements of the draft Plan.

#### **General Comments**

Given the phased approach to the legal proceedings in the BP Gulf Oil Spill Case, this uncertainty is likely to remain for several more months, possibly years. The aggressive statutory deadline of July 6, 2013 for approving the Plan appears to have assumed the availability of significantly more Trust Fund dollars at this time. With the likelihood of any type of resolution of the BP Oil Spill Case at least several months away, the urgency to adopt and publish the Plan is no longer necessary. We appreciate the Council taking a step back to allow for more public input and additional time to refine the draft Plan. The Council must take advantage of this time to develop a Plan that properly evaluates and selects priority projects and integrates all of the funding sources in a manner that efficiently and effectively carries out the intent of the RESTORE Act.



## **Duties of the Council Under the RESTORE Act**

The RESTORE Act sets forth several duties that the Council shall complete and carryout in furtherance of the intent to restore the Gulf Coast Region. However, these duties are not delineated within the Plan document. These duties serve as the basis of the Plan and will frame its content and provisions. These duties must be clearly articulated within and reflected throughout the Plan.

### **Duty of Council to Identify Authorized Projects that Can Be Implemented Quickly**

Chief among the Council's duties referenced above is to identify and list, as soon as practicable, projects that have been authorized prior to the adoption of the RESTORE Act but that have not yet commenced, that can be implemented quickly to fulfill the purposes and goals of the Plan – to restore and protect the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, barrier islands, dunes, and coastal wetlands of the Gulf Coast Region. This list of "preauthorized" projects is not subject to the "best available science" standard when prioritizing the projects to be funded during the first three years of the Plan. Essentially, preauthorized projects that are "shovel ready" will receive preference over those projects that need further design or regulatory approvals and are not in a position to be immediately implemented. Under the RESTORE Act, this preference must be considered prior to evaluating the projects under the Plan's criteria in order to effectuate one of the Council's primary duties to quickly implement restoration projects.

The draft Plan, Appendix "A," contains a list of these "authorized but not yet commenced projects and programs" (collectively "projects"). The background information preceding this list describes such projects as those that "have been either federally authorized by Congress or approved under a State program, plan or action." However, the actual project list gives no indication whether the named project is actually authorized or approved by either Congress or a Gulf Coast Region State. Given the preference described above that these types of projects will receive, it is important that each project on this list be fully vetted to verify that it has been appropriately authorized or approved and is shovel ready. This vetting process may filter out several projects that are neither authorized by Congress nor authorized by a valid state program, plan or action. We suggest that the preauthorized list include, at minimum, the following: a specific indication whether such projects are authorized or approved, citation of the specific federal or state authorization or approval, and the status of the projects in terms of their readiness for construction.

For instance, in Florida, there are several types of statutory programs or plans that develop, implement and fund restoration projects. In Lee County, these include the Comprehensive Everglades Restoration Plan ("CERP"), Caloosahatchee River Watershed Protection Plan, Caloosahatchee River Minimum Flows and Levels Recovery Strategy and the Caloosahatchee Estuary Basin Management Action Plan. These State of Florida plans or programs contain several projects that have been approved by the State of Florida and would further the purpose and goals of the Plan. They include, among others, the Caloosahatchee River (C-43) West Basin Storage Reservoir Project (the "C-43 Project"), Spanish Creek/Four Corners Initiative, C-43 Water Quality Treatment and Testing Facility Project (BOMA Property) and the Caloosahatchee Area Lakes Restoration (Lake Hicpochee) Project.

While certain components of the Plan, like the 10 Year Funding Strategy, will remain incomplete until there is more certainty regarding the dollars available to the Trust Fund, the Funded Priorities list can and should be developed using the criteria set forth in the RESTORE Act. Given that one of the Council's primary duties is to implement projects quickly upon adoption of the Plan, the Council should immediately rank at the top of its list those projects that are shovel ready. Additionally, using the best available science, the Council should also begin evaluating and ranking other projects that can be implemented within the initial three year time period of the Funded Priorities List. This approach will put

the Council in position to quickly implement projects, if and when, the BP Oil Spill Case is resolved. Furthermore, the Council may then reevaluate and adjust the rankings and sequencing of the projects once the penalty dollars are allocated to the Trust Fund. In light of the Council's duty to quickly implement projects and requirements to update the Funded Priorities List on an annual basis, this approach fits with the intent of the RESTORE Act.

### **Priority Criteria**

The Council seeks public comment on all aspects of the Plan, but is particularly interested in the Priority Criteria that are proposed to be used to evaluate ecosystem projects for at least the first three years of the Plan. Notwithstanding the comments above regarding the preference to quickly implementing preauthorized projects, we believe the Priority Criteria as laid out in the Plan are effective principles to help guide the project selection process and should not be refined so much as to limit the ability of the Council to fund worthwhile projects. In particular, we approve of several specifics with regard to the Priority Criteria. They include:

- 1) The first Priority Criteria describes projects that "are projected to make the greatest contribution to restoring and protecting... the Gulf, without regard to geographic location within the... region." We wholeheartedly agree. Not all worthwhile Gulf restoration projects can or should be located in areas perceived to have received the most damaging impacts from the Deepwater Horizon spill. Furthermore, the RESTORE Act clearly emphasizes the importance of lands, water and watersheds adjacent to the Gulf of Mexico and the value of restoring these. In fact, the Council has incorporated this emphasis into the Plan as its primary commitment. This commitment is aimed at focusing the Council's efforts on a "Regional Ecosystem-based Approach to Restoration." As stated in the Plan,

"upland, estuarine, and marine habitats are intrinsically connected, and will promote ecosystem-based and landscape-scale restoration without regard to geographic location within the Gulf Coast region. A regional approach to restoration more effectively leverages the resources of the Gulf Coast and promotes holistic Gulf Coast recovery. The Council recognizes that regional ecosystem restoration activities can also have multiple human and environmental benefits, such as restoring habitats that sustainably support diverse fish and wildlife populations, while also providing an array of commercial, recreational, and other human uses of the ecosystem."

Here, in the Southwest Florida Gulf Coast Region, there is not a better positioned or more uniquely situated project to carry out this type of restoration approach than the C-43 Project mentioned above. The C-43 Project is located within the Caloosahatchee River watershed. The Caloosahatchee River and Estuary ("CRE") is at the head of a vast estuarine and marine ecosystem that includes aquatic preserves along with numerous other federal, state, and local parks and recreation areas.

The C-43 Project contributes to the restoration of ecosystem function in the CRE by reducing the number and severity of events where harmful amounts of freshwater from basin runoff and Lake Okeechobee releases are discharged into the CRE system. Also, the C-43 Project helps to maintain a desirable minimum flow of fresh water to the CRE during dry periods. These two primary functions help to moderate unnatural changes in salinity that are detrimental to the CRE's estuarine communities. In particular, the C-43 Project will optimize the health of the oyster

communities and vegetative communities that serve as valuable habitat (nursery, escape cover, feeding grounds) for a variety of freshwater, marine and estuarine-dependent fish and wildlife, including several endangered species. Most economically important saltwater fishes and crustaceans spawn offshore in the Gulf and then use estuarine areas, like the CRE, for nursery habitat. In particular, the mangrove shoreline, large expanses of sea grass meadows, oyster bars, and sand bars of the CRE serve as a nursery ground for many commercial and recreational fish species in the Gulf, including drum, grouper, sea trout, snook, tarpon, flounder, blue and stone crab, pompano, mullet and shrimp. In sum, the C-43 Project will directly contribute to the Gulf Coast Region recovery by assisting in restoring this valuable habitat and supports sustainable and diverse fish and wildlife populations, while also providing an array of commercial, recreational, and other human uses of the ecosystem.

- 2) The second Priority Criteria discusses the value of “large-scale projects.” Again, we agree with the Council’s approach. We believe the Council should focus its resources on large-scale, immediately implementable projects that will deliver vast improvements to the Gulf ecosystem. Relying solely on thinly spread funding on hundreds of small-scale restoration projects throughout the Gulf Coast Region will not allow for the transformative restoration that the RESTORE Act intends to make possible. These smaller-scale restoration projects are more appropriate for the Direct Component funding. The C-43 Project, given its size and scope, may provide more benefit to the Gulf Coast Region than any other project in Florida by improving the timing, quantity and quality of freshwater flows to the CRE and reducing the negative impacts to the Gulf from the unfortunately polluted Lake Okeechobee. The area of benefit is expansive and recognized as significant at a local, regional, state and national level. The benefited area includes several of Florida’s aquatic preserves (Matlacha Pass Aquatic Preserve, Pine Island Sound Aquatic Preserve and Estero Bay Aquatic Preserve) and the Charlotte Harbor National Estuary. San Carlos Bay and the Caloosahatchee River are both designated as Federal Manatee Refuges. In addition, there are five national wildlife refuges in the benefited area, including: J.N. Ding Darling National Wildlife Refuge, Caloosahatchee National Wildlife Refuge, Matlacha Pass National Wildlife Refuge, Pine Island National Wildlife Refuge and Island Bay National Wildlife Refuge. There has also been significant public recognition of the importance of this area through continued support of this project by the local public and all levels of government. Simply stated, the potential scale of positive impact from the C-43 Project to federal and state natural and cultural resources is enormous.
- 3) The third Priority Criteria mentions that projects should be “contained in existing Gulf Coast State comprehensive plans.” As mentioned above, the C-43 Project is included in CERP: Florida’s *comprehensive plan* for Everglades restoration. CERP is a multi-decade, monumental Federal-State partnership between the Army Corps of Engineers (“Corps”) and the South Florida Water Management District (“SFWMD”). Everglades restoration is predicated on the ability to store more water. Ultimately, more water must be made available to impaired ecosystems at the right times and in the right quantities. The C-43 Project is a foundational project of CERP. It will not only contribute to the improvement of the health of the CRE and the Gulf Coast Region, but it will also provide additional storage for the Everglades ecosystem. As all projects considered in CERP, the C-43 Project has gone through and completed rigorous scientific analysis and planning, including an Integrated Project Implementation Report and Environmental Impacts Statement. The C-43 Project has support from all agencies involved in its review including the Corps, the SFWMD, the Florida Department of Environmental Protection, the Department of Interior and the Environmental Protection Agency. Additionally, as mentioned above, the C-43 Project is the keystone project within several other State of Florida approved restoration plans. In sum, the multiple reviews and approvals of the C-43 Project by these federal and state plans, clearly underscore the fact that it needs no further analysis. Without

question, the science is there and it is accepted. It is designed and ready for construction and can be implemented quickly.

- 4) Finally, as indicated above, there is a large omission of the statutory preference for preauthorized and shovel ready projects within the Plan's Proposal and Selection Process. Again, one of the primary duties of the Council is to identify and quickly implement those projects that have been previously approved at the federal or state level. These preauthorized and shovel ready projects, like the C-43 Project, have already completed intensive planning efforts, rigorous engineering and design and lengthy environmental permitting reviews. The Council's Plan must specifically include within its Proposal and Selection process adequate provisions that ensure preauthorized projects will receive preference based upon the project's ability to be quickly implemented. While we understand the Plan may fund projects for many years, potentially even up to a decade or more, we feel strongly that the Council must clearly delineate and carry out in the Plan the mandated duty of the RESTORE Act - to implement a number of significantly impactful projects in the short-term in order to help improve the health of the ecosystem in the Gulf Coast Region as quickly as possible.

### **Conclusion**

Again, we appreciate the Council allowing for more public input and additional time to ensure that the adopted Plan clearly reflects the duties of the Council as well as a proper project evaluation and selection process as required under the RESTORE Act. A Plan that properly reflects these requirements will prioritize, integrate and expend all of the RESTORE Act money sources in a manner that efficiently and effectively carries out the intent of the RESTORE Act. We look forward to working with the Council over the next several years as you begin to implement the Plan.

Sincerely,



Tammara "Tammy" Hall  
Lee County Commissioner  
District 4

13-031225



## OFFICE OF THE PARISH PRESIDENT

TERREBONNE PARISH CONSOLIDATED GOVERNMENT  
P. O. Box 6097  
HOUMA, LOUISIANA 70361-6097



MICHEL H. CLAUDET  
PARISH PRESIDENT

(985) 873-6401  
FAX: (985) 873-6409  
E-MAIL: mhclaudet@tpcg.org

May 31, 2013

Dr. Rebecca Blank, Chair  
Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

2013 JUN 17 PM 2:55  
EXECUTIVE SECRETARIAT

RE: Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy

Dr. Blank:

I would first like to congratulate your council and employees on the composition of your Draft Initial Comprehensive Plan related to the RESTORE Act. As president of Terrebonne Parish, Louisiana, I fully understand the devastation the Deepwater Horizon explosion and subsequent oil spill had on the environment and the economy of the Gulf States. Here in Terrebonne we have experienced direct impacts of oiled water, marsh, and barrier island habitats, as well as impacts to our commercial and recreational fishing industries, to our tourism industry, and to our oil and gas production and service industries. We have eagerly anticipated the arrival of financial assistance to help alleviate the burdens felt by these impacts, and look forward to the opportunities that will be afforded to us by the RESTORE Act and by the work of the Gulf Coast Ecosystem Restoration Council. With this in mind, I would like to offer a few comments on the Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy on behalf of Terrebonne Parish Consolidated Government.

The goals of the plan are well-structured and, overall, address the broad range of impacts we have experienced as a result of this disaster. The first goal to Restore and Conserve Habitat is absolutely essential to the survival of the region, and Terrebonne Parish, in particular. According to recent data compiled by the United States Geological Survey for its 2011 publication *Land Area Change in Coastal Louisiana from 1932 to 2010*, Terrebonne Parish has lost an average of approximately one football field of wetlands every five hours between 1932 and 2010. The impacts related to the 2010 oil spill to our already fragile environment have exacerbated this problem, and we must utilize the opportunity afforded by the RESTORE Act and this plan to address this emergency.

The second goal to Restore Water Quality, along with the third to Replenish and Protect Living Coastal and Marine Resources will work together to revitalize our aquatic organism populations, which were impacted by not only the spill, itself, but also by the subsequent

recovery and clean-up efforts. As our entire parish lies within the Louisiana Coastal Zone, it is not surprising that a considerable percentage of our population benefits from the commercial and/or recreational fishing opportunities afforded to us by our geography. Terrebonne Parish is home to many seafood processors and distributors, as well as several charter fishing businesses and lodging accommodations near vibrant fishing areas. We appreciate the ability to help these businesses restore productivity to pre-spill levels, and beyond, through the RESTORE Act and related funding opportunities.

The fourth goal of the plan to Enhance Community Resilience is a high priority shared locally by Terrebonne Parish Consolidated Government and its residents. Terrebonne Parish has been extremely active in assisting its residents in elevating their homes to safe and resilient elevations, in order to combat the devastation experienced in tropical storm and hurricane events. The Terrebonne Levee and Conservation District has worked tirelessly to provide an added level of defense for our residents by constructing interim levee and flood control features along the proposed Morganza-to-the-Gulf Hurricane Protection System alignment, which is anticipated to be authorized by Congress in the very near future. While the RESTORE Act does not seem to have the authority to approve structural projects, such as levees, there are many opportunities within Terrebonne Parish where our locally-led non-structural efforts can be bolstered by funds from Clean Water Act fines, which would work together with our other flood and storm surge protection measures.

Finally, the fifth goal to Restore and Revitalize the Gulf Economy is crucial to all areas of the Gulf harmed by the oil spill, and Terrebonne Parish is no exception. Between the spill, itself, and the drilling moratorium that followed, our local economy experienced a crippling blow that is still being felt by many of our local businesses and industries. As we are home to the Port of Terrebonne, a large offshore oil & gas service port located on the Houma Navigation Canal and the Gulf Intracoastal Waterway, the lack of activity in the gulf initiated a trickle-down effect that dealt a blow to all areas of our economy, from shipyards to grocery stores. Many of our local companies were driven to paycheck cuts and/or lay-offs. The ability to implement workforce development and job creation programs on the state level would be very beneficial to our local economies and would help our businesses get back to their pre-spill levels of productivity.

On the matter of State Expenditure Plans, we appreciate the wording chosen in the draft plan that outlines general categories of eligible uses, without being overly limiting in individual project types. The Louisiana 2012 Comprehensive Master Plan for a Sustainable Coast was very aggressive in promoting regional restoration and preservation projects that are projected to help Louisiana gain, rather than lose land at target year 50, but from a local perspective, several high priority areas and projects were left out of this plan, leaving Terrebonne Parish habitats and residents at great risk. We appreciate that the Council's plan is currently worded to allow local political subdivisions like Terrebonne Parish to utilize any direct allocations we are to receive in such a way that these high priority, vulnerable areas can be revitalized, restored, and preserved in a way that meets the needs of the local communities and the goals of the Council's plan. I strongly encourage the Council to keep this level of freedom for local funding recipients to be able to implement important projects that would otherwise be left out of state-wide plans.

I thank you for the opportunity to comment on this draft plan, and look forward to working with the Council in any way we can to restore our community back to its pre-spill conditions. Should you need any further information, or would like to contact our office for any reason, please direct correspondence and questions to Nicholas Matherne, Director of Coastal Restoration and Preservation for Terrebonne Parish Consolidated Government at (985) 873-6889 or by email at [npmatherne@tpcg.org](mailto:npmatherne@tpcg.org).

Sincerely,

A handwritten signature in black ink, consisting of a series of connected loops and a long horizontal stroke at the end.

Michel H. Claudet  
Parish President



13-031303



**PARISH OF JEFFERSON**  
**OFFICE OF THE PRESIDENT**

**JOHN F. YOUNG, JR.**  
PARISH PRESIDENT

June 12, 2013

Dr. Rebecca Blank, Chair  
Gulf Coast Ecosystem Restoration Council  
c/o US Department of Commerce  
1401 Constitution Avenue, NW  
Room 4077  
Washington, DC 20230

2013 JUN 21 AM 9:40  
OS EXECUTIVE SECRETARIAT

**RE Gulf Coast Ecosystem Restoration Council's Draft Initial Comprehensive Plan:  
*Restoring the Gulf Coast's Ecosystem and Economy***

Dear Dr. Blank:

As President of Jefferson Parish, I thank the Gulf Coast Ecosystem Restoration Council for hosting the public meeting for the Draft Initial Comprehensive Plan in Louisiana, and specifically in the Barataria Basin. The Barataria Basin is home to many coastal communities including the Town of Jean Lafitte, Crown Point, Barataria and the Town of Grand Isle. It is this watershed that received the most "heavily oiled" coastline in the Gulf Coast Region due to the Deepwater Horizon Oil Spill. It is also in this Basin that oil attributed to the Deepwater Spill continues to be removed from Jefferson Parish marshes and beaches. Further, with the threat of hurricanes and tropical storms upon us, I fear there is more oil to be discovered and revealed.

Jefferson Parish is a coastal parish located in the center of the Barataria Basin. It stretches from the south shore of Lake Pontchartrain to the Gulf of Mexico and incorporates many unique cultural fishing communities with rich heritages, including the City of Westwego, the Town of Jean Lafitte, and the Town of Grand Isle, which is the only inhabited barrier island in the State of Louisiana. It is with these coastal communities in mind that I express my gratitude and pleasure that you have included "Enhancing Community Resilience" as one of the 5 Goals of your Initial Comprehensive Plan. Jefferson Parish urges that the Lafitte Area Ring Levee Project be one of the projects included in your plan to achieve enhanced community resilience. This project is included in the State's Comprehensive Master Plan, and it is critical to providing the Lafitte community sustainability, through the ability to adapt to both short and long-term changes impacting the area, particularly flood risks associated with sea-level rise and environmental stressors.

Upon review of your "Draft" Initial Comprehensive Plan, I fully support the 5 Goals and 7 Objectives; however, Jefferson Parish requests that "coastal communities' resiliency projects" be added to the list of project types in the Evaluation Criteria. We also urge you to include a set of requirements that would push projects and programs toward expedited implementation. Louisiana loses land the approximate



size of a football field every fifty (50) minutes, so there is no time to spare. Accordingly, bringing projects and programs not only to fruition, but also to completion is of the utmost importance.

With that said, on behalf of Jefferson Parish, I respectfully request that the following projects be included in your Final Project List:

(1) Projects that follow the Multiple Lines of Defense strategies adopted by the State of Louisiana in its Comprehensive Master Plan, including:

- (a) Completion of the restoration of our Barrier Islands (already underway) from the mouth of the Mississippi River to the Caminada Headlands;
- (b) Completion of Phase II of the Barataria Basin Long Distance Sediment Pipeline Project, which has already been initiated with Phase I going to bid just yesterday; and
- (c) The Lake Pontchartrain Barrier Project.

(2) Shoreline Protection Projects, including:

- (a) The Bayside Segmented Breakwater at Grand Isle which is a NRDA Early Restoration Candidate, (but not currently funded or approved); and
- (b) The Alligator Bend Shoreline Protection Project in the Pontchartrain Basin along the East New Orleans Landbridge, submitted to you by the NRCS.

(3) Coastal Community Resiliency Projects, including:

- (a) The Lafitte Area Ring Levee Project; and
- (b) The FiFi Island Forested Wetland Restoration Project.

(4) Marsh Creation and Sediment Delivery Projects, including:

- (a) The Barataria Landbridge Marsh Creation Project, submitted to you by the US Army Corps of Engineers; and
- (b) The Bayou Dupont Sediment Delivery Project - a Marsh Creation Project, submitted to you by the EPA.

In closing, I thank you again for giving us the opportunity to voice our support for the projects and programs that our coastal communities, marshes and shorelines require, however I would be remiss in not stating that Deepwater Horizon Spill oil continues to wash up daily on our marshes and beaches, and I hope that this Council will require BP and the US Coast Guard to complete the removal and clean-up of remaining oil, buried tar mats, and tar balls that litter our coastline.

It has been 3 years and 53 days since the BP's Deepwater Horizon Oil Spill, and it is time that BP delivers on their promise to "make it right".

Sincerely,

John F. Young, Jr.  
Jefferson Parish President



**GALVESTON**  
PARK BOARD OF TRUSTEES

601 Tremont – P. O. Box 1080  
Galveston Island, Texas 77550  
(Phone) 409-797-5000  
(Toll Free) 1-888-GAL-ISLE  
(Fax) 409-762-8911  
[www.galvestonparkboard.org](http://www.galvestonparkboard.org)

June 25, 2013

Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

Via email: [RestoreCouncil@doc.gov](mailto:RestoreCouncil@doc.gov)

To Whom It May Concern:

On behalf of the Galveston Island Park Board of Trustees, we appreciate the opportunity to comment on the Gulf Ecosystem Restoration Council's (Council) Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy (Plan). The Park Board of Trustees is a governmental entity created by a special act of the Texas Legislature in 1962 for the purpose of directing all tourism efforts for Galveston Island. The Park Board oversees several island beach parks and the Galveston Island Beach Patrol. The Park Board also oversees the Galveston Island Convention and Visitors Bureau which promotes Galveston as a premier destination. The organization is funded solely by Hotel Occupancy Tax revenue and beach user fees.

Galveston Island is the second most popular tourist destination in Texas. More than 6 million people visit Galveston Island annually, generating an estimated \$880 million economic impact to the Island's tourism industry. 32 percent of all jobs on the Island are sustained by tourism and state and local tourism tax receipts offset the average household tax burden by nearly \$3,000 per household.

The coastal tourism industry in Texas, particularly along the upper coast, was significantly impacted by the Deepwater Horizon spill and the negative tourism publicity it caused. With that in mind, we are closely engaged in the implementation of the RESTORE Act and look forward to working with you to improve the health of the Gulf, the Texas Gulf shoreline, our community, and our tourism industry, all of which are intrinsically tied together.

In general, we are pleased with the Plan and understand that it is in many ways a living document, one that will be updated as events warrant. However, one of the Plan's Goals is to "Restore and Revitalize the Gulf Economy" by enhancing "the sustainability and resiliency of the Gulf economy." However, this goal is not fully realized later in the Plan's Objectives. While we understand that Gulf water quality is important to the health of our tourism economy, we also believe economic restoration could be more clearly stated as a Plan Objective.

Later, the third Priority Criteria mentions that projects should be "contained in existing Gulf Coast State comprehensive plans." In Texas, the General Land Office (GLO) has developed a number of coastal-related plans over the years, including the Coastwide Erosion Response Plan that was most recently updated in 2009 and the Texas Coast: Shoring Up Our Future, issued in April 2013. The GLO also administers the annual Coastal Erosion Planning and Response Act Program to fund restoration projects. However, the agency tapped to manage Texas's engagement with the RESTORE Act, the

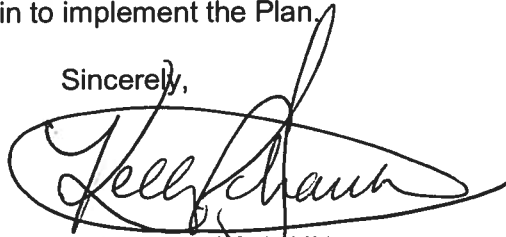
Texas Commission on Environmental Quality (TCEQ), is relatively new to coastal issues. We are sure TCEQ will be ready to implement successful RESTORE Act projects when the funding arrives by working with the GLO and others, but Texas must not be penalized for any perceived lack of a comprehensive, statewide coastal restoration plan. We also urge the Council to look to the Galveston District of the Corps of Engineers. The Corps has spent more than a decade evaluating storm surge, shoreline protection and enhancement, and other ecosystem restoration projects for the upper Texas Coast via the Sabine Pass to Galveston Bay feasibility study. We hope the Council will make use of the Corps' vast expertise on how to protect and restore our coastline.

We are also intrigued by the Plan Objective to "Promote Community Resilience." After our experience with Hurricane Ike in 2009, any effort to potentially allow for the funding of projects to protect our communities is welcome. Much of the discussion in this section revolves around non-structural solutions to responding to increased flood risks. The Council should clarify as to whether beach nourishment projects to increase beach width and dune height that protect against storm surge, which was the significant damaging factor of Hurricane Ike, will be allowable under the Plan. In order to be effective, we urge the Council not to limit our options in developing a project or planning proposal that could mitigate risk to our community, even one that may be deemed structural.

Finally, in reviewing the detail of the "Preliminary Authorized But Not Yet Commenced Projects and Programs List," we suggest that more consideration be directed at the Gulf shoreline, and improving its sustainability through the development of wider beaches and higher dunes. The Texas Gulf shoreline provides habitat and foraging areas to many endangered species, yet over 60 percent of the Texas coastline is eroding, placing this valuable habitat at considerable risk. With the Gulf shoreline ecosystem at risk, all coastal areas landward of the coast are at equal risk. Coastal restoration projects that increase beach width and dune height have proven to be of long term economic benefit to every level of government and should be prioritized by the Council.

Thank you again for the opportunity to comment on the Plan. We look forward to working with the Council over the next several years as you begin to implement the Plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Kelly De Schaun", is written over a large, loopy oval shape.

KELLY DE SCHAUN  
Executive Director  
Galveston Park Board of Trustees

CC: Texas Commission on Environmental Quality



June 21, 2013

Dear Gulf Coast Ecosystem Restoration Council:

On behalf of the Board of Directors of the Mississippi Hospitality & Restaurant Association, Gulf Coast Chapter (MHRA GCC), thank you for the opportunity to comment on the Draft Initial Comprehensive Plan for expenditure of RESTORE Act funds. We continue to follow the multiple restoration processes for our members and would like to offer these comments.

MHRA GCC represents over six hundred eating and drinking places which employ over ten thousand (10,000) people in the three coast counties, as well as hundreds of Associate Members who employ thousands more. Restaurants are a driving force in Mississippi's economy. Their sales generate tremendous tax revenues. They provide jobs and build careers for thousands of Mississippians. Restaurants also provide healthful options for their guests, give back to their communities and work to reduce their impact on the environment. In 2013, Mississippi's restaurants are projected to register \$3.4 billion in sales.

"The fortunes of restaurants are closely tied to travel and tourism. Roughly one in four industry sales dollars come from travel and tourism. The National Restaurant Association's research shows that the fullservice-restaurant segment derives roughly one-quarter of annual sales from travelers and tourists." [www.Restaurant.org](http://www.Restaurant.org)

Tourism is inextricably linked to the region's natural resources and that was made abundantly clear in April 2010. The negative impressions of the environment created by the spill caused visitors to avoid all Gulf States and the entire Mississippi Gulf Coast tourism economy plummeted making it clear that a healthy Gulf is critical to our industry.

Therefore, we believe it's paramount that environmental restoration efforts be equally focused in both the coastal environment and the often overlooked offshore marine environment. The deep waters of the Gulf attract fishermen, divers and boaters and also provide a large portion of the Fresh from the Gulf seafood that tourists love to enjoy.

It is of great concern how you will implement restoration. We recommend that the Council develop and include specific information about how the objectives will be achieved using the best available science which will make the Gulf a healthier place that will attract tourists from around the world, enhancing business opportunities for our members. An additional concern is the need for clearly defined project ranking criteria. The RESTORE Act has the potential to fund



11975 Seaway Road, Suite A240, Gulfport, MS 39503

• (228) 324-0032 • [www.msra.org](http://www.msra.org) • email:  
[coastchapter@msra.org](mailto:coastchapter@msra.org) •  
[www.ChefsOfTheCoast.org](http://www.ChefsOfTheCoast.org)



billions of dollars in projects but the Gulf is a vast body of water and efforts should be made to ensure that only projects with multiple benefits rise to the top. The priority criteria established in the RESTORE Act are not sufficient to ensure that the best projects are implemented. We recommend the inclusion of additional, science-and-community- based criteria to ensure that projects have multiple benefits and contribute to an overall vision for a healthy Gulf.

Thank you for your efforts to help make right the tragedy and impacts of the Deepwater Horizon incident. We look forward to the additional details to be released on this plan. Those who live, work, and play, on the Mississippi Gulf Coast are relying on your efforts to improve the Gulf's overall health. Their livelihood and their businesses depend on it.

Sincerely,

A handwritten signature in black ink, appearing to read "Calvin Coleman".

Calvin Coleman  
President, MHRA Gulf Coast Chapter



11975 Seaway Road, Suite A240, Gulfport, MS 39503

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[coastchapter@msra.org](mailto:coastchapter@msra.org) •  
[www.ChefsOfTheCoast.org](http://www.ChefsOfTheCoast.org)

July 3, 2013

Gulf Coast Ecosystem Restoration Council,  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

**Re: Comments on Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy**

The Gulf Coast Bird Restoration Initiative is a collaborative project of bird conservation groups working throughout the Gulf coast. The initiative has been developed specifically to support states in their efforts to remedy harm caused to birds by the *Deepwater Horizon* oil spill in its violation of the Migratory Bird Treaty Act, and to reduce the risk of future harm to these birds and their habitats. Our coalition for The Gulf Coast Bird Restoration Initiative includes the following partners who are well-established in bird conservation Gulf-wide: American Bird Conservancy (ABC), Gulf Coast Bird Observatory (GCBO), Barataria-Terrebonne National Estuary Program, Ducks Unlimited (Texas), Houston Audubon, International Bird Rescue, and Plaquemines Parish (Louisiana). Birds were the most visible and numerous major wildlife victims of the *Deepwater Horizon* Oil Spill and our projects focus on these species and their habitats.

While we understand that many "authorized, but not yet commenced" projects were submitted prior to the passage of the RESTORE Act and have been disclosed in Appendix A, we would like to request that the Council add the following list of projects our coalition of partners recently submitted to National Fish and Wildlife Foundation (NFWF). We understand that this does not guarantee funding of these projects. We also understand that the Council will work closely with state trustees, NFWF, and other pertinent stakeholders to avoid project duplication. Partners have pledged that this will be the only submission of these project proposals to NFWF; however, we would like to bring these projects to the attention of the Council as well.

Phase I of the initiative includes a suite of "shovel ready" projects that are ready for immediate implementation, and that aim to begin delivering immediate beneficial results. ***The total budget for these projects is \$151.5 million.***

**1. Restoring Pelican (Cat) Island, LA - Request: \$8.8M. Matching Funds: \$3M.**

This project could be replicated at additional sites with an investment of c. \$10M per island.

**Project Location and History:** Barataria Bay, Louisiana - Pelican Island (frequently also called Cat Island\*) is often considered the epicenter of the spill in terms of bird impacts. The mangroves were destroyed by the oil, and lacking their stabilizing effect, the island has since almost completely washed away (see before and after photos below right). Note that nearby island restoration has been highly successful; however, even withstanding Hurricane Katrina.

5. **Osprey Nesting Platforms, Fourchon to Grand Isle, LA - Request: \$110,000.**  
Matching Funds: \$7,000 and in-kind.  
**Project Location and History:**— Nesting platforms would be constructed and installed at numerous locations around the Fourchon and Grand Isle areas. These magnificent birds of prey are commonly found along the coast with a concentration in this area. Many nesting attempts on power poles fail. This would provide for a superior nesting platform/opportunity for these birds.  
**Expected 5 year Outcomes:** Construction and deployment of numerous safe, mammalian predator free, nesting platforms. Improved nesting success of this raptor.  
**Species benefitting:** Osprey.
6. **Marsh Protection along Gulf Intracoastal Waterway (GIWW), Texas - Request \$50M for 50 miles of breakwaters.**  
**Project Location and History:** Coastal marsh habitats along the GIWW are disappearing or degrading due to shoreline erosion and saltwater intrusion. Vessel and wind generated waves cause up to 10 feet of annual erosion on some shores. Additionally, saltwater deposition and intrusion from the GIWW into adjacent fresh and intermediate emergent marsh creates open water habitats with reduced value for birds and fish. A successful and widely accepted conservation practice to address these concerns is constructing breakwaters.  
**Expected 5 year Outcomes:** Construction of breakwaters for the highest priority marsh areas, mitigation of shoreline erosion, protection of existing coastal marsh functions and values, and restoration of marsh.  
**Species benefitting:** Clapper Rail, Willet, Mottled Duck, Black Rail, American Bittern, Snowy Egret
7. **Coastal Marsh Infrastructure Repair and Replacement, entire Gulf Coast - Request \$5M.**  
**Project Location and History:** Coastal marsh habitats managed by public and private landowners are vital to conserving resident and migratory bird populations along the Gulf of Mexico. Significant efforts are made by landowners to create desirable and beneficial habitat conditions. These management techniques require the use of infrastructure such as levees, pumps, water control structures, salinity barriers, and weirs to keep water on the landscape. Much of this infrastructure is inefficient, deteriorated, or out-dated. Replacement of these components using modern, corrosion resistant materials can increase marsh productivity and improve landowner dependability.  
**Expected 5 year Outcomes:** Coordinate and repair infrastructure for 7,500 acres of coastal marsh.  
**Species benefitting:** Clapper Rail, Willet, Mottled Duck, Black Rail, American Bittern, Snowy Egret
8. **Creating Safe Nesting Beaches, entire Gulf Coast - Request: \$10M. Matching Funds: \$0.25M.**  
**Project Location and History:** Multiple Sites Gulf-wide (more than 20 locations, expanding on existing successful NFWF grants). This project will create safe nesting habitat for skimmers, terns, and other shorebirds at existing nesting locations through on-



much of the property is protected and managed for coastal wildlife, many critical properties remain vulnerable to development.

**Expected 5 year Outcomes:** Protection and restoration of key inholdings of a globally important shorebird sanctuary through acquisition.

**Species benefitting:** Shorebirds and other coastal species e.g. Piping Plover, Snowy Plover, Wilson's Plover, Red Knot, Sanderling, Willet, Marbled Godwit, Reddish Egret, American Oystercatcher, Gull-billed Tern.

**13. Spill Response Preparedness - Request \$1.1M.**

**Project Location and History:** The effects of the spill were exacerbated by a lack of sturdy boom, and lack of knowledge of the impacts of cleanup operations on beach-nesting birds.

**Expected 5 year Outcomes:** Increased awareness among industry and first responders on how to minimize spill impacts on birds. Project will include a best practices manual, video and other information resources, and a series of training workshops and community outreach programs.

**Species benefitting:** All coastal birds.

**14. Bird Tourism and Conservation Outreach, Gulf-wide - Request: \$12M.**

**Project Location and History:** This project will help to stimulate local economic development and jobs based around bird tourism. It will include a series of short films, support for local bird festivals, and outreach and help to promote the existing birding trails in the region with improved infrastructure at key sites.

**Expected 5 year Outcomes:** Increased awareness of birds and bird conservation Gulf-wide, and increased visitation from birders from across the U.S. to the region.

**Species benefitting:** Migratory birds including shorebirds and songbirds.

**15. Tracking Restoration Success, Gulf-wide - Request: \$10.15M. Matching \$0.25M.**

**Project Location and History:** We propose to develop a Gulf-wide baseline for bird restoration projects developed with funding related to the Deepwater Horizon spill, and to track success to report to donors and the bird community as a whole on how populations are rebounding.

**Expected 5 year Outcomes:** A baseline status report with regular monitoring and reporting on restoration projects, leading to a full report on successes over a five-year time frame. This project includes the construction of a training center on the upper Texas coast, and a specific component studying barrier islands in Louisiana with a focus on the endangered Piping Plover.

**Species benefitting:** All beach and island colonial nesting birds.

**16. Best Practices for Bird Restoration, Gulf-wide - Request: \$4.8M.**

**Project Location and History:** Many restoration projects have been carried out across the gulf region in the past that have benefitted birds, and lessons from these can help inform projects planned under the plea agreement (and other future projects). This project will conduct a thorough analysis of current projects and determine and document best practices for each restoration technique and conduct outreach to stakeholders.



ABC and its partners stress the importance of implementing collaborative large-scale restoration projects that will have the most benefits to the Gulf Coast's unique habitats and natural resources and it is clear the Council shares this vision. We have an interest in the implementation of Gulf-wide avian-based projects that focus on protecting and growing affected populations; creating new and conserving existing habitat for wintering, migrating, and breeding birds; and educating and engaging the public in learning more about how birds are an integral part of a healthy, well-functioning ecosystem.

Thank you for the opportunity to comment on this matter. We look forward to working together with you as this process moves forward. Please feel free to contact either of our organizations if we can be of additional assistance.

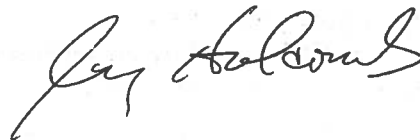
Sincerely,



Darin Schroeder  
Vice President  
American Bird Conservancy  
1731 Connecticut Avenue, NW  
Third Floor  
Washington, DC 20009  
(202) 234-7181



Cecilia M. Riley  
Executive Director  
Gulf Coast Bird Observatory  
103 Hwy 332 West  
Lake Jackson, TX 77566  
(979) 480-0999



Jay Holcomb  
Director  
International Bird Rescue  
P.O. Box 2171  
Long Beach, CA 90801  
(707) 207-0380



Helen Drummond  
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440 Wilchester Blvd.  
Houston, TX 77079  
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P.J. Hahn  
Director of Coastal Zone Management  
Plaquemines Parish  
8056 Hwy 23, Suite 307  
Belle Chasse, LA 70037  
(504) 297-5629

2013 JUN 28 AM 10: 58

O-S EXECUTIVE SECRETARIAT



JEFF R. BRANICK

County Judge

Jefferson County Courthouse  
P.O. Box 4025  
Beaumont, TX 77704

Beaumont (409) 835-8466  
Pt. Arthur (409) 727-2191 Ext. 8466  
Facsimile (409) 839-2311

Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Ave. N.W. Rm. 4077  
Washington, DC 20230

In Re: Public comment Submission of Jefferson County, Texas

Sirs,

I very much appreciate having had the opportunity to address you during the public comment meeting in Galveston, Texas on June 10, 2013. Because there was inadequate time there to describe our proposed project and needs, I am submitting the attached items which will more clearly describe our desperate need for funds you may consider granting our County. We are prayerful that your Council will provide the \$60 million dollars we require to reconstruct our beach dune system for our 20-mile section of our coast.

We are still desperately trying to recover from the devastating effects of Hurricane Ike and, as you are aware, we did have oil from the BP disaster wash up on our beaches. We are currently the home of over 100,000 acres of wildlife refuge and critical marsh area that provide critical support for our ecosystem.

Our entire beach dune system was destroyed which is allowing the continued encroachment of salt water into the marsh area which is causing it to degrade and in a short time we expect that all vegetation will be destroyed in thousands of acres unless immediate action is taken to protect this area. This area is critical economically because it serves to support our shrimp, crab and fish industries, it provides habitat for many types of birds and game fowl, fur bearing animals and it serves as an important buffer for storm surges. We were overrun by a storm surge of between 19-20 feet that extended several miles into the county destroying or contaminating hundreds of homes and businesses and causing over a billion dollars of damage to our local refineries and chemical plants. This storm surge also contaminated thousands of acres of farm land and killed thousands of livestock. Our supporting documents will prove that each mile of marsh will reduce storm surge by one foot and, without this protective barrier, we will face similar damage with a much more nominal surge.

This marsh is the home of the McFaddin National Wildlife Refuge, Sea Rim State Park and the J.D. Murphree Wildlife Management Area which comprise many thousands of

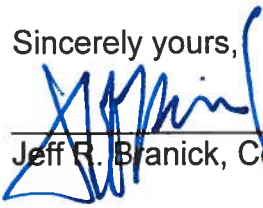
acres, which if not protected, will be converted to a relatively unproductive and unprotected open water.. These marsh areas also provide protection for the Gulf Intercoastal Waterway which is vital to our national economy. The portion of that waterway between Port Arthur and Galveston, Texas is the busiest section of that waterway in the country. If this marsh is allowed to sink and die, it will cost the federal government hundreds of millions of dollars to erect adequate barrier to protect that waterway.

I would also point out that our county is home to the largest refinery in the world (Motiva) and Valero has their largest refinery here. Additionally our industrial complex is a base for various essential chemical facilities that provide a plethora of products utilized in manufacturing and endless list of goods necessary national economy and military complex and includes one of the largest LNG facilities in the world. Our refineries produce 25% of the nation's gasoline, 50% of the military aviation fuel and a large percentage of commercial aviation fuel. Our port complex in Beaumont, Texas is the largest military off-load port in the nation and it also relies on our beach dune protection. I would also point out that the Big Hill Federal Oil Reserve was directly in the path of this surge and protecting this site is of critical importance to the security of our nation.

You will note that our submission is indexed for your ease and these documents will provide detailed documentation to support our request. Should you have any questions or desire any other information, please do not hesitate to contact my office.

I deeply appreciate your anticipated assistance.

Sincerely yours,



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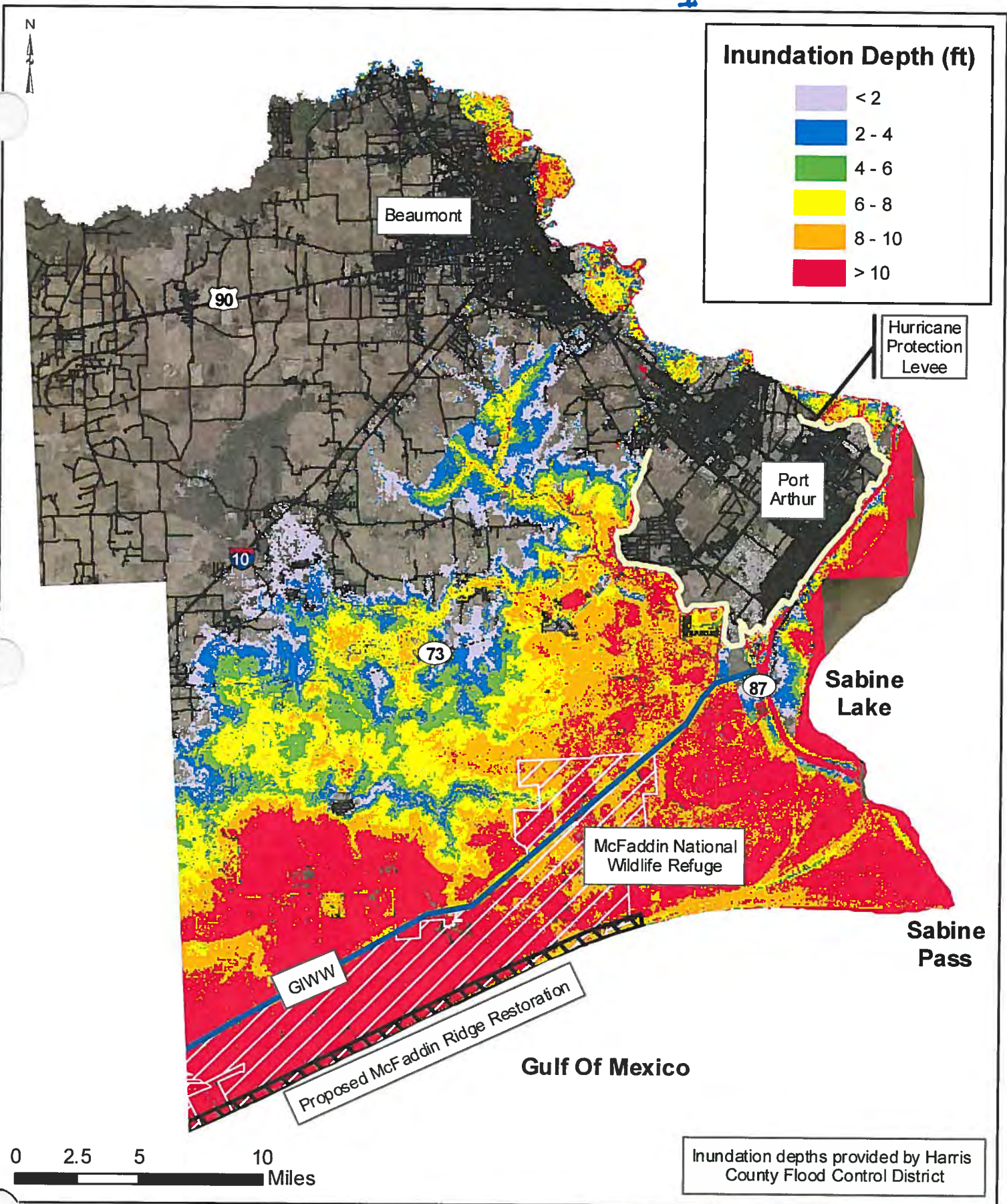
Jeff R. Branick, County Judge

# 1 Hurricane Ike Inundation depths

## 1a. Aerial Photos of pre and post Ike vegetation growth

6 / 14 / 2013





**Exhibit 1**  
**HURRICANE IKE STORM SURGE**  
**INUNDATION DEPTHS**  
**2008 AERIAL**

Jefferson County  
 FEMA Hazard Mitigation Grant  
 Preliminary Eligibility Determination  
 Jefferson County, Texas

Date: October 14, 2009

LE Project No. 079A-1002



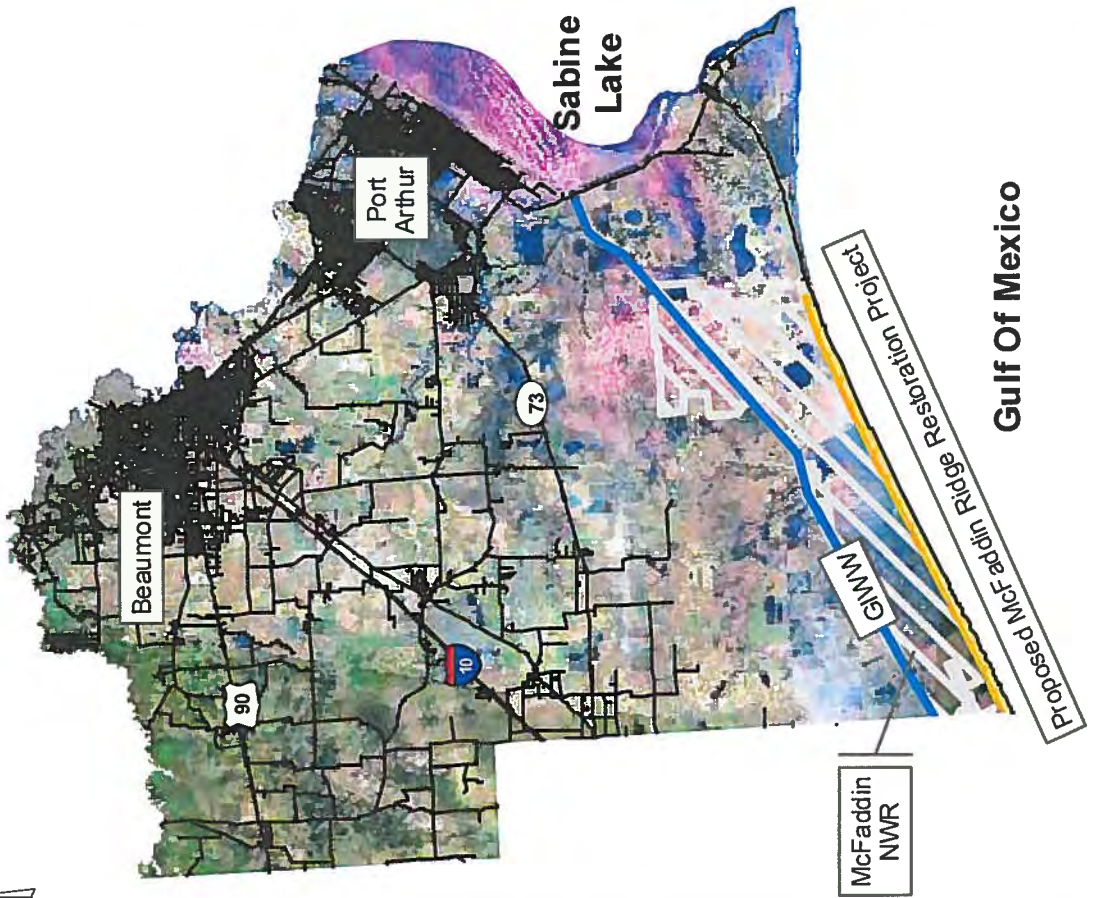
550 Fannin Street, Ste. 510  
 Beaumont, Texas 77701  
 Tel: (409) 813-1862  
 Fax: (409) 813-1916





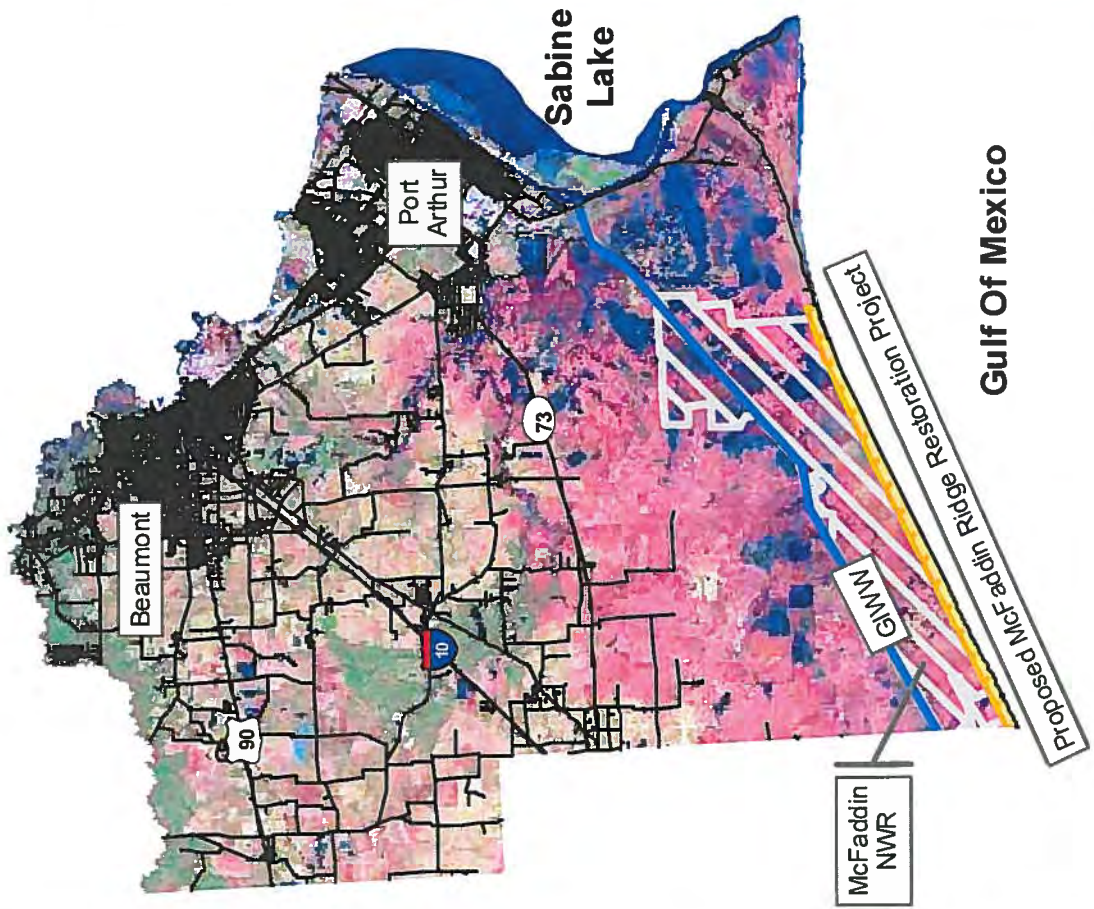
Pre-IKE

February 2008



Post-IKE

February 2009



0 4 8 16 Miles

Images Courtesy of USGS, Landsat 5  
Red - Band 7, Green - Band 4, Blue - Band 2

1a

**Exhibit 2**  
**VEGETATION GROWTH PATTERNS**  
**PRE AND POST HURRICANE IKE**

Jefferson County  
FEMA Hazard Mitigation Grant  
Preliminary Eligibility Determination  
Jefferson County, Texas

Date: October 14, 2008  
LE Project No. 079A-1002



550 Fannin Street, Ste. 510  
Beaumont, Texas 77701  
Tel. (409) 813-1862  
Fax (409) 813-1916





1 Inch = 200 feet  
Imagery Date: 2002  
Vegetation: Before  
TPWD\_DU Levee



1 Inch = 200 feet  
Imagery Date: 2009  
Vegetation: After  
TPWD\_DU Levee

## 2. Salt Bayou Watershed Restoration Plan

6 / 14 / 2013





TEXAS GULF COAST  
915 Front Street  
Richmond, TX 77469  
(832) 595-0663 Fax (281) 239-8302  
[www.ducks.org/sro](http://www.ducks.org/sro)

June 24, 2013

Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Ave. N.W. Rm. 4077  
Washington, DC 20230

In Re: Public comment Submission of Jefferson County, Texas

Sirs,

This letter is written in support of efforts by Jefferson County to seek funding for restoring the Salt Bayou Marsh Complex in Jefferson County. The recently published "Salt Bayou Watershed Restoration Plan", representing the collaborative effort of a consortium of state, federal, and NGO groups, identifies the needs and strategies for restoring the Salt Bayou system. Re-construction of the beach/dune ridge, one of the strategies identified in the plan, will prevent saline Gulf Waters from intruding into this brackish marsh system. The influx of saline Gulf Water into the brackish marsh system results in the loss of saline intolerant vegetation, leading to soil erosion and conversion to an open water system that is less productive for fish, waterbirds and an array of wetland dependent wildlife, that contribute to the economy via recreational and commercial harvest of fish and wildlife resources. Storm surge abatement afforded by a healthy robust vegetated marsh can provide storm surge protection to the many petrochemical facilities in the Sabine Pass / Port Arthur area, thus helping to protect that vital economy and preventing environmental contamination that might occur if the facilities were flooded with storm surge.

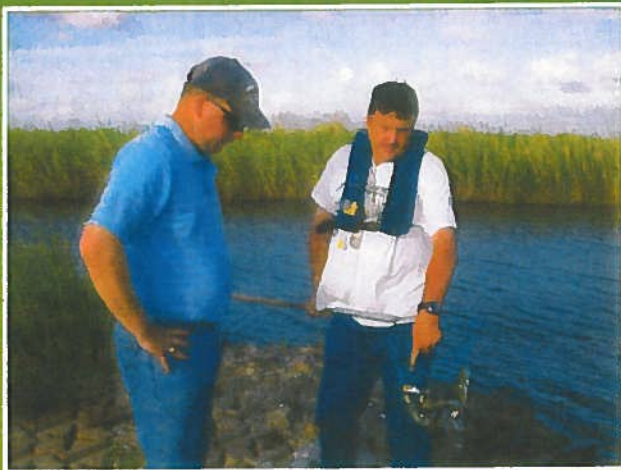
We encourage the Council to support efforts by Jefferson County and others to implement wetland restoration strategies of the Salt Bayou Watershed Restoration Plan. Implementation of these strategies will ensure the long-term viability of a 130,000 acre marsh complex that is of regional and national economic and biologic significance.

Sincerely yours,

M. Todd Merendino, Ph.D.  
Manager of Conservation Programs  
Ducks Unlimited – TX/OK/NM

# SALT BAYOU WATERSHED RESTORATION PLAN

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Prepared by:  
Salt Bayou Marsh Workgroup

May 2013





## SALT BAYOU MARSH WORKGROUP MEMBERS

Ducks Unlimited

Jefferson County, Texas:

Engineering Department

Jefferson County Drainage District No. 6

National Oceanic and Atmospheric Administration (NOAA):

National Marine Fisheries Service:

Habitat Conservation Division

Restoration Center

Texas General Land Office:

Coastal Erosion Planning and Response Act (CEPRA) Program

Natural Resource Damage Assessment Program

Texas Parks and Wildlife Department (TPWD):

Wildlife Division

Coastal Fisheries Division

Environmental Assessment, Response, and Restoration Program

Texas Water Development Board:

Coastal Water Resources Group

U.S. Army Corps of Engineers (Galveston District)

U.S. Fish and Wildlife Service (USFWS):

McFaddin National Wildlife Refuge

Coastal Program

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## INTRODUCTION

The purpose of this document is to present a brief summary describing the importance of the ecological functions of the Salt Bayou system, to discuss natural and man-made causes of decline, and to propose a plan of action that would maintain ecological functions and values or reverse their decline. This document was developed in collaboration with a technical stakeholder group that has met yearly since 2000. This document reflects the Salt Bayou Workgroup's understanding and knowledge of this ecosystem. It also represents a consensus of the workgroup members on a strategy or plan forward to collectively improve conditions in the Salt Bayou system.

The Salt Bayou ecosystem contains the largest contiguous estuarine marsh complex in Texas (Figure 1). This ecosystem is approximately 139,000 acres in size within a Chenier Plain landscape that includes freshwater to estuarine marsh, coastal prairie grasslands, tidal flats, creeks and basins and associated aquatic vegetation (Figures 2 and 3). This diversity of communities creates an extremely productive complex for an array of fish and wildlife resources. This system provides a wide variety of benefits for people of the area including outdoor recreation and storm protection. The Salt Bayou system is widely recognized for its fishing, hunting, and wildlife viewing opportunities. The area is extremely important for commercial and recreational fisheries productivity and for wintering and migratory bird habitat. The area is one of the largest extant wetland areas in the entire state and sustains a very high level of productivity.



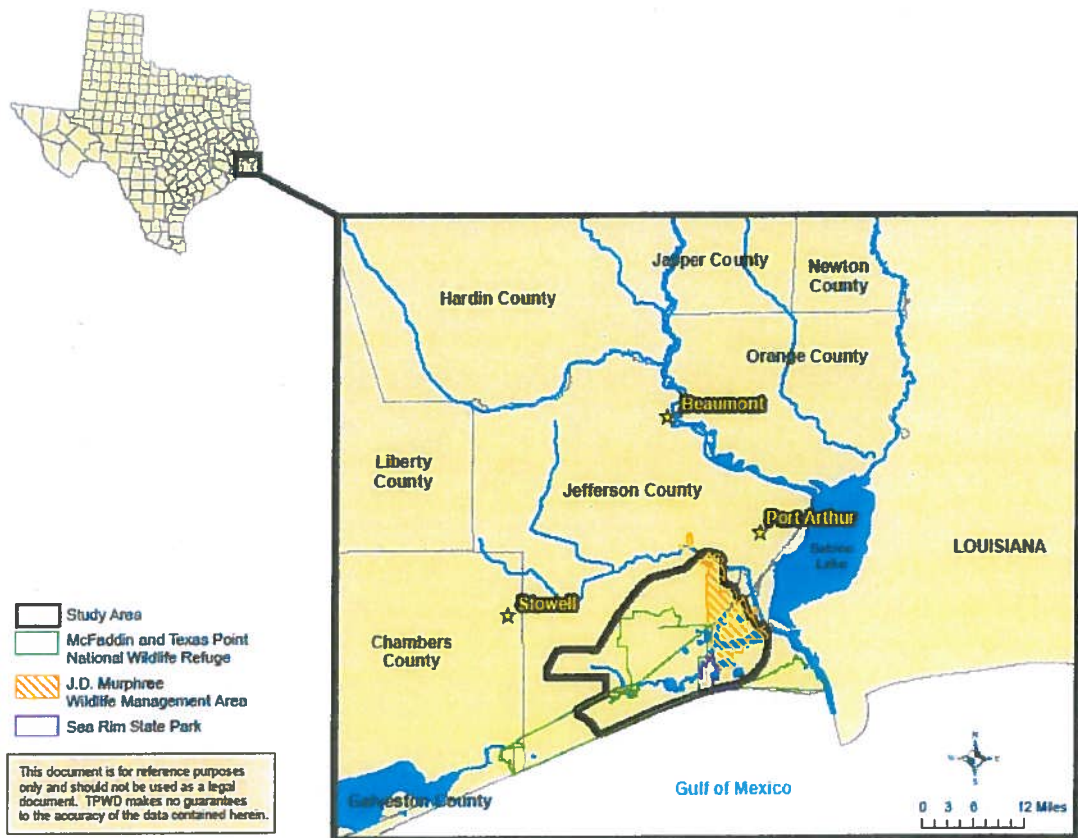


Figure 1. Location and extent of Salt Bayou Marsh study area.

## Salt Bayou System Land Use

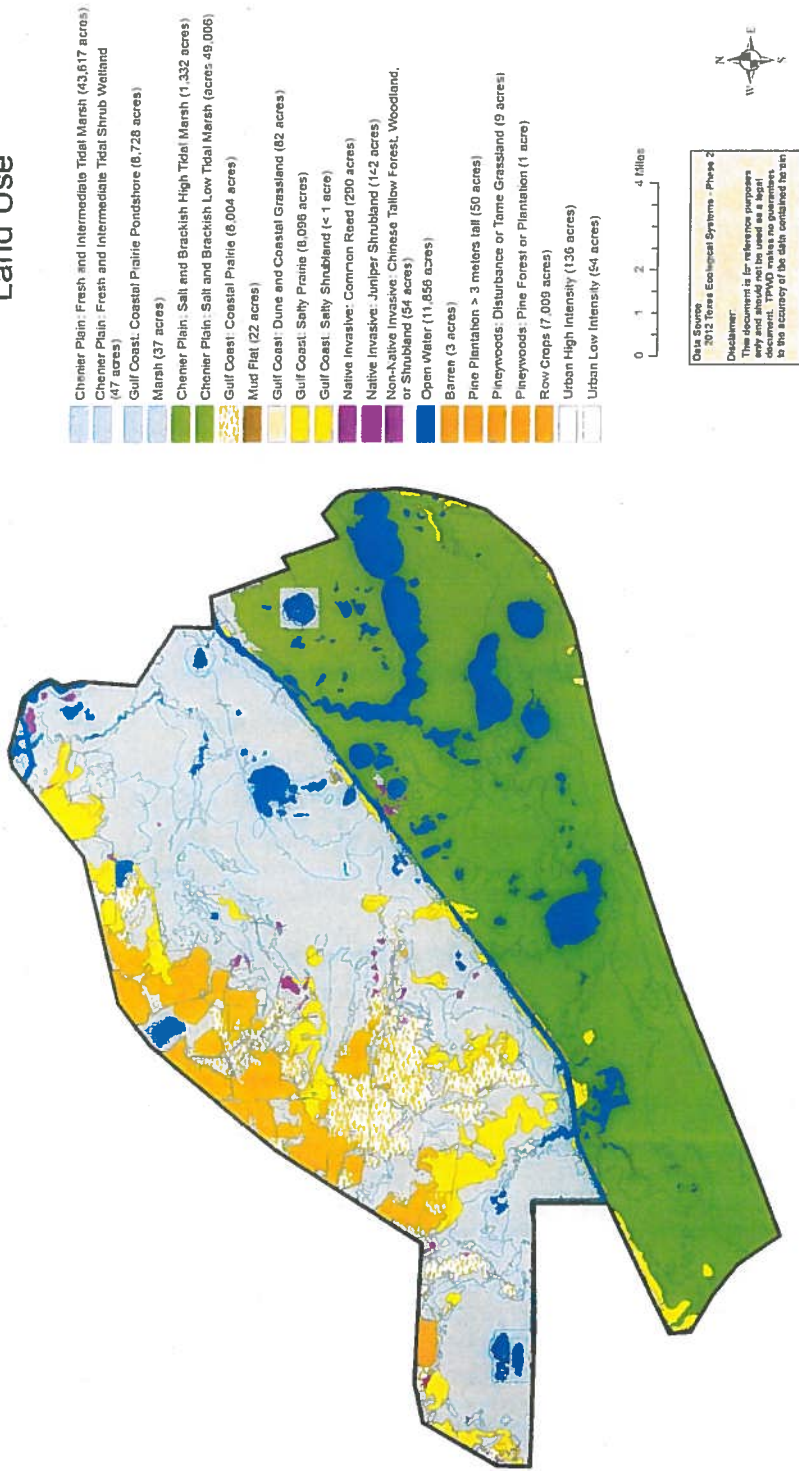


Figure 2. Texas Parks and Wildlife vegetation classification of the Salt Bayou System



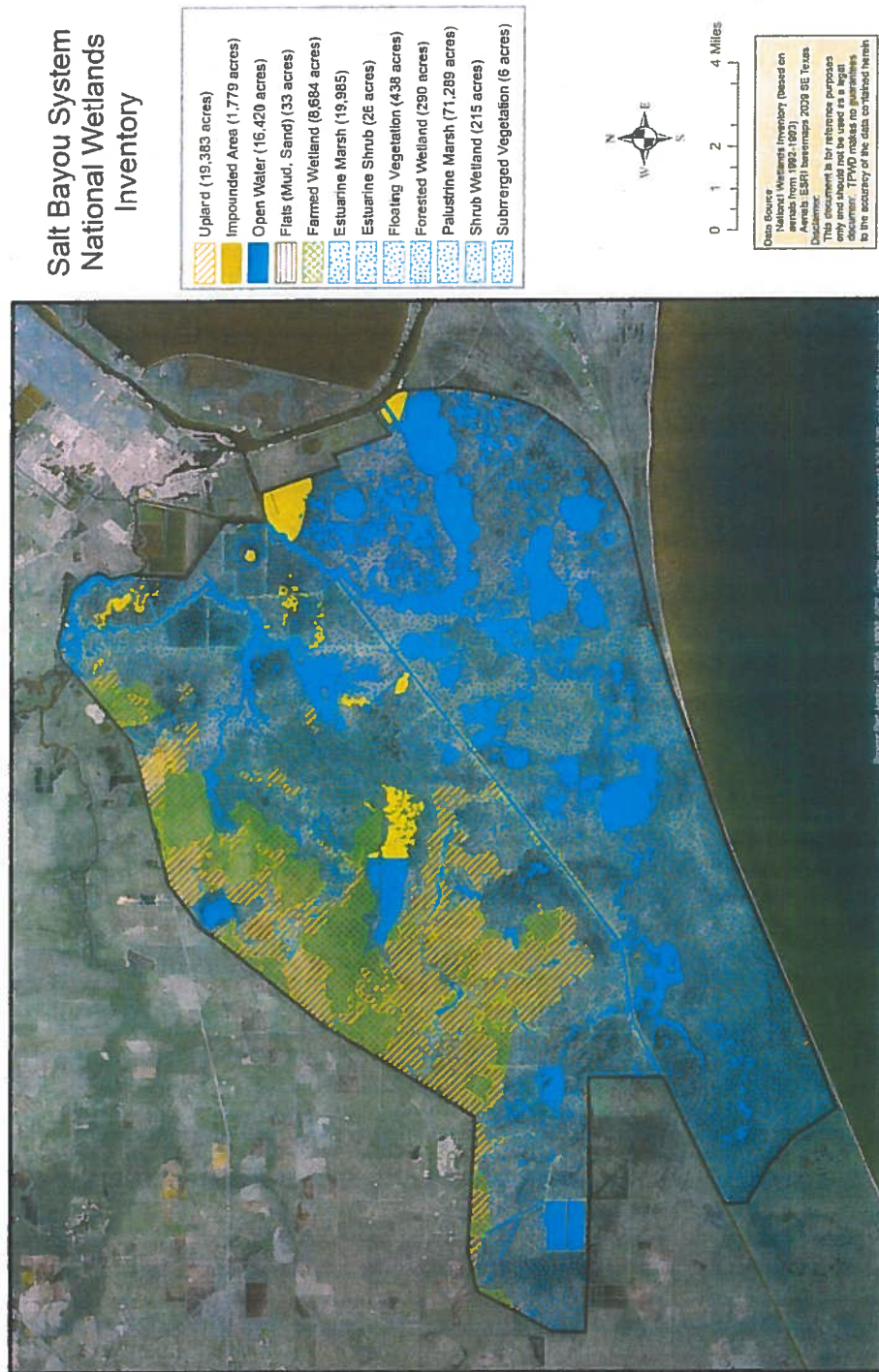


Figure 3. Wetland area as determined by the National Wetlands Inventory in the Salt Bayou Area.

## DEVELOPMENT OF THE SALT BAYOU SYSTEM AND CURRENT STATUS

The Salt Bayou system is part of the Chenier plain that was formed by the reworking of riverine sediments. The Mississippi River provided the main sediment source that formed the coastal landscape in Louisiana and in southeastern Texas. The Chenier plain was developed by lateral oscillations of the Mississippi River over long periods of time and the reworking of sediments that were deposited during these shifts. Mudflats were formed along the shoreline by the fine grained sediments from the Mississippi River. These sediments were pushed west by longshore transport and were ultimately deposited along the shoreline through nearshore currents (Britsch and Dunbar 1993). Eastward shifts in the course of the Mississippi River resulted in a decline of the westward sediment transport. This decline in sediments resulted in coastal processes reworking and eroding the sediments along the shore. These coastal processes concentrated the coarse, large-grained sediments forming higher ridges or cheniers (Britsch and Dunbar 1993).

When the Mississippi River oscillated westward again, new sediments were deposited along the existing shoreline, and the cycle of ridge and mudflat formation began again. Repetition of sediment accretion and erosion from coastal processes over time created the alternating ridges separated by marshlands, which is now called the Chenier plain (Britsch and Dunbar 1993). The higher ridges support woody vegetation, while the mudflat areas which are isolated from the Gulf waters support diverse freshwater coastal habitat (USFWS 2008). Today the Chenier plain stretches approximately 125 miles from southwest Louisiana to southeast Texas and runs parallel to shore (Penland and Suter 1989).

The Salt Bayou system is part of the Texas portion of the Chenier plain. The system covers approximately 139,000 acres in Jefferson County, Texas (Figure 1) and is protected as public lands in large part by McFaddin National Wildlife Refuge (57,000 acres), J.D. Murphree Wildlife Management Area (25,000 acres), and Sea Rim State Park (3,000 acres). "Although this system is but a remnant of what was once a much larger watershed extending north as far as Beaumont and as far west as Stowell, Texas, it is still

a large wetland complex composed of hydraulically connected shallow lakes and small bayous” (Pothina and Guthrie 2009).

### *Essential Functions*

The Salt Bayou system is rich in natural resources and is a valuable economic resource for Texas. Historically, the system consisted of fresh (0-0.5 ppt) to intermediate (0.5-3.5 ppt) salinity marshes with some brackish (3.5-10 ppt) to saline (>10 ppt) inclusions near where saltwater from Sabine Lake would enter the system (TPWD and USFWS 1990, Stutzenbaker 1999). The plant communities in these marshes were highly productive, and supported a large number of vertebrate and invertebrate species. In fresher regions, the emergent marsh community was dominated by Jamaica sawgrass (*Cladium jamaicensis*), cutgrass (*Zizaniopsis milaceae*), maidencane (*Panicum hemitomon*), lotus (*Nelumbo lutea*), najas (*Najas guadalupensis*), arrowheads (*Sagittaria* spp.), and banana waterlily (*Nymphaea mexicana*). Intermediate and brackish zones were dominated by marsh hay cordgrass (*Spartina patens*), seashore paspalum (*Paspalum vaginatum*), saltgrass (*Distichlis spicata*), and salt marsh bulrush (*Schoenoplectus robustus*) with widgeongrass (*Ruppia maritima*) in open water areas. In more recent times, these marshes have been subjected to increasing salinities with a reduction in extent of fresh to intermediate marsh and associated changes in species diversity, abundance, and productivity. However, the system remains a very important habitat for fish and wildlife and still maintains much of the historic diversity and productivity.

The remaining freshwater and low-salinity marshes provide excellent habitat for a variety of wildlife. The Salt Bayou system is recognized in the North American Waterfowl Management Plan (2004) as an important waterfowl habitat. This area supports hundreds of thousands of individuals of most species within the Central Flyway during winter months. It also provides year-round habitat for mottled ducks (*Anas fulvigula*), rails (Rallidae), bitterns (Ardeidae), stilts (Recurvirostridae), and many other marsh birds. The Texas Upper Coast has produced large populations of muskrat (*Ondatra zibethicus*) and nutria (*Myocastor coypu*) over the years. Historically, the fur industry provided early settlers and inhabitants through the 1970's with dynamic and abundant fur resources. Trappers have traditionally produced high quality harvests of

muskrat, mink and river otter pelts from south Jefferson County marshes. The now extirpated red wolf (*Canis rufus*) once inhabited this area. Other mammals, including coyote (*Canis latrans*), bobcat (*Lynx rufus*), opossum (*Opusum virginianus*), and raccoon (*Procyon lotor*) also thrive in these marsh habitats. Two invasive exotic species, feral hogs (*Sus scrofa*) and nutria are problematic in these coastal marsh habitats.

Several species of reptiles are also found commonly throughout the system including various species of snakes (e.g., Colubridae and Viperidae), turtles (e.g., Kinosternidae, Emydidae, Chelydridae and Trionichidae) and the American alligator (*Alligator mississippiensis*). Likewise, amphibians can be found when conditions within the system are favorable (i.e., salinities are not too high). These may include several species of amphibians (e.g., Hylidae, Ranidae and Microhylidae), toads (e.g., Bufonidae) and the Amphiuma (*Amphiuma tridactylum*).

This area is an important nursery for marine and estuarine fishery species, including several that are important to the local economy. Recreational fishing in the area focuses on speckled trout (*Cynoscion nebulosus*), redfish (*Sciaenops ocellatus*), Southern flounder (*Paralichthys lethostigma*), and other species. These game fish forage on the smaller fish and shellfish species that are abundant within the marsh. Commercially valuable species that share a similar dependent attachment to this marsh include brown shrimp (*Farfantepenaeus aztecus*), white shrimp (*Litopenaeus setiferus*), blue crab (*Callinectes sapidus*), black drum (*Pogonias chromis*), gulf menhaden (*Brevoortia patronus*), Southern flounder, and various bait fish. Although not of commercial interest in the Sabine Lake system, reefs formed by the Eastern oyster (*Crassostrea virginica*) in the Salt Bayou marsh system provide essential fish habitat, with large shell beds of the Atlantic rangia (*Rangia cuneata*) also providing several ecosystem services. A number of past investigators have studied species abundance and distribution in the Salt Bayou Marsh besides TPWD - Coastal Fisheries (1986 – Present) which include works by Bob Fish (TPWD-Sea Rim State Park, data summarized in Stelly (1980), Hartman et al. (1987), and Simon (1996).

Marshes provide essential functions that maintain the productivity of the system. They filter pollutants, provide essential nutrients and food, and provide refuge from predators. These marshes are also highly effective at decreasing impacts from storm

surges. The Army Corps of Engineers estimates that for each 2.7 miles of emergent marsh present, one foot of storm surge can be reduced. Although this is a widely used estimate, an accurate prediction of storm abatement must take into account landscape position, storm intensity, storm track, speed at which the storm is moving, slope from sea floor to coastal marshes, degree of bottom friction on the surge, and condition of the marsh (Masters 2011). The portion of the Salt Bayou system covered by this plan is up to 20 miles wide and is effective at protecting nearby municipalities from a high frequency of severe storms that occur in the area (Table 1).

Table 1. Hurricanes and tropical storms that have affected the Keith Lake - Salt Bayou system. All events were recorded from the National Weather Service and National Hurricane Center.

Date	Tropical Storm or Hurricane Event
September 13, 1865	Hurricane landfall along Texas/Louisiana border, storm surge inundates Calcasieu Lake and Grand Chenier.
July 15, 1866	Tropical storm landfall at Port O'Connor.
1871	Three hurricanes land on the Texas coast: June 2-3, June 9, September 30-October 2.
September 15-17, 1877	Hurricane landfall on Texas coast.
August 22-23, 1879	Hurricane landfall along upper Texas coast.
September 14, 1882	Tropical storm landfall at Sabine Pass.
June 14, 1886	Tropical storm landfall near Sabine Pass that flooded the coast several miles inland and inundated Sabine Pass with 7 ft of water.
October 12, 1886	Hurricane (Category 2) near Sabine Pass that flooded the coast up to 20 miles inland.
July 5, 1888	Hurricane landfall at Galveston.
July 13, 1891	Hurricane landfall near Sabine Pass.
October 6, 1895	Tropical storm landfall at Bolivar Peninsula.

September 13, 1897	Hurricane (Category 1) landfall in western Louisiana. Sabine Pass rice fields in Taylor Bayou were inundated with 6ft of water.
September 28, 1898	Tropical storm landfall at Bolivar Peninsula.
September 9, 1900	Hurricane (Category 4) landfall Galveston Island.
August 17, 1915	Hurricane (Category 3) landfall west of Galveston Island.
August 14, 1932	Hurricane (Category 4) landfall south of Galveston Island.
August 14, 1938	Hurricane (Category 1) western Louisiana produced high tides on upper Texas coast.
August 7, 1940	Hurricane (Category 2) east of Sabine Pass with a storm surge reaching 21.1 ft.
September 15, 1941	Tropical storm landfall west of Sabine Pass.
August 21, 1942	Hurricane (Category 1) landfall near Galveston with a storm surge reaching 7 ft at High Island.
July 27, 1943	Hurricane (Category 1) landfall at Bolivar Peninsula. Beaumont recorded 17.76 of rain.
June 16, 1946	Tropical storm landfall east of Sabine Pass.
August 24, 1947	Hurricane (Category 1) landfall at Galveston Island produced a 3.6 ft tide at Sabine Pass.
June 27, 1957	Hurricane Audrey (Category 4) landfall east of Sabine Pass with storm surge of 8-10 feet.
August 9, 1957	Tropical Storm Bertha landfall east of Sabine Pass.
July 24, 1959	Hurricane Debra (Category 1) landfall east of Freeport.
September 11, 1961	Hurricane Carla (Category 4) landfall near Port Lavaca with storm surge of 7-8 feet.
September 17, 1963	Hurricane Cindy (Category 1) landfall near High Island.
September 15, 1970	Tropical Storm Felice landfall north of Galveston.

July 2, 1979	Tropical Storm Claudette landfall near Sabine Pass. Port Arthur records 13 inches of rain
September 5, 1980	Tropical Storm Danielle landfall near Galveston. Port Arthur records 17 inches of rain.
August 17-18, 1983	Hurricane Alicia (Category 3) landfall Galveston Island with a storm surge just over 5 feet.
September 11, 1982	Tropical Storm Chris landfall near Texas/Louisiana border.
June 26, 1986	Hurricane Bonnie (Category 1) landfall west of Sabine Pass with a storm surge of 6-7 feet.
August 9, 1987	Unnamed tropical storm landfall near Texas/Louisiana border.
August 1, 1989	Hurricane Chantal (Category 1) landfall at High Island caused beach erosion with storm surge of 4-5 feet.
October 16, 1989	Hurricane Jerry (Category 1) landfall at Galveston with storm surge of 4-5 feet.
September 11, 1998	Tropical Storm Frances landfall at Corpus Christi creates a storm surge of 5.4 ft at Sabine Pass.
September 24, 2005	Hurricane Rita (Category 3) landfall at Sabine Pass creates a storm surge of 10 feet.
September 13, 2007	Hurricane Humberto (Category 1) landfall at McFaddin NWR with storm surge of 4-5 feet.
September 13, 2008	Hurricane Ike (Category 2) landfall at Galveston Island creates a 14 foot storm surge across Salt Bayou.

## SIGNIFICANT CAUSES OF ENVIRONMENTAL CHANGE

The vast resources discussed previously are rapidly degrading due to a variety of changes in the system. The rate of decline in recent years has increased dramatically as a result of management actions in combination with natural processes. Below, the human-induced and natural processes that have affected the Salt Bayou system are described.

### *History of Significant Anthropogenic Influences*

The ecological functions of the Salt Bayou system have been significantly affected by a long history of land development which started in the mid-1800s (Table 2; Figure 4). Individually, many of the land alterations were minor, however, when combined with more significant alterations, the effects have been devastating.

Historically, the Salt Bayou watershed was predominantly a freshwater to intermediate system. However, by 1900, development of a rail line connecting Beaumont to Sabine Pass and the dredging of a 6 ft deep channel from Sabine Pass to Taylor Bayou resulted in farmers noticing salinity in their irrigation fields. The railroad berm also caused flooding west of Sabine Pass by inhibiting sheetflow and increased the duration of flooding to the detriment of the marsh community.

By the 1930s, the Gulf Intracoastal Waterway (GIWW) and the Sabine-Neches Waterway (SNWW) had been constructed. The GIWW cut off overland freshwater flows that drained from the northern to the southern portion of the watershed, thereby eliminating nearly half of the watershed of Salt Bayou. Additionally, the GIWW provided a large conduit for saltwater to travel to portions of the system which rarely experienced any tidal influx. Extended exposure to saltwater killed many salt intolerant plants. In some areas, more salt tolerant plants replaced those that died while in many locations vegetated marshes converted to open water. During this same time period, oil and gas production near the Clam Lake area began. The withdrawal of subsurface fluids caused a fault line to become active and resulted in land subsidence and a conversion of marsh to open water (White and Tremblay 1995).



Table 2. Events that directly or indirectly have affected the hydrological and ecological conditions of the Keith Lake - Salt Bayou system (modified from TPWD and USFWS 1990).

Date	Event
pre-1860	System is relatively undisturbed. No natural connection exists between Little Keith Lake and Sabine Lake, but this area is suitable for a man-made connection. Sheetflow flows from Salt Bayou to Taylor Bayou to Sabine Lake.
1861	Eastern Texas Railroad Company constructs a rail line on an earthen berm connecting Beaumont, Port Arthur and Sabine Pass (Handbook of Texas Online). The berm prevents sheetflow from going into Sabine Lake.
1862	In response to complaints of flooding in Salt Bayou by local residents the railroad cuts the berm and attempts to imitate sheet or relieve flooding flow between Little Keith Lake and Sabine Lake.
mid-1870s	Mr. Keith opens a row boat canal from Little Keith Lake to Sabine Lake, possibly utilizing the existing cut through the railroad berm (J. Sutherlin, <i>pers. comm.</i> ).
1870-1880	Congressional appropriations were made for the survey of possible Texas harbors, and improvements were made at Sabine Pass (Handbook of Texas Online).
1898	Port Arthur Canal and Dock Company, Kansas City Railroad, and Gulf Railroad connect the Port Arthur Canal to the Sabine Channel (Alperin 1977)  Dredge spoil closes the entrance to the existing boat canal between Little Keith Lake and Sabine Lake (J. Sutherlin, <i>pers. comm.</i> ).
1901	Rice growers on Taylor's Bayou report saline water in irrigation system used for rice fields (Alperin 1977).
1908	SNWW dredged to 100 ft wide by 9 ft deep (Alperin 1977).
1911	A salt water guard lock in the Sabine-Neches Canal downstream from the mouth of the Neches River was authorized (Wilson 1981).
1914	Construction of a lock and salt water barrier on Taylor Bayou by the Beaumont Navigation District of Jefferson County, later replaced with a relocated barrier in 1935 (Wilson 1981).

1916	SNWW dredged to 25 ft deep (Alperin 1977).
1922	SNWW widened to 125 ft (Alperin 1977).
1924	Severe drought and peat fires convert areas of marsh in Salt Bayou to open water (Lay and O'Neill 1942).
1925	Removal of the saltwater guard lock in the Sabine Neches Canal downstream of mouth of the Neches River was authorized by the River and Harbor Act of March 3, 1925. A bypass channel was constructed around the lock, and the lock was later removed in fiscal years 1952-53 (Wilson 1981).
1927	SNWW dredged to 150 ft wide by 30 ft deep (Alperin 1977).  Dredging activities along the SNWW likely hastened the reconnection with Little Keith Lake (J. Sutherlin, <i>pers. comm.</i> ).
1933	Gulf Intracoastal Waterway (GIWW) dredged across Jefferson County, separating Salt Bayou from its upper watershed and confluence with Taylor Bayou and Sabine Lake.
1930-1933	Water control structures are installed on the GIWW at Star Lake and Salt Bayou. A water control structure is installed between Little Keith Lake and SNWW. A second water connection (canal) is developed using dynamite to improve boat access between Keith Lake and Little Keith Lake (USDA/SCS 1976, J. Sutherlin, <i>pers. comm.</i> ).
1946	SNWW dredged to 400 ft wide by 36 ft deep (Alperin 1977).
1947	Clam Lake Oil Field is developed and begins production. Construction of Clam Lake Road changes hydrologic patterns within the marshes.
Early 1950s	Dam B (B. A. Stienhagen Reservoir 1951) is constructed on the Neches River at Town Bluff.  White's levee, Perkin's levee, Back Ridge Cattlewalk and numerous small boat trails and small wooden weirs were constructed throughout the marsh.  Lost Lake and Round Lake were impounded by ring-levee systems.

1957	<p>TPWD acquires land for a wildlife management area (J.D. Murphree WMA).</p> <p>Hurricane Audrey (1957) makes landfall. The storm likely damages existing water control structures along the GIWW and Little Keith Lake.</p>
1958	Shell Lake Oil Field developed and begins production. Construction of Shell Road changes hydrologic patterns within the marshes.
1961	Hurricane Carla (1961) makes landfall and likely further damages the existing water control structures along the GIWW and Little Keith Lake. By this time, these structures likely no longer prevented the free exchange of tidal waters.
1964	The USACE built a containment levee around Little Keith Lake and filled the lake with dredged materials from the SNWW (TPWD and USFWS 1990).
1965	<p>Impoundment of the Angelina River (Neches River Basin) and construction of Lake Sam Rayburn reservoir.</p> <p>Dredging began to deepen the SNWW to 40 ft (completed in 1972, Alperin 1977) 1969 Toledo Bend reservoir.</p>
1969	Toledo Bend reservoir construction was completed.
1971	TPWD purchases Sea Rim State Park.
1977	Keith Lake Fish Pass is dredged.
1981	USFWS acquires McFaddin NWR.
1985	TPWD acquires 5,000 acres North of Keith Lake, including Lost Lake. These acres eventually become part of the Salt Bayou Unit of J. D. Murphree WMA.
1995	Salt Bayou structure is constructed at the eastern intersection with the GIWW.
1997	11,000 acres of Sea Rim State Park transferred to the J. D. Murphree WMA and are combined with the 5,000 acres purchased in 1985 to make up the Salt Bayou Unit.
1998	Tropical storm Frances reduced the elevation of the beach ridge.
2003	LNVA completes a permanent salt water barrier on the Neches River above Beaumont.

2005	Hurricane Rita severely damages the beach ridge. Beach ridge elevation is no longer high enough to protect marshes. There are widespread impacts.
2007	Hurricane Humberto makes landfall and causes minor damage to marsh vegetation.
2008	Hurricane Ike makes landfall and creates over 800 acres of open water from emergent marsh by scouring vegetation from the marsh within the J D Murphree WMA. The storm also affects remaining beach ridge and internal hydrologic patterns by depositing debris and sediment in existing ditches and channels.
2010	Needmore Diversion Ditch is started, which will affect hydrologic patterns within the watershed north of the GIWW upon completion.
2006-2012	Beneficial Use efforts using grant funding from NOAA Fisheries (Hurricane Ike Recovery), industrial partnerships and 404 mitigation within the Salt Bayou Unit of the J. D. Murphree WMA totals enhancement to approximately 2,100 acres of emergent marsh since 2006. (J. Sutherlin <i>pers comm.</i> ).
2011	A year long drought of record results in a lack of freshwater inflows and rainfall resulting in exacerbated salinity levels above 20 ppt through-out the Salt Bayou Watershed for much of the year. (J. Sutherlin <i>pers comm.</i> ).



Figure 4. Major man-made structures that have resulted in significant hydrologic alterations.

Prior to dredging of the GIWW, the Salt Bayou system drained to the north through Salt Bayou into Taylor Bayou and then Sabine Lake. This route was truncated when the GIWW was dredged, with the system draining into the GIWW through a water control structure. As a result, aquatic estuarine dependent organisms had a shorter distance to get in and out of the system. Little Keith Lake also had a connection to the shipping channel through a drainage ditch dug by the railroad to alleviate the flooding mentioned earlier. This ditch remained until the USACE filled Little Keith Lake with dredged material in 1966. After the filling of Little Keith Lake, the only access point for estuarine organisms and tidal waters was through the confluence of the GIWW and Salt Bayou. This resulted in a decline of the estuarine function of the wetlands along with a decline in recreational and commercial fishing (TPWD et al. 1976).

In 1977, the Keith Lake Fish Pass (KLFP) was opened to connect the SNWW to Keith Lake in order to enhance recreational fishing in Sea Rim State Park. The opening of this cut provided a direct conduit for saltwater to access the system. As a result, the area was impacted by higher levels of salt influx than had ever occurred before (TPWD and USFWS 1990). According to Pothina and Guthrie (2009):

Over time, tidal action widened and deepened the Fish Pass so that by 1988, the Fish Pass had expanded [in some locations] to 300 ft wide and 10 ft deep (Fisher 1988). This allowed the salinity gradient to impact interior marshes upstream of Keith Lake, which included marshes near Johnson Lake, Salt Bayou, Shell Lake, Salt Lake, Fence Lake and Knight Lake (TPWD and USFWS 1990) and areas further west. Today, the predominant source of saltwater to the system enters via the Fish Pass (Fisher 1988), with consequences to freshwater conditions in the eastern portion of the watershed.

Over the years, water control structures that were built to prevent saltwater intrusion fell into disrepair and are no longer functional today. The water control structure at the eastern confluence of the GIWW and Salt Bayou was replaced with a new structure in 1995. Berms and levees created during dredging of channels and for water

management inhibited sheet flow and funneled water out of the system via narrow channels, many of which were developed as access for hunting and trapping. Under flood conditions (fresh or salt water), this caused a longer residence time and increased waterlogging stresses, conditions which can lead to plant death and land loss. Constructed waterways including the GIWW, SNWW, and KLFP have been subject to erosive forces eroding the banks of these channels, leading to loss of emergent marsh along the banks. Over the last 100 years, the SNWW has been widened and deepened several times, further increasing the amount of Gulf of Mexico (GOM) waters entering the system.

#### *Natural processes*

Beyond the aforementioned human-induced activities that have reduced marsh area, relative sea-level rise, severe disturbances (e.g. hurricanes, droughts), and the natural reworking of coastal sediments are also contributing to habitat degradation. Relative sea-level rise is a major factor in the rate of land loss. The Salt Bayou system has a high vulnerability to sea-level rise. Two different studies have established high rates of sea-level rise in this area ranging from 6.45 mm/yr (1958-1999) (USFWS 2008) to 5.66 mm/yr (1958-2006) at Sabine Pass (Paine et al. 2011). In comparison, global sea-level rise was 1.7 mm/year (Church and White 2006). Various sea-level rise scenarios were modeled to determine the extent of potential inundation in the Salt Bayou system (Figure 5). Model scenarios estimated that by 2100, estuarine open water could increase from at least 9% up to 252%. Irregularly flooded marsh is predicted to decrease between 4-97% and fresh marsh is expected to increase slightly (1-6%) or to decrease by 37% depending on the model scenario (Warren Pinnacle Consulting, Inc. 2011).

Changes in the location of the Mississippi River have also influenced the areal extent and geography of the Salt Bayou system. Currently, this system is suffering from substantial shoreline erosion and retreat, which has resulted in land loss comparable to that of coastal Louisiana. The historic barrier/beach dune system has degraded severely on both the Texas Point and McFaddin National Wildlife Refuges (NWR) (USFWS 2008). On average, the shoreline in Jefferson County has been retreating 9.2 ft/year and land loss rates have averaged 35.7 acres/year (Paine et al. 2011).

The large-scale perturbations discussed previously act to lower the resiliency of the marsh, making it more vulnerable to large, acute disturbances such as hurricanes. For example, Hurricane Ike, which made landfall approximately 65 miles to the southwest, resulted in land loss of  $14.8 \text{ km}^2$  ( $5.7 \text{ mi}^2$ ; Barras et al. 2010).



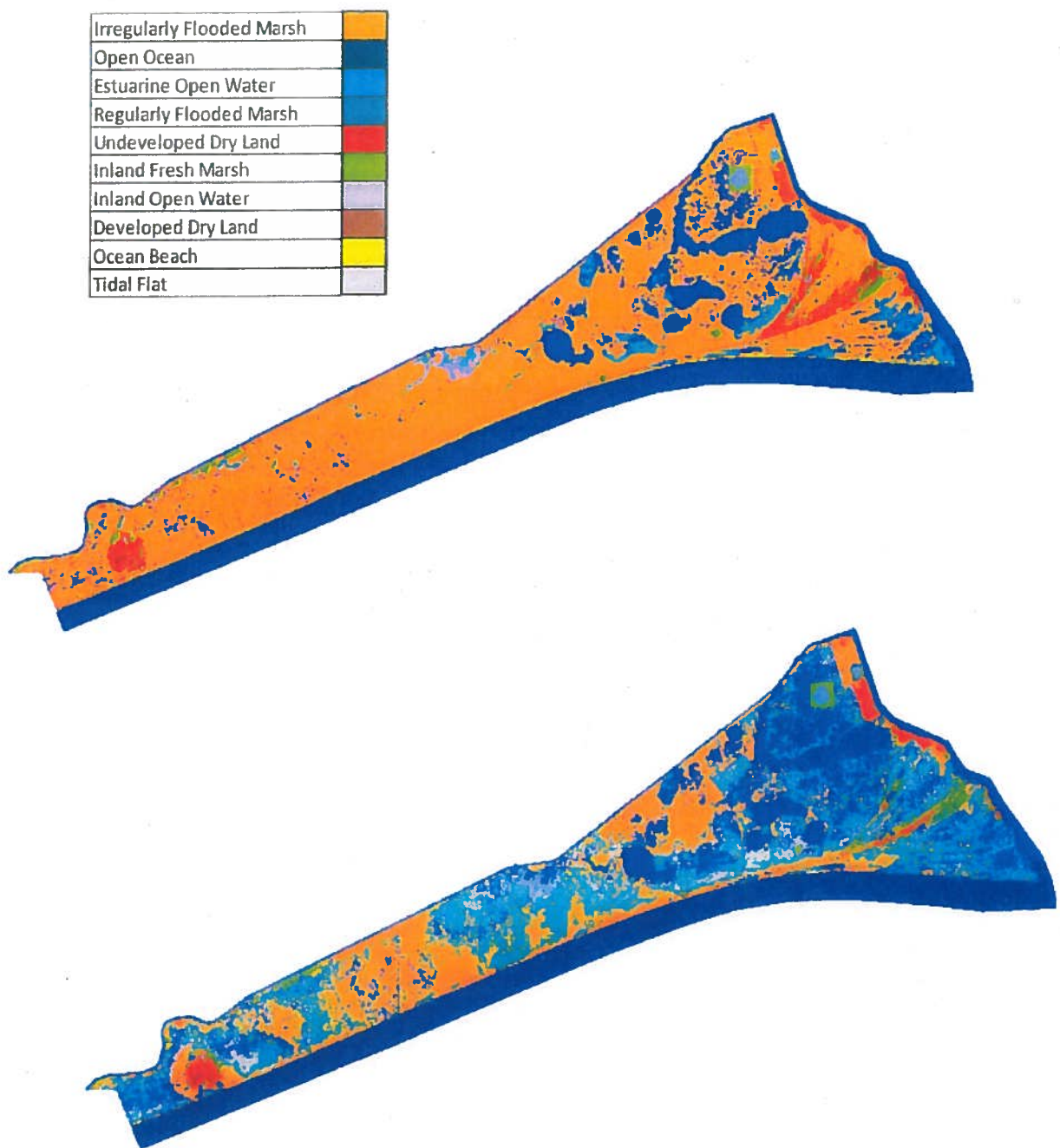


Figure 5. SLAMM 6 (Sea Level Affecting Marshes Model) visual representation of the (a) current condition of the southern portion of the Salt Bayou and the (b) predicted habitat change with the 1m of sea level rise scenario in the year 2100 (Warren Pinnacle Consulting Inc. 2011).

## IMPACTS DUE TO ENVIRONMENTAL ALTERATIONS

Following the reopening and restructuring of the KLFP in 1977, the system has slowly and episodically transitioned towards estuarine conditions with negative consequences to its diverse wetland habitats. Salt intolerant plant communities are dying and subsequently the organic soils are dissolving and eroding, resulting in increasing expanses of shallow open water. As expanses of open water exceed 75-80 % relative to vegetated marsh, production of brown and white shrimp and blue crabs has been shown to decrease (Minello and Rozas 2002).

In response to the overall increase in salinity, increased frequency of high salinity events, and continued marsh loss, several changes have occurred in the system. Areas of open water are increasing at the expense of other nearby habitat types. Plant communities have shifted so that only the more salt tolerant species remain, and/or additional areas of open water were created in areas where plants died due to harsh environmental conditions. Additionally, many of the historic reptiles and amphibians that were present have decreased or disappeared. Muskrats, nutria, and river otters, once common, have declined dramatically (TPWD and USFWS 1990). Sightings of these mammals within the Salt Bayou system are now rare. The number of waterfowl using the system is declining even though the numbers for the state have not changed significantly over the last 20 years or more (Kevin Kraaii – TPWD Waterfowl Program Leader, personal communication March 9, 2012). The change in numbers reflects a shift in where waterfowl are spending the winter months, with more of them spending increasingly more time further inland in more preferable freshwater habitats (Kevin Kraaii – TPWD Waterfowl Program Leader, personal communication March 9, 2012). Hunting opportunities remain plentiful today but the quality of opportunities is likely to decrease as the habitat continues to degrade.

Increased salinities have accelerated wetland plant loss while enhancing access of some estuarine marine fisheries including gulf menhaden, blue crabs, brown shrimp, and spotted seatrout (*Cynoscion nebulosus*), all valuable fisheries species. This accelerated increase in fisheries production will reverse as marsh loss continues, undercutting the foundation of the food web and its associated nursery habitat function (Boesch, et al.,

1994; Minello and Rozas 2002). Plant viability, longevity, and reproductive success will decrease because seawater in flooded wetland soils leads to the conversion of sulfate to hydrogen sulfide, a compound toxic to marsh plants. Some plant species may be replaced by more tolerant species. However, conversion of marsh to open water can also be an outcome of this process if surface soils are lost and the area is inundated to a depth incompatible with establishment and growth of plants. Substantial marsh loss has already occurred in this system (German and O'Brien 2002). This process of increased salinity and increased frequency of salinity spikes will continue to lead to a degraded ecosystem with reduced fisheries productivity, reduced use by migratory birds and mammals, elimination of most reptile and amphibian species, and reduction in abundance of the macroinvertebrate community (USFWS 2010; Haas et al. 2004).

Coastal marshes are able to reduce or suppress storm surge (Masters 2011; Resio and Westerink, 2008; Wamsley et al. 2009). Because this ability is directly related to the areal extent, vegetation type and density, and condition of marsh between the Gulf and upland areas as well as condition of marsh vegetation, changes within the Salt Bayou system could have direct effects on storm impacts, both physically and economically (Costanza et al. 2008). An additional 4 to 9.5 miles of freshwater to intermediate marsh are found between the GIWW, Port Arthur's storm levee and SH 73, and are integral to the effectiveness of storm surge suppression along the coast. Should the marshes within the Salt Bayou system continue to degrade or disappear completely, the reduction in effectiveness would significantly increase risks of storm damage and economic losses in this area.

## STRATEGY FOR SALT BAYOU SYSTEM

In order to sustain the functions of the Salt Bayou system, the Salt Bayou Workgroup has discussed and agreed upon some general principles that should be considered for future restoration projects in the area. The overall goal of this Plan is to facilitate:

*Conservation of the Salt Bayou system to ensure its continued benefits for wildlife, fisheries, and the community.*

The workgroup formed with the original goal of reducing the negative impacts of hydrologic modifications by reducing the volume of GOM water coming through KLFP. Soon after the work group formed, they chose 5 conservation actions to use in determining the success of any modification to KLFP. These conservation actions were:

1. Modify the cross section of the pass sufficiently to allow a maximum salinity at the interchange between Johnson's Lake and Keith Lake of 10 ppt (under any conditions excluding tropical low pressure events and extreme drought).
2. Re-establish isohaline gradients within the Salt Bayou system to allow intermediate emergent marsh with freshwater inclusions to grade into brackish marsh (waters) at the Keith Lake/Johnson's Lake interchange.
3. Reduce the rate at which the Salt Bayou marshes de-water when a weather front from out of the North causes a tidal blow-out. Current conditions allow rapid de-watering (about 12 hours) resulting in increased organic soil suspension and loss during tidal blow-outs. Blow-out low tides should be slowed to a rate which minimizes suspension and loss of organic soils (e.g. 48 hours).
4. Slow or reverse the present/on-going trend of marsh deterioration whereby salt intolerant emergent plants are being lost, resulting in accelerated erosion of organic soils.
5. Restore soil accretion through vegetative production and reduced current velocities throughout the Salt Bayou marsh system.

Scrutiny of the entire watershed by the group revealed a set of existing and emerging alterations to the system that have the ability to drastically change the hydrologic and biological characteristics of the marshes. The alterations are many, but could be grouped into two main categories. The first relates to human-induced and natural changes to hydrology that altered the historic hydrologic pattern either by reducing the amount of freshwater entering the system or by increasing the amount of saltwater entering the system. The second category relates to surface subsidence from loss of organic surface soils, subsidence from fluid extraction, or a combination of both. It is perhaps these two groups of perturbations that are having the greatest effect on the characteristics of the marshes in Salt Bayou, and the two that the group has placed most effort in addressing.

#### *Alteration of historic hydrologic patterns*

Changes to the hydrologic pattern are a grave threat at this time because its impacts are widespread and continuous. It is also a major driver of land loss and loss of elevation within the emergent marsh. Freshwater inputs have been severed from the northern part of the watershed by the GIWW, and cannot be restored without a structural solution. Saltwater is now entering from at least two major locations within the watershed where it had not during predevelopment times, and soon may be intruding from multiple other locations. Without adequately addressing all of the actual and potential alterations to the hydrologic flows into the watershed, marsh loss will continue at an accelerating rate.

Keith Lake Fish Pass is a major, man-made cut that altered hydrology and is having a drastic impact to the system. Since its excavation, the fish pass has eroded to over 3 times its original depth (5.5 feet) and twice its original width (150 feet). The current cross section allows large volumes of saltwater to rapidly exchange between the Sabine Neches Waterway and the Salt Bayou marsh. The rapid exchange of seawater from the shipping channel greatly stresses the *Spartina patens* dominated emergent marsh. Review of aerial photography of this area shows that over several decades the marsh has been breaking up internally (German and O'Brien, 2002) in a manner described for marshes in the Louisiana Chenier Plain (Delaune, et al., 1994; Nyman et al.,

1993). Estimates of the rate of conversion from emergent vegetation to surface water are as high as 0.69 % per year (German and O'Brien 2002).

A more recent entryway for saltwater with impacts at least equaling those of KLFP is loss of the beach ridge along the GOM. This ridge prevented Gulf seawater from directly entering the marshes within what is now McFaddin NWR under all but storm tides. Today, water from the Gulf overtops the eroded ridge several times a year and directly impacts thousands of acres of fresh to intermediate marsh and submerged aquatic vegetation with each overtopping event. The high rate of shoreline erosion along this stretch of coast makes rebuilding a stable ridge difficult and expensive. However, without addressing this source of salt water intrusion the loss of marsh between the current shoreline and GIWW is imminent.

A third source of saltwater is from potential breaching of the earthen banks of the GIWW. This would open a third front that would allow near constant influx of saltwater into the system, with impacts that could equal those from the KLFP or overtopping from the Gulf in extent and severity.

In order to address the problems associated with increases in salinity, the following goals and objectives were developed:

**Goal:** To the maximum practical extent, restore the hydrologic pattern of the Salt Bayou system to pre-development conditions.

**Objective:** Reduce volumes of saltwater flowing through KLFP such that salinity at the junction of Johnson and Keith lakes does not exceed 10 parts per thousand during 80 % or more of a year with typical rainfall and river flows (excludes years with tropical storms or drought).

**Objective:** Return freshwater inputs from north of the GIWW to re-establish isohaline gradients through the watershed which resemble those historically found in the watershed.

**Objective:** Create a sustainable shoreline that resembles in function the historic ridge and dune system to protect fresh to intermediate marshes located between the Gulf and the GIWW that accounts for potential sea level rise.

**Objective:** Prevent additional points of entry for saltwater from forming within the watershed along shipping channels and other locations.

*Loss of emergent marsh through loss of soils and elevation*

Within marshes of the Chenier plain, two typical patterns of marsh loss are commonly observed. In the first, loss of living root networks or erosion of organic soils below the root network cause the peat layer to collapse and form small patches of open water in a scattered pattern (Nyman et al., 1993). This collapse then allows ponding within the affected area that precludes future plant growth ultimately leading to marsh loss. Through time, as the peat layer is eroded further, these small ponds converge and create a large area of surface water in which emergent vegetation does not re-establish.

The second pattern of marsh loss is described as “marsh loss hotspots.” They are large areas of marsh experiencing rapid conversion to open water embedded within a larger area of marsh experiencing a much lower rate of marsh loss. Peat collapse appears to be the primary mechanism of hotspot formation (DeLaune et al., 1994, Nyman et al., 1994). The inability of the marsh to accrete soils with components that are organic, mineral, or both leads to flooding stress and ponding within large areas of emergent vegetation. Within a marsh, loss may occur by both of these processes simultaneously.

Within the Salt Bayou watershed, examples of both of these processes are found. The formation of hotspots is most prevalent within areas with active or abandoned oil and gas wells where the surface subsided as extraction occurred. After fluid removal operations ended, subsidence returned to background rates (White and Tremblay 1995) and is believed to continue at those rates. However, the elevation of the soil surface in these areas is below mean sea-level and these areas are nearly constantly inundated. The scattered ponding pattern is evident in areas of the marsh not associated with mineral extraction activities but that are under flooding stress with saltwater. These areas cannot support an emergent plant community without additional inputs of sediments. Effective restoration of the soil accretion process within the watershed will require addressing waterlogging by saltwater as well as restoring the physical conditions (e.g. elevation, flow patterns, wet/dry cycles, etc.) that promote vigorous growth of vegetation and accumulation of organic material. Addressing the loss of emergent marsh will require



consideration of the rates of surface subsidence in relation to marsh soil accretion such that proposed actions will promote accretion at a rate sufficient to keep up with subsidence and relative sea-level changes.

In order to address the problems associated with surface subsidence, the following goals and objectives were developed:

**Goal:** Slow or reverse the current trend of emergent vegetation converting to open water through loss of marsh soils and elevation.

**Objective:** Promote the beneficial use of dredge material to stabilize degrading marsh and restore elevations sufficient to support emergent marsh vegetation.

**Objective:** Stabilize seasonal salinity patterns to reduce or eliminate rapid changes within the system that lead to conversion of vegetated marsh to shallow open water.

**Objective:** Reduce stress to emergent marsh plants from extended exposure to waterlogging, high salinity, or hydrogen sulfide that leads to plant death and conversion to open water.

**Goal:** Create conditions that promote formation of marsh soils having both mineral and organic components at a rate capable of keeping pace with relative sea level rise.

**Objective:** Develop ways to deliver beneficial use dredge material across the watershed to accrete marsh soils and supply nutrients to marsh vegetation.

**Objective:** Re-establish hydrologic conditions that support primary productivity within the emergent marsh plant community sufficient to allow accretion of organic soil components at a rate to match or exceed relative sea level rise.

## RECENT ACCOMPLISHMENTS OF WORKGROUP MEMBERS

Since the year 1990, members of the Salt Bayou Workgroup, independently or through partnership, have accomplished several efforts aimed at long-term solutions to restore and maintain the ecosystem.

These include:

- Installation of the Star Lake water control structure. It is managed to maximize availability of fresh water inflows into the 5 Mile and Clam Lake portions of the Salt Bayou system.
- Construction of a new Salt Bayou water control structure to replace the deteriorated water control structure at the eastern confluence of Salt Bayou and the GIWW. This structure is managed to restore the historic hydrologic functions of the Salt Bayou system.
- Installation of the Wild Cow Bayou water control structure. The structure is managed to meet marsh objectives and to restore hydrologic functions in the Wild Cow Bayou Management Unit of the Salt Bayou system.
- A model evaluating the hydrologic nature of the Salt Bayou ecosystem.
- A hydrologic model to evaluate different designs to reduce the KLFP cross-sectional flows.
- A model to evaluate how different tidal reduction designs for KLFP might affect larval fisheries.
- Development of siphon designs across the GIWW to restore freshwater inputs into the system.
- Feasibility assessment of McFaddin Beach Ridge alignments and ridge restoration options.
- Located an offshore source of sand for beach nourishment along McFaddin National Wildlife Refuge.
- Design and construction of the clay core artificial ridge associated with the McFaddin Beach Ridge.

- Applications of beneficial use of dredged material from the Sabine Neches Ship Channel and GIWW at several locations in the system.
- Erosion control and marsh restoration along the GIWW.

### *Recommendations*

Dialogue and efforts have continued with members to implement fundamental projects necessary for long-term sustainability of this ecosystem. Currently (April 2013) four major projects to address the fundamental problems are being pursued. They are:

1. Restoring the historic beach ridge where it is missing from High Island to Sabine Pass. The first phase of clay core berm construction will begin in early 2013. When fully completed, this beach ridge barrier system will minimize the frequency of high tide overwash events to a periodicity of multiple years (between 5 and 10 years). This would allow the marsh ecosystem to stabilize after high salinity events and provide a productive vegetation community and habitat that supports freshwater dependent species.
2. Reducing the ability of Gulf waters from the Sabine Neches Ship Channel to feed directly into the ecosystem via the KLFP. Reducing the tidal flux through this pass will reduce the frequency and duration of high salinity events in the ecosystem.
3. Increasing freshwater inputs to the Salt Bayou System by installing siphons across the GIWW and mimicking some of the historic freshwater inflow back into the system. These siphons would also provide the opportunity for freshwater delivery during critical periods such as drought or after tropical storm surge flooding.
4. Beneficially using dredge material to restore elevation to eroding marsh in Salt Bayou Unit, J. D. Murphree Water Management Area. This project is being done through collaboration between Texas Parks and Wildlife Department and private industry, and is acting as an example of how private and public sectors can combine seemingly disparate needs to create a project that benefits public lands and natural resources. Through 2012, approximately 2,300 acres of marsh within the WMA has been enhanced or restored using dredged soil materials.

## TECHNICAL REPORTS OR STUDIES COMPLETED IN THE SALT BAYOU AREA

- Esslinger, C.G., and B.C. Wilson. 2001. North American Waterfowl Management Plan, Gulf Coast Joint Venture: Chenier Plain Initiative. North American Waterfowl Management Plan, Albuquerque, NM. 28 pp. + appendix. (Revised 2003).
- German, D. and M. O'Brien. 2002. Salt Bayou Watershed Open Water Trend Analysis. Texas Parks and Wildlife Department. PWD RP R0400-872 (10/02). Austin, TX.
- Gosselink, J. G., C. L. Cordes and J. W. Parsons. 1979. An Ecological Characterization Study of the Chenier Plain Coastal Ecosystem of Louisiana and Texas. 3 vols. U.S. Fish and Wildlife Service, Office of Biological Services. FWS/OBS-78/9 through 78/11.
- Hartman, R. D., C. F. Bryan, and J. W. Korth. 1987. Community structure and dynamics of fishes and crustaceans in a southeast Texas estuary. Louisiana State University, Louisiana Cooperative Fish and Wildlife Research Unit, School of Forestry, Wildlife, and Fisheries, Louisiana Agricultural Experiment Station, Agricultural Center. Baton Rouge, Louisiana.
- Fisher, J. C. 1988. Hydrologic Data for the Salt Bayou Estuary Near Sabine Pass, Texas, October 1984 to March 1986. U.S. Geological Survey. Report 88-499. Austin, TX.
- Pacific International Engineering. 2003. Coastal Geomorphology of a Non-Barrier Gulf of Mexico Beach: Analysis for Protection of Highway 87 and McFaddin NWR in Jefferson County, TX. Prepared for Jefferson County, TX.
- Pacific International Engineering. 2004. Sediments and Geomorphology of the Gulf of Mexico Shore from Sea Rim State Park to High Island: Analysis for Protection of Highway 87 and McFaddin NWR in Jefferson County, TX. Prepared for Jefferson County, TX.
- Pacific International Engineering. 2005. Recommended Shore Protection Alternatives: Analysis for Protection of Highway 87 and McFaddin NWR in Jefferson County, TX. Version 1.0. Prepared for Jefferson County, TX.
- Paine, J. G., S. Mathew, and T. Caudle. 2011. Texas gulf shoreline change rates through 2007. Bureau of Economic Geology. The Shoreline Change Project. University of Texas, Austin. Online article viewed 11/7/2012  
[http://www.beg.utexas.edu/coastal/presentations\\_reports/begTexasGulfShorelineReport2011\\_highRes.pdf](http://www.beg.utexas.edu/coastal/presentations_reports/begTexasGulfShorelineReport2011_highRes.pdf)
- Pothina, D. and C. Guthrie. 2009. Evaluating Inverted Siphons as a Means of Mitigating Salinity Intrusion in the Keith Lake/Salt Bayou System, Jefferson County, Texas:

prepared by the Texas Water Development Board. Grant No. MX-96401704. U.S. Environmental Protection Agency, Gulf of Mexico Program.

Simon, S. 1996. Wild Cow Bayou ecological monitoring 1992-1994., United States Fish and Wildlife Service, McFaddin National Wildlife Refuge., Port Arthur, Texas.

Stelly, T. D. 1980. Currents and biota at the Salt Bayou Weir and the Keith Lake Water Exchange Pass of Sea Rim State Park. Master of Science Thesis, Lamar University - Biology, Beaumont, Texas.

Stutzenbaker, C. D. (1999). Aquatic and Wetland Plants of the Western Gulf Coast. Austin, TX, Texas Parks and Wildlife Press.

Texas Parks and Wildlife Dept. and US Fish and Wildlife Service. 1990. Salt Bayou Project. Joint water management concept plan for Sea Rim State Park, McFaddin National Wildlife Refuge, and Murphree Wildlife Management Area. Document No. 7-M-639-07/13/90.

Texas Parks and Wildlife Department and U.S. Department of Agriculture Soil Conservation Service. 1979. Keith Lake Water Exchange Pass: Fish and Wildlife Development RC&D Measure Plan. Document No. 48-6001-245-194. Temple, TX.

U.S. Fish and Wildlife Service. 2006. Wild Cow Bayou Monitoring Plan McFaddin National Wildlife Refuge 2000-2002. Texas Chenier Plain Refuge Complex, Anahuac, Texas.

U.S. Fish and Wildlife Service. 2008. Texas Chenier Plain Refuge Complex: Final Environmental Impact Statement, comprehensive Conservation Plan, and Land Protection Plan. Division of Planning, National Wildlife Refuge System, Southwest Region. Albuquerque, New Mexico.

U.S. Fish and Wildlife Service. 2010. Final Environmental Assessment: Restoration of the Salt Bayou System by Diverting Freshwater Inflows and Other Wetland Improvements on McFaddin National Wildlife Refuge, Jefferson County, TX. Prepared by McFaddin/Texas Point National Wildlife Refuge, Sabine Pass, TX.

Warren Pinnacle Consulting, Inc. 2009. SLAMM Analysis of Southern Jefferson County, TX: Final Report. Prepared for The Nature Conservancy Gulf of Mexico Initiative. Corpus Christi, TX.

Warren Pinnacle Consulting, Inc. 2011. SLAMM Analysis of Southern Jefferson County, TX. Prepared for Gulf of Mexico Alliance Habitat Conservation and Restoration Priority Issue Team. Corpus Christi, TX.

White, W. A., T. A. Tremblay, R. L. Waldinger, and T. R. Calnan. 2007. Status and trends of wetland and aquatic habitats on Texas barriers: Upper coast strandplain-chenier system and southern coast Padre Island National Seashore. Prepared for

Texas General Land Office and National Oceanic and Atmospheric Administration  
Contract No. 06-044.

## REFERENCES

- Barras, J. A.; Brock, J. C.; Morton, R. A., and Travers, L. J., 2010. Satellite images and aerial photographs of the effects of hurricanes Gustav and Ike on coastal Louisiana. U. S. Geological Survey Data Series 566. <http://pubs.usgs.gov/ds/566/> (accessed November 7, 2012).
- Britsch, L. D. and J. B. Dunbar. 1993. Land loss rates: Louisiana coastal plain. *Journal of Coastal Research* 9:324-338.
- Boesch, D. F., M. N. Josselyn, A.J. Mehta, J. T. Morris, W.K. Nuttle, C.A. Simestad, and D.J.P. Swift. 1994. Scientific assessment of coastal wetland loss, restoration and management in Louisiana. *Journal of Coastal Research*, Special Issue No. 20.
- Church, J. A. and N. J. White. 2006. A 20<sup>th</sup> century acceleration in global sea-level rise. *Geophysical Research Letters* 33: L01602,
- Corps of Engineers, US Army Engineer District, New Orleans. 1963. Interim survey report, Morgan City, Louisiana and Vicinity. Serial No. 63.
- Costanza, R., O. Perez-Maqueo, M.L. Martinez, P. Sutton, S.J. Anderson, and K. Mulder. 2008. The value of coastal wetlands for hurricane protection. *Ambio*, 37:241-248.
- DeLaune, R. D., J. A. Nyman, and W. H. Patrick, Jr. 1994. Peat collapse, ponding and wetlands loss in a rapidly submerging coastal marsh. *Journal of Coastal Research*, 10(4):1021-1030.
- German, D. and M. O'Brien. 2002. Salt Bayou Watershed open water trend analysis. Texas Parks and Wildlife Department. PWD RP R0400-872 (10/02). Austin, TX
- Fisher, J. C. 1988. Hydrologic Data for the Salt Bayou Estuary Near Sabine Pass, Texas, October 1984 to March 1986. U.S. Geological Survey Open-file Report 88-499. 128p.
- Haas, J. L., K. A. Rose, B. Fry, T. J. Minello, L. P. Rozas. 2004. Brown shrimp on the edge: linking habitat to survival using an individual-based simulation model. *Ecological Applications* 14(4): 1232-1247.
- Handbook of Texas Online, "Ocean Shipping"  
(<http://www.tshaonline.org/handbook/online/articles/eto01>), accessed March 18, 2013. Published by the Texas State Historical Association.
- Hartman, R. D., C. F. Bryan, and J. W. Korth. 1987. Community structure and dynamics of fishes and crustaceans in a southeast Texas estuary. Louisiana State University, Louisiana Cooperative Fish and Wildlife Research Unit, School of Forestry, Wildlife, and Fisheries, Louisiana Agricultural Experiment Station, Agricultural Center. Baton Rouge, Louisiana.



- Masters, J. 2011. Storm Surge Reduction by Wetlands. Online article viewed 11/7/2012 at [http://www.wunderground.com/hurricane/surge\\_wetlands.asp](http://www.wunderground.com/hurricane/surge_wetlands.asp).
- Minello, T. J. and L. P. Rozas. 2002. Nekton in Gulf Coast wetlands: fine-scale distributions, landscape patterns, and restoration implications. *Ecological Applications* 12(2): 441-455.
- North American Waterfowl Management Plan, Plan Committee. 2004. North American Waterfowl Management Plan 2004. Implementation Framework: Strengthening the Biological Foundation. Canadian Wildlife Service, U.S. Fish and Wildlife Service, Secretaria de Medio Ambiente y Recursos Naturales, 106 pp.
- Nyman, J. A., M. Carloss, R. D. Delaune, and W. H. Patrick, Jr. 1993. Are landscape patterns related to marsh loss processes? Proceedings of the 8th Symposium on Coastal and Ocean Management, American Shore and Beach Preservation Association, New Orleans. 1993. p. 337-348.
- Nyman, J. A., M. Carloss, R. D. Delaune, and W. H. Patrick, Jr. 1994. Erosion rather than plant dieback as the mechanism of marsh loss in an estuarine marsh. *Earth Surface Processes and Landforms*. 19:69-84.
- Paine, J. G., S. Mathew, and T. Caudle. 2011. Texas gulf shoreline change rates through 2007. Bureau of Economic Geology. The Shoreline Change Project. University of Texas, Austin. Online article viewed 11/7/2012 [http://www.beg.utexas.edu/coastal/presentations\\_reports/begTexasGulfShorelineReport2011\\_highRes.pdf](http://www.beg.utexas.edu/coastal/presentations_reports/begTexasGulfShorelineReport2011_highRes.pdf)
- Penland, S., and J. R. Suter. 1989. The geomorphology of the Mississippi River Chenier Plain: *Marine Geology*. 90: 231-258.
- Pothina, D. and C. Guthrie. 2009. Evaluating inverted siphons as a means of mitigating salinity intrusion in the Keith Lake/Salt Bayou System, Jefferson County, Texas: prepared by the Texas Water Development Board. Grant No. MX-96401704. U.S. Environmental Protection Agency, Gulf of Mexico Program.
- Resio, D. T., and J. J. Westerink. 2008. Modeling the physics of storm surges. *Physics Today*, September 2008, pp. 33-38.
- Simon, S. 1996. Wild Cow Bayou ecological monitoring 1992-1994., United States Fish and Wildlife Service, McFaddin National Wildlife Refuge., Port Arthur, Texas.
- Stelly, T. D. 1980. Currents and biota at the Salt Bayou Weir and the Keith Lake Water Exchange Pass of Sea Rim State Park. Master of Science Thesis, Lamar University - Biology, Beaumont, Texas.
- Stutzenbaker, C. D. (1999). *Aquatic and Wetland Plants of the Western Gulf Coast*. Austin, TX, Texas Parks and Wildlife Press.

- Texas Parks and Wildlife Dept., Coastal Soil and Water Conservation District, and USDA Soil Conservation Service. 1976. Keith Lake Water Exchange Pass. Fish and Wildlife Development RC&D Measure Plan 48-6001-245-194. November, 1976.
- Texas Parks and Wildlife Dept. (TPWD) and U. S. Fish and Wildlife Service (USFWS). 1990. Salt Bayou Project. Joint water management concept plan for Sea Rim State Park, McFaddin National Wildlife Refuge, and Murphree Wildlife Management Area. Document No. 7-M-639-07/13/90.
- U. S. Fish and Wildlife Service. 2008. Texas Chenier Plain Refuge Complex: final environmental impact statement, comprehensive conservation plan, and land protection plan. Division of Planning, National Wildlife Refuge System, Southwest Region. Albuquerque, New Mexico.
- U. S. Fish and Wildlife Service. 2010. Restoration of the Salt Bayou System by diverting freshwater inflows and other wetland improvements on McFaddin National Wildlife Refuge, Jefferson County, Texas. Final Environmental Assessment, April 26, 2010. Wamsley, T.V., M.A. Cialone, J.M. Smith, B.A. Ebersole, and A.S. Grzegorzewski. 2009. Influence of landscape restoration and degradation on storm surge and waves in southern Louisiana. *Natural Hazards*, 51:207-224. White, W. A. and T. A. Tremblay. 1995. Submergence of Wetlands as a Result of Human-Induced Subsidence and Faulting along the Upper Texas Gulf Coast. *Journal of Coastal Research* 11(3): 788-807.
- Wamsley, T. V., M. A. Cialone, J. Westerink, and J. M. Smith. 2009. Influence of marsh restoration and degradation on storm surge and waves. Coastal and Hydraulics Engineering Technical Note ERDC/CL CHEH-I-77, Vicksburg, MS: U. S. Army Engineer Research and Development Center.  
<http://chl.erdc.usace.army.mil/library/publications/chetn/pdf/chetn-i-77.pdf>
- Warren Pinnacle Consulting, Inc. 2011. SLAMM Analysis of Southern Jefferson County, TX. Report for Gulf of Mexico Alliance: Habitat Conservation and Restoration Priority Issue Team. March 28, 2011.
- White, W. A., and Tremblay, T. A. 1995. Submergence of wetlands as a result of human-induced subsidence and faulting along the upper Texas Gulf Coast: *Journal of Coastal Research*. 11(3):788–807.
- Wilson, Paul C., Jr. 1981. History of the Saltwater Barrier on the Neches River. *The Texas Gulf Coast Historical and Biographical Record*, Vol. 17 CD: 29-37.





For more information about this Restoration Plan, contact Nathan Kuhn from the Texas Parks and Wildlife Department:  
[Nathan.Kuhn@tpwd.state.tx.us](mailto:Nathan.Kuhn@tpwd.state.tx.us), 512-389-8061.

#### ACKNOWLEDGEMENTS

This document could not have been completed without the efforts of several members of the Salt Bayou Workgroup. In particular, thanks goes to Angela Schriff for coordinating the drafting of the document and for overseeing all edits. Mike Rezsutek, Angela Schriff, Ashley Thompson, Woody Woodrow and John Huffman wrote text for sections of the document. Mike Rezsutek and Angela Schriff were instrumental in developing the figures presented in the document. In addition, edits and/or information used in the document were provided by Jim Sutherlin, Jerry Mambrecht, Patrick Walther, Jamie Schubert, Woody Woodrow, Mike Rezsutek, Terry Stelly, Ray Newby, Nathan Kuhn, Jonelle Stokes, Jeff Brown, Jenna Moon, and Carla Gutierrez, as well as several other members of the workgroup who provided verbal comments during the several meetings to review the document.

The Salt Bayou Workgroup members would also like to acknowledge the help and support that Jefferson County has provided to the workgroup efforts. From the very beginning of these efforts, the County recognized the value of the Salt Bayou ecosystem to its citizens as well as to the agencies with management responsibilities. Of particular note has been the continuous involvement of Don Rao, Jefferson County Director of Engineering, and the early support of County Commissioner Waymon Hallmark.

### 3. CD of U.S. Army Corps of Engineers Storm Reduction Study

6 / 14 / 2013

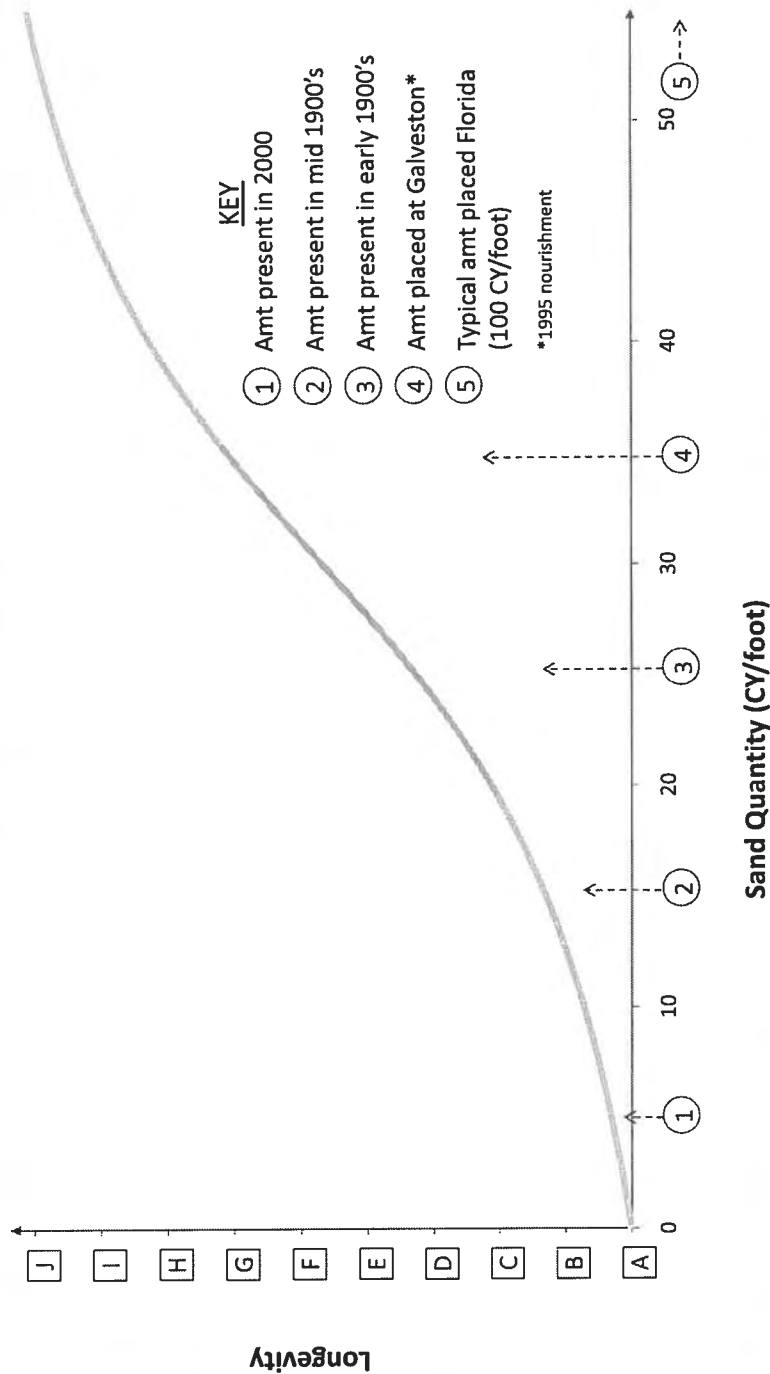
## 4. Incremental Analysis for the McFaddin Beach ridge Restoration Project

6 / 14 / 2013



# Incremental Analysis for the McFaddin Beach Ridge Restoration Project

- J** - Additional beach benefits, no additional marsh benefits
- I** - Long term benefits to off site locations (Bolivar, Texas Point, etc...)
- H** - Longevity extended with additional beach benefits and some marsh benefits
- G** - Refuge interior marsh survival assured for decades; potential for turtle habitat
- F** - Re-nourishment needs not likely in 20+ year project lifetime shoreline does not recede to pre-project location and retains ability to survive significant storm without clay loss
- E** - Similar to **D** with reduced effects of significant storms on interior marsh; increased time before shoreline recedes to pre-project location
- D** - Similar to **C** with reduced dependence upon re-nourishment; 10+ years before shoreline recede to pre-project location
- C** - Retreat rate reduced to below long term rate; inundation freq. at sustainable level; maintenance re-nourishment needed after significant storms
- B** - Shoreline retreat reverts to long term average; refuge interior remains at risk; inundation frequency reduced
- A** - Shoreline retreat rate continues above long term historical rate; likelihood of interior conversion to open water



DRAFT



\* Analysis is based on costs/volumes for beach re-nourishment (dredging and placement) and the longevity/benefits assume that the berm is constructed and in place.

## 5. Totals of Live killed

6 / 14 / 2013



## Hurricane Ike Totals

Date Hurricane Ike made landfall:	9/12/2008
Cattle in storm zone:	24,000 mature cows 7,000 calves
Cattle displaced:	20,000
Cattle fed and watered through Operation No Fences:	12,000
Relief efforts (includes donated items):	
Tons of livestock feed	165 tons
Round bales:	6,500 bales
Square bales:	3,000 bales
Cattle vaccine:	10,000 units
Water Troughs:	400 water troughs
Fencing panels:	300 portable fence panels
Savings attributed to the relief effort:	\$8.3MM
TSCRA Special Ranger Hours (Source: TSCRA):	2492
Cattle shipped from affected area (Source: TSCRA):	15,623
Cattle losses:	4,800 mature cows (20% death loss) 5,600 calves (80% death loss)
Cattle Carcasses Disposed (Source: NRCS):	1355 head in Chambers, Jefferson, Orange, and Galveston counties

*All figures are from AgriLife unless noted.*

## 6. Hurricane Rita and Ike Papers and Abstracts

6 / 14 / 2013

**Hurricanes Rita and Ike  
Papers and Abstracts  
2006 – 2010**

**Donald E. Owen, Ph.D.  
and  
Cissie J. Owen**

**Lamar University Department of Earth and Space Science**

**Richard A. Ashmore  
Geological Consultant**

**Texas Academy of Science Annual Meeting  
2-4 March 2006, Beaumont, Texas**

**PRELIMINARY ANALYSIS OF HURRICANE RITA WITH RESPECT TO OTHER  
MAJOR HURRICANES THAT HAVE STRUCK THE GULF COAST ALONG THE  
TEXAS-LOUISIANA BORDER AND HOW THESE STORMS HAVE SHAPED THE  
GEOLOGY AND ECOLOGY OF THE REGION.**

**Richard A. Ashmore**, Department of Biological Sciences, Texas Tech University, Lubbock, Texas.

Hurricane Rita was the first major hurricane (category 3 or greater) to strike the Gulf Coast along the Texas-Louisiana Border since Hurricane Audrey in 1957. Studies concerning how Rita affected the geology, biology, and human development of this section of the Gulf Coast will take years to complete. What is available now for discussion is a visual analysis of the affected area before and after Rita, how Rita's damage to the coast compares to damage caused by Audrey, and how major hurricanes have shaped the coastal geology and ecology of the area. A comparison and contrast of Rita with all recorded major hurricanes that have made landfall between Vermillion Bay, Louisiana and Freeport, Texas has been made so as to place Rita in a proper historical perspective.

**Texas Academy of Science Annual Meeting  
6-7 March 2009, Junction, Texas**

**COMPARISON OF HURRICANE IKE WITH OTHER MAJOR HURRICANES THAT HAVE STRUCK THE UPPER TEXAS AND SOUTHWESTERN LOUISIANA GULF COASTS**

**Richard A. Ashmore\***, Lamar University, Beaumont, TX and Texas Tech University, Lubbock, TX, and **Donald E. Owen**, Lamar University, Beaumont, TX.

Hurricane Ike was the second historically significant hurricane to strike the Gulf Coast along the Texas-Louisiana border within three years. Ike's storm surge was much larger than that expected from a Saffir-Simpson Scale Category 2 hurricane. The storm surge was in part enhanced by Ike's wind field size, angle of approach toward the coastline, and speed of movement as it approached the coastline. Compared to other strong hurricanes that have hit this area within the past 150 years. Ike's erosional and damaging effects on the coastline and infrastructure was spectacular considering its Category 2 rating. A visual analysis of the Upper Texas and Southwestern Louisiana coastlines before and after Ike and how Ike's damage to the coastline compares to damage caused by Rita and notable storms that have struck this area during the Nineteenth and Twentieth centuries will be exhibited and discussed, placing Hurricane Ike into a proper historical perspective.

**HOW TO ENHANCE PROPERTY DESTRUCTION BY HURRICANES BY INSTALLING GEOTUBES ON ERODING BEACHES--THE SAGA OF HURRICANE IKE AT GILCHRIST, TEXAS**

**Donald E. Owen\***, **Richard A. Ashmore**, & **Cissie J. Owen**, Lamar University, Beaumont, TX

A Geotube® is a temporary seawall or "sand sock". It absorbs wave energy and reduces flooding from minor storm surges of moderate meteorological events, such as cold-front passages or thunderstorms. Geotubes perform best in areas of beach accretion or stability. However, in beach-erosion areas, such as the upper Texas coast, Geotubes hasten beach erosion and increase damaging effects of hurricane storm surges. Geotubes were placed on both sides of Rollover Pass, an artificial cut in Bolivar Peninsula. They quickly reduced beach width and steepened the offshore profile. This steepening was caused by the Geotubes reflecting wave energy downward and offshore, causing sand removal offshore and water deepening. Without the gently sloping, normal beach profile, large waves could then strike the Geotubes during a tropical storm or hurricane storm surge. When the storm surge is above the height of the Geotube (typically 6-8 ft.), large storm waves pass over the Geotube, without it absorbing much wave energy, and hit structures behind it. The abrupt shallowing at the Geotubes can cause the waves to break on them rather than offshore, propelling fast-moving water directly onto beach houses, concrete slabs, etc. close behind them. This occurred during Hurricane Ike (2008), with a 20-foot storm surge, when all (>200) structures, except for one newly constructed home on high piers, were destroyed in Gilchrist between Highway 87 and the Geotubes. Also, because the Geotubes were breached, storm-surge backflow was concentrated at gaps cut in them, eroding channels several feet deep into beach sand and underlying compacted bay mud. Geotubes placed on Bolivar Peninsula gave residents a false sense of security and enhanced destruction by Hurricane Ike's waves. West of the area where Geotubes were placed, a much higher percentage of beach houses and slabs survived Hurricane Ike because there were no Geotubes to enhance destructive effects along a normal, gently-sloping beach.

7. November 2, 2009 Letter to Greg Pekar, State Hazard Mitigation Officer regarding the fact that Jefferson County could not utilize FEMA fundings for our restoration project

6 / 14 / 2013



**RONALD L. WALKER**  
County Judge

Jefferson County Courthouse  
P.O. Box 4025  
Beaumont, TX 77704

Beaumont (409) 835-8466  
Pt. Arthur (409) 727-2191 Ext. 8466  
Facsimile (409) 839-2311

November 2, 2009  
Greg Pekar  
State Hazard Mitigation Officer  
Governor's Division of Emergency Management  
P.O. Box 4087  
Austin, Texas 78773-0226

Dear Mr. Pekar:

I am writing to request that you forward this letter to FEMA with a request that they provide a preliminary eligibility determination of a mitigation project that Jefferson County may submit to FEMA for funding through the Hazard Mitigation Grant Program DR-1791, Hurricane Ike. As you will understand from the description below, the project is fairly complex. We strongly believe this activity is technically feasible, environmentally sound and cost-effective, but also acknowledge that there is some room for interpretation regarding programmatic eligibility. If FEMA Region VI concurs on the issue of project eligibility, we will proceed with developing a complete HMGP application, including preliminary engineering design and benefit-cost analysis, among the other required elements. However, given the nature of the project, developing an application will be time-consuming and expensive, and we do not want to expend resources on a proposal that does not have at least a moderate probability of approval. Please note that the Texas General Land Office just announced its commitment of \$3 million of state funds that will help ensure that the proposed flood damage mitigation measures will not be overtaken by shoreline retreat--further evidence of the level of support of the project goals.

For these reasons we are asking FEMA Region VI to review the information in this letter, and provide us with feedback regarding the eligibility of the project. Even though we have already completed some of the engineering and research related to the proposed project, there are many details that will not be fully understood until we complete more detailed studies as part of the application process. We clearly understand that your answer will not constitute an approval or endorsement of the project -- we are seeking only your initial feedback on the project so that we can decide whether to proceed with an application. In the sections below we have provided a project description and some brief comments on key elements of a potential application, specifically the cost-effectiveness of the project and NEPA compliance. If you have questions after reviewing these materials, we will be pleased to provide additional written information, hold a conference call, or meet with you in person to discuss the project.

### **Background**

The project site is on the Texas Gulf Coast in Jefferson County, extending about 25 miles along the coast between High Island and Sabine Pass, much of which is contained within the McFaddin National Wildlife Refuge. Prior to Hurricane Ike (2008), a low ridge consisting of clay covered with sand extended the entire length of the project site, with top elevations averaging about 6' MSL. The ridge prevented the sea water inundation of approximately 100 square miles of marsh area under normal conditions and during small storms. The busiest segment of the Gulf Intracoastal Waterway (GIWW) is located immediately inland of the marsh, and further north, the City of Port Arthur. The City of Port Arthur is protected by a storm surge levee. The GIWW is heavily used by the oil and gas industry for transport of raw materials and products to and from manufacturing facilities around Houston and Port Arthur.

Hurricane Ike flattened most of the remaining ridge in the project area. The physical circumstances of this unique clay-dominated shoreline are such that the clay ridge cannot be restored by natural processes. The ridge and the vast marsh provided a buffer against waves and surges generated by Gulf storms. The effects of Hurricane Ike were devastating to the Southeast Texas Gulf Coast. However, the storm surge only reached the top of the levee protecting the City of Port Arthur with only minimal overtopping. Absent the storm surge-dissipating effects of the buffering marsh, it is clear that additional overtopping and flooding within Port Arthur would have occurred. The project mitigates several significant flooding risks as listed here and further described in the paragraphs that follow:

1. Ongoing sea water inundation causing massive marsh destruction, resulting in the loss of the economic and environmental value of the publicly-accessible marsh
2. Complete loss of the economic use of the GIWW immediately following major storms due to unsafe conditions
3. Significant reduction in the utility of the GIWW for an extended period following major storms due to depth restrictions resulting from sedimentation
4. The implementation cost of substantial structural measures (breakwaters or seawalls) to protect the ongoing operation of the GIWW from the open waters of the Gulf of Mexico in the absence of the buffering marsh
5. Increased frequency and severity of flood damage to structures within Port Arthur due to the loss of storm surge-buffering marsh

**Marsh recovery.** The project very simply restores the integrity of the damaged clay/sand ridge to prevent ongoing sea water inundation from the Gulf of Mexico into the interior marsh. As a result of reduced salinities over time, the marsh will be allowed to naturally recover from the effects of Ike and other subsequent overwash events. The natural generation of plant biomass will help the marsh sustain a viable elevation in the face of rising sea level. Absent the project, the marsh die-off that has already occurred will not be reversed but will become more widespread, and the interior marsh and underlying soil between the present Gulf of Mexico shoreline and the GIWW some five miles inland will be eroded away and converted to open water within a matter of a few years. The process of conversion to open water is well documented in South Louisiana, where after-the-fact restoration efforts are consuming federal funds on a scale of hundreds of millions of dollars. Because a significant part of the project benefits are related to protecting the marsh biomass, we believe that it conforms to FEMA's general intent in establishing "vegetative management/soil stabilization" as an eligible class of projects (HMGP Desk Reference, Section 7).

**Protecting and maintaining the infrastructure and operation of the Gulf Intracoastal Waterway.** The Gulf Intracoastal Waterway (GIWW) extends from South Texas to Florida. A large proportion of the raw materials used by heavy industries (primarily refineries) in the region are moved by barges via the GIWW, making it a critical part of the regional transportation infrastructure, and essential in maintaining the operations of these industries. GIWW operations avoid the need for thousands of truck trips on regional highways. Hurricane damage to GIWW infrastructure, including downtime caused by debris and sedimentation, is correlated to the proximity of the channel to open waters of the Gulf of Mexico. Hurricane Ike caused significant direct damage to the GIWW infrastructure and millions of dollars in documented lost function damages related to channel obstructions, which mandate reduced barge loading. If the proposed project (or a similar one) is not completed, damages in future similar events are likely to be significantly worse because (a) the ridge will not be available to act as a wave break, and (b) the buffering marsh will be diminished or nonexistent, resulting in greater debris and sedimentation effects. Ultimately, without the mitigation project, very costly structural coastal protection measures (breakwaters, seawalls, etc.) will be required to protect the tremendous economic functions of the GIWW. We believe the GIWW is clearly classified as infrastructure, and hence the proposed project is eligible partly on the basis of "infrastructure protection measures", as noted in HMGP Desk Reference, Section 7.

**Mitigating surge risk to structures and infrastructure in and around Port Arthur.** We have not yet attempted to quantify in a detailed manner the degree of flood risk reduction for structures, infrastructure, and operations within the Port Arthur levee that would result from the project, but it is clear that under some hurricane/surge scenarios (e.g., a storm surge event identical to Hurricane Ike) the surge-dissipating effect of the ridge and marsh restored and preserved by the project would reduce the damages. We can perform a preliminary study to further identify and quantify this category of risk mitigation as necessary. Obviously, if any risk is mitigated the benefits will increase. Until such a study is completed we cannot provide an estimate of potential benefits.

## **Project Description**

The project will consist of the placement of a clay and sand ridge landward of the post-like clay beach location to a nominal elevation of approximately 6 feet above sea level, thereby preventing normal high tides and the effects of small storms from inundating the landward marsh with sea water from the Gulf of Mexico. The ridge will be located roughly 200 to 300 feet landward of the Gulf of Mexico to mimic the typical natural ridge location. This location is on the federally-owned McFaddin National Wildlife Refuge for a majority of the shoreline length, with the remainder primarily within Sea Rim State Park. A limited amount of similar construction may be appropriate near the GIWW (similarly situated on refuge/state park land) to maximize the integrity of the project. Other related components include hydrologic control structures to beneficially manage rainfall runoff that will enhance the marsh recovery and restoration goals of the project.

Projected costs are estimated to be nominally under \$1 million per mile of ridge and will ultimately depend upon the preferred ridge width and height as well as the location of the source material (either local, imported, or a combination). The project can be completed within one year of initiation of construction, allowing one year of design and regulatory effort to result in a viable project timeline of two years or less.

## **Cost Effectiveness**

As part of our project development, we have already completed a preliminary benefit-cost analysis that shows that the project produces a benefit-cost ratio of 2.14 using very conservative estimates of the potential costs of the ridge restoration. Please note that if the estimated cost of the ridge restoration and the potential for surge damage to structures and infrastructure in and around Port Arthur is included, the benefits (and hence the ratio) will increase.

## **Environmental Compliance**

We have engaged in proactive discussions with McFaddin Refuge managers to identify any stumbling blocks to successful project implementation. They support the project, are very familiar with the NEPA process as has been applied to the refuge for other recent projects, and see no significant NEPA-related issues that would adversely affect the proposed project.

## **Conclusion**

As noted above, the purpose of this letter is to request from FEMA Region VI some preliminary feedback regarding the eligibility of the project we have described here. There is clearly additional engineering study that would be required to move forward with an application, but we will undertake this only if we are reasonably assured that the project complies with basic eligibility for the HMGP. We greatly appreciate your consideration and cooperation in this matter. Please feel free to contact me with any questions or feedback.

Sincerely,

Ronald L. Walker  
Jefferson County Judge

*Your comments were successfully submitted at  
June 03, 2013 08:23 AM Mountain Time*

*Project:* Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy

*Document:* Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy

*Name:* Joseph A Salmon

*Address:* P.O. Box 1434

*City:* Danville

*State:* VA

*Postal Code:* 24543

*Email Address:* jsalmon403@gmail.com

*Organization:* United States citizen

*Keep My Info Private:* No

*Comments:* Proposal: The courts legally require British Petroleum to make downpayments on the \$16.7 trillion deficit, on a timetable established by the court. Proposal: The courts legally require British Petroleum to finance one to several major environmental Hollywood movie projects. I attended the "Screenwriter's Summit" in Las Vegas, Nevada in December, 2012. I believe that I can help develop major movie projects. Sincerely, Joseph A. Salmon, Jr. (434)793-1659

*Comment ID:* 856631-53621/15

Proposal: The courts legally require British Petroleum to make downpayments on the \$16.7 trillion deficit, on a timetable established by the court.  
Proposal: The courts legally require British ~~Petroleum~~ <sup>Petroleum</sup> to finance one to several major environmental Hollywood movie projects. I attended the "Screenwriter's Summit" in Las Vegas, Nevada in December, 2012. I believe that I can help develop major movie projects.  
Sincerely,  
Joseph A. Salmon, Jr.  
(434)793-1659

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## Gulf Coast Ecosystem Restoration Council releases Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy

May 23, 2013 | 4:00:00 PM EDT

The Gulf Coast Ecosystem Restoration Council marked significant progress today with the public release of the [Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy](#) and accompanying [Draft Programmatic Environmental Assessment](#) for [formal public comment](#). The Draft Plan provides a framework to implement a coordinated region-wide restoration effort in a way that restores, protects, and revitalizes the Gulf Coast region following the *Deepwater Horizon* oil spill.

The Draft Plan establishes overarching restoration goals for the Gulf Coast region; provides details about how the Council will solicit, evaluate, and fund projects and programs for ecosystem restoration in the Gulf Coast region; outlines the process for the development, review, and approval of State Expenditure Plans; and highlights the Council's next steps. The Council expects to release a Final Plan this summer.

Along with the release of the Draft Plan, Acting Secretary of Commerce Rebecca Blank and Council Chair announced today that Justin Ehrenwerth will serve as the Executive Director of the Council. These steps signify the Council's efforts to ensure that it is ready to move efficiently and effectively to implement a restoration plan once funds are received.

"As Chair of the Council, I am proud to announce that my Chief of Staff, Justin Ehrenwerth, will move into the role of Executive Director of the Council. I can think of no better person to help the Council continue to move forward with implementing a plan that ensures the long-term health, prosperity, and resilience of the Gulf Coast," said Council Chair Blank.

In order to ensure robust public input throughout the entire process, the Council is hosting a series of public engagement sessions in each of the five impacted Gulf States in June to give the public the opportunity to provide input on the Draft Plan and the Council's restoration planning efforts. The 30-day [formal public comment](#) period for the Draft Plan and associated documents begins today, May 23, and ends June 24. Public meetings to discuss the Draft Plan are scheduled for the following dates and locations:

June 3, 2013  
5:30 - 9:00 pm CST  
Escambia County Board of County Commission Chambers  
Ernie Lee Magaha Government Building  
221 Palafox Place  
Pensacola, FL 32502

June 5, 2013  
6:00pm CST  
The Tensaw Theater at 5 Rivers  
Alabama's Delta Resource Center  
30945 Five Rivers Boulevard  
Spanish Fort, Alabama

June 10, 2013  
6:00-8:00 pm CST  
Texas A&M University, Galveston  
200 Seawolf Parkway, Bldg 3007  
Galveston, TX 77554

June 11, 2013  
6:00 pm CST (registration begins at 5:00 pm CST)  
Mississippi Coast Coliseum and Convention Center  
2350 Beach Blvd  
Biloxi, MS 39531

June 12, 2013  
6:30 pm CST (doors open at 6:00 pm CST)  
Belle Chasse Auditorium  
8398 Louisiana Hwy 23  
Belle Chasse, LA 70037

June 17, 2013  
5:30 - 8:00 pm EST  
Fish & Wildlife Conservation Commissions' Fish & Wildlife Research Institute  
100 Eighth Ave. SE  
St. Petersburg, FL 33701

### We Want to Hear from You

From May 23, 2013 to June 24, 2013 you will be able to submit your input and comments to the Council [here](#). While the Council is seeking public comment on all aspects of the Draft Plan, we also ask that you consider the following questions:

1. The Draft Plan includes restoration Priority Criteria established in the RESTORE Act and applicable to the Council's selection of projects and programs for at least the first three years after publication of the Initial Comprehensive Plan. The Council is considering further defining these criteria and developing additional criteria for consideration.
  - Should the Council further define the Priority Criteria? If so, how?
  - Should the Council develop additional criteria for consideration now or in the future? If so, what should they be?
2. The "Objectives" section of the Draft Plan describes the broad types of activities the Council envisions funding in order to achieve its goals.
  - Should the Council consider other Objectives at this juncture? If not, at what point, if any, should the Council consider additional Objectives? If so, what should they be?
  - Similarly, should the Council eliminate any of the Objectives?
  - How should the Council prioritize its restoration Objectives?
3. The Council is considering establishing or engaging advisory committees as may be necessary, such as a citizens' advisory committee and/or a science advisory committee, to provide input to the Council in carrying out its responsibilities under the RESTORE Act.
  - Should the Council establish any advisory committees?
  - If so, what type of advisory committees should the Council establish? How should the Council structure such advisory committees? What role should such advisory committees play?



See the [Federal Register Notice](#) for additional information and details.

#### Background on the Gulf Coast Ecosystem Restoration Council

The Council, which was established by the Resources and Ecosystem Sustainability, Tourism, Opportunities Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act), will help restore the ecosystem and economy of the Gulf Coast region by developing and overseeing implementation of a Comprehensive Plan and carrying out other responsibilities. The *Deepwater Horizon* oil spill caused extensive damage to the Gulf Coast's natural resources, devastating the economies and communities that rely on it. In an effort to help the region rebuild in the wake of the spill, Congress passed the bipartisan RESTORE Act. The Act dedicates 80 percent of any civil and administrative penalties paid under the Clean Water Act by responsible parties in connection with the *Deepwater Horizon* oil spill to the Gulf Coast Restoration Trust Fund (the Trust Fund) for ecosystem restoration, economic recovery, and tourism promotion in the Gulf Coast region.

#### Attachments

[Draft Initial Plan](#) (PDF 621kb)

[Draft Programmatic Environmental Assessment](#) (PDF 1.1MB)

[Appendix A - Background Information - Preliminary List of Authorized but Not Commenced Projects and Programs](#) (PDF 258kb)

For media inquiries please contact Sarah Horowitz at 202-482-4883.

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Planning, Environment & Public Comment (PEPC)  
hosted by the National Park Service, U.S. Department of the Interior

## Submit Comments

Draft Initial Comprehensive Plan: Restoring the Gulf  
Coast's Ecosystem and Economy



We welcome your comments on this project.

Your comments must be submitted or postmarked by 11:59 PM Mountain Time on 06/24/2013.

For more information and to access the plan, please visit:

[www.restorethegulf.gov](http://www.restorethegulf.gov)

Draft Initial Plan (PDF 621kb)

Draft Programmatic Environmental Assessment (PDF 1.1MB)

Appendix A - Background Information - Preliminary List of Authorized but Not Commenced Projects and Programs  
(PDF 258kb)

For electronic submission of comments containing attachments, email: [RestoreCouncil@doc.gov](mailto:RestoreCouncil@doc.gov)

✓ If you prefer to submit your comments by mail, you may send your comments to:

Gulf Coast Ecosystem Restoration Council,  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

### Comment Form

**bold\*** indicates required fields

Country:	United States of America	
City:*	Danville	
State/Territory:*	Virginia	
Postal Code:*	24543	
First Name:	Joseph	Middle Initial: A
Last Name:	Salmon	
Organization:	United States citizen	
	<input checked="" type="radio"/> <b>Member</b> <input type="radio"/> <b>Official Representative</b>	
Address 1:	P.O. Box 1434	
Address 2:		
E-mail:	<a href="mailto:jsalmon403@gmail.com">jsalmon403@gmail.com</a>	

Please submit your comments in the box provided. You can enter up to 35,000 characters in the comment field  
(approximately equivalent to a 10 page letter).

**Comments:**

KATHY CASTOR  
14TH DISTRICT, FLORIDA

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ENERGY AND COMMERCE  
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SUBCOMMITTEE ON  
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2013 JUL 29 PM 2:50  
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4144 NORTH ARMENIA AVENUE  
SUITE 300  
TAMPA, FL 33607  
(813) 871-2817  
[www.castor.house.gov](http://www.castor.house.gov)

July 23, 2013

The Honorable Dr. Rebecca Blank  
Acting Secretary  
U.S. Department of Commerce  
Chair  
Gulf Coast Ecosystem Restoration Council  
1401 Constitution Ave. NW, Room 4077  
Washington, DC 20230

RE: Gulf Coast Ecosystem Restoration Council's Draft Initial Comprehensive Plan

Dear Dr. Blank:

Nearly one year ago, in response to the Deepwater Horizon oil disaster, the worst environmental catastrophe in U.S. history, the U.S. Congress passed and the President signed into law the RESTORE Act, a once-in-a-lifetime opportunity to dramatically improve the environmental and economic vitality of the Gulf of Mexico and related communities and businesses. The RESTORE Act, among other things, established the Gulf Coast Ecosystem Restoration Council (Council) to develop and implement a Comprehensive Plan that would protect and revitalize the Gulf Coast region's ecosystem and economy. Ecosystem recovery and investment are needed for economic sustainability.

As you know, the disaster wreaked economic havoc across the Gulf, including Florida and Tampa Bay. Industries all across the state reported a considerable decline in tourism-related revenues over the past three months. Trade Winds Resort, the largest hotel in Florida's Gulf coast, reported in 2010 that it lost \$1.7 million in the summer of 2010. This downward spiral had a chilling effect on other businesses that rely on tourism-generated revenues. I commend the Council for meeting its statutory obligations in a timely and inclusive manner, especially with the recent release of the draft initial Comprehensive Plan (Plan) for public comment.

Based upon my extensive involvement with stakeholders and as Co-Chair of the bipartisan Congressional Gulf Coast Caucus, I made a number of recommendations that were ultimately included in the RESTORE Act, including a commitment to research. As the Council seeks input in the development of this Plan from those who live and work in the Gulf Coast region, I am pleased to offer additional recommendations for the Comprehensive Plan:

### **Long Term Scientific Research in the Gulf of Mexico**

There will be numerous and extensive site-specific projects funded under the Natural Resources Damage Assessment (NRDA), State Allocations from RESTORE, and the Fish and Wildlife Foundation. The overriding intent of the Council's Comprehensive Plan is to focus on major Gulf-wide research and restoration strategies. I encourage the Council to concentrate on the macro ecosystem.

## **Apalachicola River System Freshwater Flows to Help Restore Gulf of Mexico**

The Council should work with the U.S. Army Corps of Engineers (Corps) to provide freshwater flows required to support and reestablish the physical, chemical, biological, and overall ecological integrity required for a thriving and resilient Apalachicola River, Apalachicola River flood plain, and Apalachicola Bay. By doing so, this would ultimately restore the Gulf of Mexico ecosystem and economy, a national treasure. As you know, the Apalachicola River discharges its nutrient-rich freshwater into the Apalachicola Bay, one of the most productive estuarine systems on the Gulf of Mexico coast. The biological productivity of the Apalachicola Bay is strongly influenced by the freshwater inflow from the Apalachicola River. Freshwater flows constitute the quality, quantity, timing, and variability of freshwater flows to also support and reestablish commercial and recreational fisheries dependent on freshwater flows into Apalachicola Bay and adjacent waters, including the Gulf of Mexico. Freshwater flows are also required to restore and recover species that are endangered, threatened, or at risk and to prevent significantly harmful adverse impacts to the Apalachicola River ecosystem.

The commercial fishing industry in the Apalachicola Bay has national implications and is responsible for \$134 million in economic output and an additional \$71 million in value added impacts. The Apalachicola Bay oyster industry alone employs more than 1,000 people, harvests approximately \$10 million in oysters annually, and historically, the Apalachicola Bay has provided more than 10% of the Nation's oyster supply. Other important commercial species for all the Gulf States as well as our national supply include shrimp, blue crabs, and striped mullet.

More than 95% of all species harvested commercially and 85% of all species harvested recreationally in the open Gulf spend a portion of their lives in the estuarine waters fed by the Apalachicola's flow into the Gulf. For example, blue crabs may migrate as far as 300 miles to spawn in Apalachicola Bay. Apalachicola Bay is also a major forage area for such offshore fish species as gag grouper and gray snapper. Most of the nearly two dozen ocean sport fish enter the Apalachicola Bay primarily for foraging. Apalachicola Bay is an unusually important nursery area for Gulf of Mexico commercial fish species. Moreover, a total of 131 species of freshwater and estuarine fish have been identified in the Apalachicola River, with 40 of these species found only in the lower tidal reaches of this river system. The Apalachicola River has the only known reproducing Gulf population of striped bass.

To provide freshwater flows for the Apalachicola that meet the aforementioned goals could help ultimately restore the Gulf of Mexico ecosystem and benefit our entire Nation's economy. Therefore, the Council should require the Corps to complete their revision of their water control manuals to ensure the maintenance of freshwater flows that meet the needs of all aspects of the Apalachicola – endangered species, as well as flows to achieve improved health for the Gulf. Additionally, the Corps should enter into an agreement with the National Academy of Sciences (NAS) under which the NAS would carry out an independent peer review of each revised water control manual, as required under section 2034 of the Water Resources Development Act of 2007; each independent peer review should comply with this section. Finally, before a final water control manual developed with the criteria listed above may be issued, the Corps should obtain written approval of each water control manual from the Administrator of the Environmental Protection Agency, Director of the U.S. Fish and Wildlife Service, Director of the National Oceanic and Atmospheric Administration, and the Director of the U.S. Geological Survey.

Significant resources are needed to study and repair the Gulf of Mexico for decades to come. To complement and improve other research activities, resources need to focus on collecting much needed data and deploy much needed monitoring capabilities across the Gulf. This information could further enhance our knowledge of the complex Gulf of Mexico ecosystem which is absolutely critical, for example, to Florida's tourist economy and jobs, wetlands, fisheries, and quality of life.

The Gulf of Mexico University Research Collaborative (GOMURC) has formed a solid partnership within the Gulf States in pursuit of scientific understanding of issues and has already served to inform decisions at all levels of government on resource management and policy practices affecting the Gulf of Mexico ecosystem and economy. GOMURC's continued involvement would ensure a solid foundation of science to support ecosystem restoration research and ensure a Gulf-wide perspective and input from major stakeholders.

### **Boost Gulf of Mexico Fisheries**

One-third of the national seafood harvest hails from the Gulf of Mexico. Even though Gulf seafood is the most tested, cleanest, safest seafood in the world, misperceptions have hurt our fisheries. Local businesses like Bama Sea Products of St. Petersburg have told me that Gulf seafood has lost market share to other seafood producers, both domestic and foreign. It is critical to restore our ecosystem to restore our fisheries and their economic value. Like ocean observing systems, the Gulf of Mexico fisheries have historically lagged behind other fisheries in the country in terms of investment. Resources should be directed for fisheries monitoring and research. There is a need to implement independent and dependent fishery modeling systems; acquire, protect, and restore essential fish habitats; and to enhance Marine Protected Species such as sea turtles, dolphins, and whales. The Gulf of Mexico Regional Fishery Management Council, as well as commercial, recreational, state and federal participants should be major players in this effort.

The Oil Spill Commission highlighted the importance of fisheries research and protection, particularly how using coastal and marine spatial planning has the potential to improve overall efficiency and reduce conflicts among users, "Ocean management should also include more strategically sited Marine Protected Areas, including but not limited to National Marine Sanctuaries, which can be used as 'mitigation banks' to help offset harm to the marine environment." Marine Protected Areas and scientifically valid measures, such as catch share programs, should be used to ensure the continuity and robustness of fisheries into the future. The RESTORE Act provisions relating to "Gulf Coast Restoration Science, Observation and Monitoring" specifically boost fisheries management and research. The Comprehensive Plan should connect and build upon the initiative.

### **Gulf of Mexico National Estuary Programs like the Tampa Bay Estuary Program**

The National Estuary Programs that operate in the Gulf of Mexico should be bolstered with significant new investments. Estuaries are critical to a healthy Gulf of Mexico as they provide nurseries for many species, including oysters, shrimp, and crab, which are integral to commercial fisheries. The Gulf estuaries have been degraded for years by nutrient runoff, pollution, energy development, and coastal development. I recommend improving the quality and health of Gulf Coast estuaries by strengthening the National Estuary Programs. For example, the Tampa Bay Estuary Program is designated by Congress to protect and preserve our waters. Through its "Charting the Course" protection plan, they have been improving water quality, recovering seagrass, and restoring wildlife and fish populations. We need to tap into their expertise and vigorously support their continued efforts through a substantial boost in resources. Also, in Florida, our Gulf Coast Water Management Districts have water quality initiatives that need greater collaboration.

As you can see, providing freshwater flows to the Apalachicola River system to restore the Gulf of Mexico ecosystem would also meet all of the draft initial Comprehensive Plan's five stated goals to: restore and conserve habitat, restore water quality, replenish and protect living coastal and marine resources, enhance community resilience, and restore and revitalize the Gulf economy.

**National Sea Grant College Program, Tampa Bay Watch and other Non-Profits**

Resources should be leveraged by partnering with existing National Sea Grant College Programs or non-profits such as Tampa Bay Watch in the Gulf Coast to fund restoration projects. Studies have shown that every dollar invested in this Program returns \$20 in economic growth in coastal communities.

**Ensure that Natural Resource Damage Assessment monies and programs are not duplicated**

With over \$1 billion in Natural Resource Damage Assessment (NRDA) monies going toward early restoration and a yet undetermined amount from Clean Water Act settlement proceeds for RESTORE Act purposes, which could be up to \$20 billion, the Council should delineate that the settlement proceeds are not intended to and shall not duplicate the extensive environmental restoration projects under the jurisdiction of NRDA and the Oil Pollution Act. The same can be said to the U.S. Fish and Wildlife Foundation.

The Council has done a good job thus far and I reiterate to think broadly about Gulf research and restoration. We must ensure that resources are used in the most effective manner to secure the long-term health and stability of our region's most precious economic and environmental asset, the Gulf of Mexico. Thank you for considering my recommendations to repair the Gulf Coast ecosystem with this once-in-a-lifetime opportunity. If you have any questions or comments, please feel free to contact me or my legislative assistant, Javier Gamboa (202) 225-3376.

Sincerely,



Kathy Castor  
U.S. Representative  
Florida- District 14



June 28, 2013

Via Email and U.S. Mail

Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, NW  
Washington, DC 20230

Re: Public Comments for the Draft Initial Comprehensive Plan: Restoring the Gulf Coast's  
Ecosystem and Economy

Dear Council Members,

On behalf of our four million members and supporters nation-wide, including approximately 390,000 in the Gulf States, the National Wildlife Federation (NWF) appreciates this opportunity to provide comments on the Council's Draft Initial Comprehensive Plan. For our membership, and sportsmen and anglers throughout the country, restoring the Gulf ecosystem is a top priority. Rapid land loss, declining water quality, overfishing, natural disasters, and the tragic 2010 Deepwater Horizon Oil disaster have devastated marine and coastal habitats, fish and wildlife populations, and undermined the resiliency of coastal communities on the Gulf Coast. The long term impacts on both people and wildlife are substantial, and these issues will need to be addressed through a comprehensive, science-based, and transparent process. NWF and its state affiliates have a long history in the region, providing support to local, state, and federal organizations and agencies to rebuild and restore coastal ecosystems throughout the Gulf. We believe the RESTORE Act represents an unprecedented opportunity to ensure a healthy, resilient, and sustainable Gulf environment for the benefit of future generations. In addition to our broader Gulf presence, as a member of the Mississippi River Delta Coalition (MRD), NWF works specifically to rebuild and preserve vital ecosystems along Louisiana's coastline. The MRD Coalition will also submit comments for the record that reflect restoration priorities in the Mississippi River Delta — a cornerstone of the broader Gulf environment.

Studies show that there is broad public support for restoring the Gulf ecosystem. A recent poll by Chesapeake Beach Consulting shows that eighty-seven percent of sportsmen strongly believe that fines and penalties from the Deepwater Horizon oil spill should be used exclusively to



restore fish and wildlife habitat of the Gulf of Mexico and its fishing and hunting heritage, and not for infrastructure projects such as roads, bridges, ports and convention centers.<sup>[1]</sup>

Every dollar invested in restoring the Gulf environment will strengthen and sustain the region's economy. The Gulf contributes many billions of dollars annually from its commercial and recreational fishing industry alone.<sup>[2]</sup> Restoring this vital ecosystem will benefit people, coastal communities, fish and wildlife populations, as well as the national economy, and fulfill the intent of Congress in passing the RESTORE Act.

It is for that reason that we provide the following recommendations, modifications, and additions to the Draft Initial Comprehensive Plan. Thank you in advance for your consideration, and we look forward to continuing to work with you to restore the Gulf of Mexico.

Sincerely,

David J. White, Esq.  
Director, Gulf of Mexico Restoration Campaign  
National Wildlife Federation  
1700 Fairway Avenue South, Suite 100  
St. Petersburg, FL 33712

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<sup>[1]</sup> <http://www.nwf.org/News-and-Magazines/Media-Center/Reports/Archive/2012/09-25-12-National-Sportsmen-Poll.aspx>

<sup>[2]</sup> [Gulf](#) of Mexico Regional Ecosystem Restoration Strategy, Gulf Coast Ecosystem Restoration Task Force, December 2011.

## **Comments of the National Wildlife Federation on the Draft Initial Comprehensive Plan**

**RESTORE Implementation Principle.** Congress passed the RESTORE Act in direct response to the Deepwater Horizon oil spill—the largest environmental disaster in U.S. history. In this context, Congress intended the Gulf Coast Restoration Trust Fund to benefit the environment *and* economy of the region. As the disaster made abundantly clear, harming the Gulf ecosystem adversely impacts the regional economy. To carry out this overarching theme of the RESTORE Act, NWF recommends that the Council adopt the following principle:

- Each project and program selected by the Council or approved in State Expenditure Plans must avoid, minimize, and mitigate environmental harm *and* provide a net environmental benefit.

**Council-selected Ecosystem Restoration Component.** NWF supports provisions in the Draft Initial Comprehensive Plan that confirm the statutory requirement that Council-selected restoration projects “restore and protect the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.” **We recommend that the Council reaffirm and strengthen this focus in the Final Initial Comprehensive Plan.**

**Science-based Decision-Making.** NWF supports the Council’s commitment to support decision-making based upon the best available science. In order to achieve this, the Council must commit to supporting a sound RESTORE Science Program that requires an ecosystem approach to restoration by supporting integrated research, monitoring, and modeling throughout the Gulf of Mexico, while leveraging existing partnerships. An important piece of this work was completed by the Gulf Coast Ecosystem Restoration Task Force through development of their Ecosystem Science Assessment and Needs report.<sup>1</sup> The Council has committed to incorporating findings and strategies from the Task Force into the Final Comprehensive Plan, however there is no mention of this report or how the Council intends to incorporate it. NWF also **urges the Council to approve, develop, and utilize, to the maximum extent possible, a Restoration Science Advisory Committee (SAC)** that will compile, update, translate, and make publically accessible, the best available science on the state of Gulf ecosystems, restoration management practices, and comprehensive monitoring and evaluation, and make recommendations to the Council based thereon. As part of this process **we recommend that the Council appoint a senior-level Chief Scientist** that would serve as Chair to the SAC in order to coordinate science objectives moving forward in implementing the Comprehensive Plan.

**Project Selection Criteria.** The RESTORE Act requires the Council to establish priorities for funding based on best available science and according to four required restoration priority criteria, provided below. **While NWF recommends that the Council further define statutory criteria and provide interpretive guidelines, we urge the Council not to adopt criteria outside of the scope of those specifically provided for in the statute.** NWF supports inclusion of the following considerations in evaluating whether projects or programs meet restoration criteria:

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<sup>1</sup> Gulf of Mexico Ecosystem Science Assessment and Needs, Gulf Coast Ecosystem Restoration Task Force Science Coordination Team, April 2012.

- 1) *“Projects that are projected to make the greatest contribution to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region, without regard to geographic location within the Gulf Coast region.”* The Council should interpret this criterion to focus on projects and programs that:
  - Address existing (or prevent future) environmental degradation;
  - Restore or conserve ecologically important habitat across all ecological regions, including from upstream in watersheds, through coastal and nearshore habitats, to bluewater marine ecosystems;
  - Protect indicator species (including threatened or endangered species); and/or
  - Maximize ecological benefits by working synergistically with other restoration activities, leveraging other sources of restoration funding, such as NRDA, NFWF, and North American Wetlands Conservation Fund.
- 2) *“Large-scale projects and programs that are projected to substantially contribute to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast ecosystem.”* The Council should interpret this criterion to mean projects and programs that:
  - Regardless of geopolitical boundaries, provide large ecosystem-scale environmental restoration or protection.
- 3) *“Projects contained in existing Gulf Coast State comprehensive plans for the restoration and protection of natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.”* This criterion should be interpreted to give priority to projects that:
  - Are contained in existing comprehensive environmental restoration plans in the Gulf Coast region, including projects that are in the Comprehensive Everglades Restoration Plan, the Louisiana Coastal Master Plan, and the Mississippi Coastal Improvement Plan that provide the greatest ecological benefits to Gulf restoration.
- 4) *“Projects that restore long-term resiliency of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands most impacted by the Deepwater Horizon oil spill.”* The Council should interpret this criterion to address programs and projects that:
  - Provide sustainable long-term benefits;
  - Consider and account for the impacts of climate change, including sea level rise, subsidence, coastal flooding, increased frequency and severity of storms, and the impacts of ocean acidification; or
  - Benefit the long-term resiliency of the *types* of resources, ecosystems, processes, habitats, fish and wildlife that were harmed by the spill.<sup>2</sup>

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<sup>2</sup> Because resources that were actually harmed by the oil disaster should be restored through the Natural Resource Damage Assessment process, this criterion should address increased benefits to the types of resources that were impacted—and not the actual reparation of damage.

**Sample Project Evaluation.** With our partners in the Mississippi River Delta Coalition, NWF has provided a project list prioritized using statutory criteria for funding projects within Louisiana. In addition, we provide below examples of how various kinds of projects within Texas, Alabama, Mississippi and Florida might be evaluated. These projects each help accomplish the goals of the RESTORE Act and provide benefits consistent with statutory prioritization criteria. These projects are provided for example only, are not listed according to any priority, and do not constitute all projects and programs that NWF would support.

In providing examples of projects in Texas, NWF has focused on protection and enhancement of freshwater inflows. For many Texas estuaries, the assurance of adequate freshwater inflows is arguably the most critical long-term restoration need. Freshwater inflows to the estuary systems from rivers and streams are the primary variable determining estuarine health, particularly when considered in terms of long-term viability.

Because so much of the reliably available water in Texas already has been allocated through perpetual water-rights permits that authorize complete consumptive use, a two-step process will be needed to deliver the necessary quantities of freshwater inflows to many estuaries within the Gulf Coast region. In the first step, property interests would be acquired to all or a portion of selected existing water-diversion permits to prevent the water from being taken out of the river or stream before it reaches the coast. The second step would involve adding legally enforceable downstream delivery points and mechanisms--basically moving the acquired permit downstream--to provide for physical delivery of the increased inflows to key habitat features within the Gulf Coast region.

To ensure needed freshwater inflows for some estuaries, it may be necessary to acquire interests in water permits that are located inland of the Gulf Coast region as the RESTORE Act defines it. These transactions would provide, through permit amendment or other legal means, an enforceable mechanism resulting in physically delivering water at new delivery points downstream within the defined Gulf Coast region. The result is analogous to purchasing raw materials or component parts only available from outside the region for construction of a fish hatchery along the coast. There is no requirement in the Act, and no compelling reason to infer a limitation, that would deprive the Gulf Coast region of these critical benefits. Accordingly, NWF urges the Council to avoid adopting any interpretation that would inhibit providing funding for meritorious projects designed to deliver critically important freshwater inflows to the Gulf Coast region from inland areas.

#### ***Example Restoration Projects, Texas:***

*Nueces Bay Productivity Enhancement Through Wastewater Relocation and Dedication:* The continued productivity and health of the Nueces Bay estuary system is at risk because of reduced inflows of fresh water, and accompanying nutrients, particularly into the Nueces Bay delta. Freshwater inflows from streams and rivers are critical for the continued productivity of estuaries: delivering nutrients to support food webs, supplying sediments to sustain marshlands, and maintaining areas of moderate salinity for critical life stages of many species. Recognizing the difficulty of securing increased inflows from upstream in the river system flowing into the estuary, this project involves obtaining voluntary "dedications" of treated wastewater discharges to be delivered at advantageous locations in the Nueces Estuary. Through a voluntary dedication

of a portion of wastewater return flows, and relocation of discharge points and addition of pipelines to deliver the water where it is needed most, this project would be designed to deliver a significant amount of drought-secure inflows, and beneficial nutrients, to a key portion of the Nueces Estuary each year. The project would provide great benefits to coastal habitats, fisheries, and coastal wetlands by restoring and enhancing long-term resiliency on an ecosystem scale. (This project meets priority criteria 1, 2, and 4.)

*Galveston Bay Freshwater Inflows:* The continued productivity and health of the Galveston Bay system is at risk because of reduced inflows of fresh water. Freshwater inflows from streams and rivers are critical for the continued productivity of estuaries: delivering nutrients to support food webs, supplying sediments to sustain marshlands, and maintaining areas of moderate salinity for critical life stages of many species. This project involves delivering additional water within the Gulf Coast area including by paying owners of existing diversion rights not to divert that water upstream and adding downstream delivery points for conveying the water to the estuary. It would provide up to an additional 100,000 acre-feet/year of drought-secure inflows to the Galveston Bay system as compared to future conditions without the project. The project would provide great benefits to coastal habitats, fisheries, and coastal wetlands by restoring and enhancing long-term resiliency on an ecosystem scale. (This project meets priority criteria 1, 2, and 4.)

*Guadalupe Estuary Freshwater Inflows:* The continued productivity and health of the Guadalupe estuary system is at risk because of reduced inflows of fresh water, particularly in drought periods. Freshwater inflows from streams and rivers are critical for the continued productivity of estuaries; delivering nutrients to support food webs, supplying sediments to sustain marshlands, and maintaining areas of moderate salinity for critical life stages of many species. This project involves delivering water within the Gulf Coast area by paying existing owners of diversion rights not to divert that water upstream and by obtaining voluntary dedications of wastewater return flows. Downstream delivery points would be established for conveying the water to the estuary. The project would provide up to an additional 80,000 acre-feet/year of drought-secure inflows to the San Antonio Bay system as compared to future conditions without the project. The project would provide great benefits to coastal habitats, fisheries, and coastal wetlands by restoring and enhancing long-term resiliency on an ecosystem scale. (This project meets priority criteria 1, 2, and 4.)

*Matagorda Bay Freshwater Inflows:* The continued productivity and health of the Matagorda Bay and estuary system is at risk because of reduced inflows of fresh water, particularly during drought periods. Freshwater inflows from streams and rivers are critical for the continued productivity of estuaries; delivering nutrients to support food webs, supplying sediments to sustain marshlands, and maintaining areas of moderate salinity for critical life stages of many species. In this river system, there are limited options for increasing drought-period inflows to the estuary simply by paying those with existing diversion rights not to divert. Accordingly, this project involves purchasing an ongoing right to have water delivered within the Gulf Coast area from new storage facilities that are planned for imminent development. The addition of storage would allow for water to be diverted during periods of high inflows and stored for release during dry periods. This project would be designed to procure about 24,000 acre-feet/year of freshwater inflows that could be delivered when most needed. The project would provide great benefits to

coastal habitats, fisheries, and coastal wetlands by restoring and enhancing long-term resiliency on an ecosystem scale. (This project meets priority criteria 1, 2, and 4.)

***Example Restoration Projects, Mississippi:***

*Gulf Islands National Seashore "GINS":* This project serves as a primary example of protecting and conserving significant habitat and living coastal and marine resources in Mississippi and the Gulf of Mexico. As proposed by the U.S. Department of the Interior's National Park Service, this project supports nesting for migratory waterfowl, important fisheries, and several state and federally-listed species. It promotes community resilience against storm surge and sea level rise and supports the local economy through eco-tourism. This project complements the U.S. Army Corps of Engineers' Mississippi Comprehensive Barrier Island and Ecosystem Restoration project. (This project meets all four priority criteria.)

*Turkey Creek Ecosystem Restoration:* Supported by the Mississippi Department of Environmental Quality, this project proposes to restore the hydrology and natural vegetation of a degraded wet pine savannah habitat, which is one of the most endangered ecosystems in the United States. Notably, communities throughout Turkey Creek watershed recognize the storm surge protection this area provides. (This project meets priority criteria 3 and 4).

*Pascagoula River Marsh Restoration:* This project is a prime example among the broad suite of emergent aquatic vegetation projects being proposed that demonstrates the value of restoring living shorelines. Projects that involve marsh restoration will support habitat for fisheries, migratory waterfowl, and shore birds. As supported by the Mississippi Department of Environmental Quality, this marsh restoration project also complements the U.S. Army Corps of Engineers' state-wide Aquatic Ecosystem and Reef Restoration Project. (Marsh restoration projects meet priority criteria 1, 3 and 4).

*Bay St. Louis and Biloxi Bay Oyster Reef Restoration:* This project is an ecosystem restoration opportunity that has been identified by NWF and our Gulf Restoration Partnership allies. Specifically, the proposal is to construct up to 30 acres of subtidal oyster reef habitat in Bay St. Louis and up to 70 acres in Biloxi Bay using natural oyster shell on suitable water bottoms. As existing pilot projects have shown in these waters, this project would restore the productivity and biodiversity of Bay St. Louis and Biloxi Bay by providing water filtration, nursery habitat for commercially and recreationally important fishes and invertebrate species, food sources for wildlife such as shore birds, and additional protection for shorelines and marshlands. The project is being designed in a manner that is consistent with state and federal restoration plans for restoring Mississippi's subtidal oyster reefs. In addition, the proposal will support the economy of the local and regional recreational and commercial seafood industry. (This project meets priority criteria 1 and 4.)

***Example Restoration Projects, Alabama:***

*100-1000: Restore Coastal Alabama:* Mobile Bay, with the fourth-largest drainage basin in the U.S., has experienced significant loss of oyster reefs, coastal marsh and seagrass beds. Despite these challenges, Mobile Bay represents one of the largest potential areas for outright restoration,



replacement and enhancement of these lost habitats due to the size of the estuary, historical distribution of oysters in the bay, high natural oyster spat sets and warm water for fast growth. Engaging in ecosystem-scale restoration is a critical first step to address impacts from the oil spill in order to help restore habitats, wildlife and fisheries of importance across Alabama and the Gulf, both immediately and for the long term. The *100-1000: Restore Coastal Alabama* partnership proposes to build 100 miles of intertidal oyster reefs, which will in turn protect and promote the growth of more than 1,000 acres of coastal marsh and seagrass. These living shoreline projects apply natural principles and construction elements that create habitat and provide other services important for estuarine functioning. They provide substrate for oyster larvae to settle and colonize, creating structural and foraging habitat for economically important estuarine fishes, vertebrates and invertebrates. Other project benefits include increased light penetration for seagrass and decreased wave energy and shoreline erosion. (This project meets all four priority criteria.)

*Mobile Causeway Hydrological Restoration Project:* The Mobile-Tensaw Delta, terminus of the fourth-largest watershed in the continental United States in terms of water volume, empties into Mobile Bay, contributing to one of North America's largest, most productive and most diverse estuarine systems. The Delta's importance lies in the connection between the riverine and coastal ecosystems. The dike-like Mobile Bay Causeway has reduced the Delta's critical ecosystem services, including habitat functioning, productivity and species and habitat diversity. This project will involve reconnecting the tidal exchange in the Mobile-Tensaw Delta by bridging Justin's Bay and Chocolata Bay to address upstream and downstream modifications that have altered ecological productivity. The existing roadway has altered saltwater and freshwater exchange, adversely impacting coastal marsh and seagrass habitats north and south of the causeway and thus, the finfish, shellfish and wildlife that depend on them. The Delta's importance lies in the connection between the riverine and coastal ecosystems. This project will restore the Delta's critical ecosystems services, including habitat function, productivity, and species and habitat diversity. (This project meets priority criteria 1, 2, and 4.)

*Dauphin Island Causeway Habitat Restoration & Public Access:* The objectives of this project are to expand the protective buffer along the right of way of the causeway, restore and enhance the causeway shoreline to promote wetland vegetation re-growth, improving the habitat for marine life, and to provide additional public access points. A 9,000 linear foot section of the Dauphin Island Parkway will be protected through the creation of 36 acres of aquatic habitat including sandy beaches, oyster reefs, fishing reefs, and enhanced public access through the creation of two 0.33-acre roadside pocket parks. This will be accomplished by installing 3,500 wave attenuation breakwaters deployed in a double row using an offset segmented design. 12,000 cubic yards oyster cultch will be placed shoreward of the breakwaters to provide hard substrate for the setting of oyster larvae and to provide habitat for other marine vertebrates and invertebrates. A total of 8,000 cubic yards of earthen fill will be used to create two pocket parks to provide public access to the restoration site for fishing. The parks will be constructed in collaboration with the Department of Transportation to ensure proper engineering, construction, and traffic guidelines are used. Additional habitat will be added by planting of 15,000 *Spartina alterniflora* and *Spartina patens* transplants to stabilize the shoreline of the constructed pocket parks. (This project meets priority criteria 1 and 4.)



### ***Example Restoration Projects, Florida:***

***C-43 West Basin Storage Reservoir Project:*** In Labelle, FL, this project is critical to restoring the estuaries of southwest Florida, including Charlotte Harbor National Estuary, one of the primary drivers of Gulf of Mexico fisheries. This project, sponsored by South Florida Water Management District, is an important component of the Comprehensive Everglades Restoration Plan which involves an above-ground reservoir (170,000 ac-ft capacity) located south of the Corkscrew Regional Ecosystem Watershed and west of the Ortona Lock (S-78), and will comprise a significant portion of total water storage requirement for the C-43 Basin. This project is also part of the National Estuary Program Southwest Florida Regional Restoration plan. (This project meets all four priority criteria.)

***St. Marks National Wildlife Refuge:*** This project, in Wakulla, Jefferson, Taylor, and Franklin Counties FL, submitted by Department of the Interior/USFWS, provides habitat conservation through land acquisition, permanent conservation easements, and agreements with willing landowners. The refuge spans over 43 miles of coastline and supports 52 species of mammals such as the Florida black bear and bobcat; 40 species of amphibians such as the endangered flatwoods salamander; 65 species of reptiles; and numerous fish species, including gulf sturgeon and gulf striped bass. In addition, this project, as well as other North Florida coastal projects, provides tremendous benefit to migratory bird species. Natural salt marshes, freshwater swamps, pine forests and lakes provide a haven for wildlife and people. This project meets the Council's restoration goals of Restore and Conserve Habitat, Restore Water Quality, Enhance Community Resilience, and Replenish and Protect Living and Coastal and Marine Resources. (This project meets priority criteria 1 and 3.)

***Tamiami Trail Next Steps Project:*** This project in Everglades National Park, FL, will help restore historic fresh water flows to Everglades National Park and Florida Bay and the Gulf of Mexico, providing improvements to wetlands and coastal fisheries of Florida Bay by dramatically improving water flows into the estuaries of Southwest Florida. (This project meets priority criteria 1, 2 and 3.)

***Apalachicola River, St. Vincent Sound to Lake Wimico Ecosystem:*** This famed ecosystem supports one of the nation's last natural oyster fisheries as well as providing the source of one of America's great fisheries habitats: Apalachicola Bay. Acquisition of parcels totaling 11,214 acres would protect and enhance water quality going to the bay, and buffer one of the world's last great mainly-undeveloped rivers. Restoration of Tate's Hell State Forest will likewise directly benefit Apalachicola Bay. The St. Vincent Sound to Lake Wimico Ecosystem includes a vast 40,000 acre wetland tract south of Lake Wimico. Protection by conservation easement would afford water quality and quantity benefits to the Lake, as well as to Apalachicola and St. Joseph Bays and St. Vincent Sound. (This project meets priority criteria 1, 2 and 4.)

***West Bay Preservation Area:*** This Bay County project would complement lands already protected by mitigation for the new Panama City Airport. This 4,494 acre project secures the northern side of West Bay, and has a direct impact on protection of water quality. Moreover, it is possible additional land directly on the Bay and north thereof could be part of larger conservation project to protect additional wetland areas. Alone or combined with other

watershed protection projects (such as Seven Runs Creek, South Walton Ecosystem, and others), the West Bay Preservation Area project would greatly contribute to long term health and resiliency of the area's rich and diverse fish and wildlife habitats, including marine, estuarine and freshwater systems of Gulf coastal watersheds. These areas contain many species of plants and animals, including federally designated critical habitat for the Gulf Sturgeon. (This project meets priority criteria 1, 2 and 4.)

*Lower Suwannee National Wildlife Refuge:* Submitted by The USFWS and others, this project is a 73 square mile watershed and coastal habitat protection project bordering more than 20 miles of state, Water Management District and federal conservation lands along the Suwannee River Sound and Gulf of Mexico. The project enhances surface and ground water quality and quantity benefits for coastal commercial and sport fishing areas, including tidal creeks and springs, marsh and marine grass beds of the Big Bend Coast, and conserves hardwood hammocks and riparian swamps. The LSNWR supports extensive migratory bird habitat, and protects habitat for imperiled aquatic species such as Gulf Sturgeon and Manatee, as well as for upland species like black bear. The LSNWR contains one of the Gulf of Mexico's most significant and wild riparian estuaries with the highest survey counts for coastal birds such as the American Oystercatcher. (This project meets priority criteria 1, 2, and 4.)

**Objectives.** The Draft Initial Comprehensive Plan includes seven objectives to further define the types of projects and programs the Council intends to select for funding. We appreciate the acknowledgement that efforts funded under the Council-selected allocation may achieve multiple objectives at once, and also may not (and should not) be equally distributed among objectives.

**We urge the Council to avoid objectives that would limit ecosystem restoration projects based on economic considerations.** Components of the Gulf ecosystem are intrinsically linked. Individual environmental restoration projects, when considered alone, may not have enormous economic benefits, but when completed as part of a Comprehensive Ecosystem Restoration plan will create jobs and sustain a robust economy. As a result, any objective that would filter out or disadvantage consideration of ecosystem projects based on potential economic impact threatens to undermine the holistic environmental and economic goals of the RESTORE Act.

In addition, NWF recommends the Council establish the following prioritization of objectives:

- **Primary Objectives:** Each selected project must be designed to attain one or more primary objective. The Council should establish Objectives 1-4 in the Draft Initial Comprehensive Plan as primary.
- **Secondary Objectives:** In addition, selected projects that achieve additional, co-occurring benefits should also be viewed favorably. Secondary objectives are those that aren't required of each project, but that add value. Objectives 5-6 should be established as secondary.
- Objective 7 is more appropriately viewed as an integrated requirement of plan development and project selection. NWF recommends that the Council establish regional scientific monitoring and adaptive management standards, and that the Plan require each

project to incorporate such project-level scientific monitoring and adaptive management strategies.

**State-specific Restoration Expenditure Plans.** As the Draft Initial Comprehensive Plan notes, State Restoration Expenditure Plans must be consistent with goals and objectives of the Comprehensive Plan. The RESTORE Act requires the Council to consider and approve, or deny, state plans. The Act also limits spending on infrastructure in state plans - a state may only exceed the infrastructure spending limitation if there are no remaining environmental restoration needs.

While the Draft Initial Comprehensive Plan outlines permissive elements that *may* be included in a State Restoration Expenditure Plan, it does not specify what *must* be included or what *must not* be included. **We recommend that the Council revise the Draft Initial Comprehensive Plan to more clearly delineate required elements of state plans, criteria and process for a consistency determination, and the method for evaluating sufficiency of a state-certification that environmental restoration needs have been fully met.**

**Specifically, the following elements should be mandatory:**

- The amount of funding needed for each project, program, and activity selected by the State for planning and implementation; the proposed start and completion dates; and specific mechanisms that will be used to monitor and evaluate the outcomes and impacts of each project, program, and activity.
- A description of how the best available science, as applicable, informed the State's project, program, and activity selection.
- A justification statement of how all included projects, programs, and activities are eligible activities under the RESTORE Act.
- A description of how each included project, program, and activity contributes to the overall economic or ecosystem recovery of the Gulf Coast.
- A certification that all included projects, programs, and activities do not exceed the 25 percent funding limit for infrastructure.
- If the state intends to claim an exception to this 25 percent limitation for infrastructure in accordance with the RESTORE Act, the state must provide the percentage to be spent on infrastructure, evidence that the environmental restoration needs of the state have been met, and certify that the state has provided adequate public notice of its intent to claim an exception.
- A description of how each project, program, and activity is consistent with the Goals and Objectives of this Plan. The Council should clarify that it views "consistent" to mean:
  - Each eligible project, program, and activity will further one or more of the five Goals; **and** will not negatively impact the Gulf Coast ecosystem.
- A description of the process the State will use or has used to ensure appropriate public and tribal participation and transparency in the project, program, and activity selection process.

- A description of financial controls and other financial integrity mechanisms to be used to assure the public and Congress that funds have been managed appropriately to further the purposes of the RESTORE Act.
- A description of the methods the State will use to measure, monitor, and evaluate the outcomes and impacts of funded projects, programs, and activities.

**The following elements should be discretionary, but encouraged because they would be useful to the Council in evaluation and approval or disapproval of State Restoration Expenditure Plans:**

- To the extent known, a description of any certain or prospective collaborations or partnerships to be used or created through the selection process.
- To the extent known, a description of any additional resources that will be leveraged to meet the goals of the State Expenditure Plan.

**The Council should also specify elements that will lead to disapproval of a state plan, including missing or incomplete information.**

**Again, on behalf of our members and supporters, we thank you for the opportunity to provide these comments, and we look forward to working with you to restore the Gulf of Mexico.**

CC:

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## Ocean Conservancy

*Start a Sea Change*

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S EXECUTIVE SECRETARIAT

July 8, 2013

Secretary Penny Pritzker  
Department of Commerce  
1401 Constitution Avenue, NW  
Washington, DC 20230

Dear Secretary Pritzker:

Ocean Conservancy, in partnership with many organizations across the Gulf region, continues to work to ensure that the intent of Congress—restoring the Gulf ecosystem after the Deepwater Horizon oil disaster and reversing decades of ecosystem decline—is realized. Thank you for this opportunity to provide our input on the Gulf Coast Ecosystem Restoration Council (Council) Draft Initial Comprehensive Plan (Plan). We respectfully offer the following recommendations for your consideration.

Given the additional detail that must be included for the Plan to be implemented from a practical standpoint, we request that the public be given an opportunity to comment on the final initial plan and project list that the Council will release prior to beginning project implementation. The ability of stakeholders to comment on this project list before the final plan is adopted is critical. We appreciate the time you have spent thus far soliciting feedback from residents and businesses across the Gulf Coast, and we urge you to continue to incorporate meaningful public engagement moving forward.

The Plan serves a critical role in providing a blueprint that will help guide restoration of the region and ensure a healthy and sustainable future for the Gulf. In order to fulfill this role and be fully effective, restoration decisions must adhere to clearly defined principles and criteria. Ocean Conservancy bases our comments to the Council on the following principles and makes additional recommendations, which are further described in the attached document:

- Principle: Sound management  
*Recommended Actions:*
  - Restoration is conducted on an ecosystem scale and is comprehensive in scope, addressing coastal and marine environments, as well as coastal communities
  - Develop project selection sideboards guided by specific, objective criteria
- Principle: Predictable and coordinated funding for restoration projects and monitoring programs  
*Recommended Actions:*
  - Creation of an endowment to support long-term ecosystem-scale research and monitoring
  - Project budgets include funding for monitoring and evaluation of results
- Principle: Feasible objectives for projects

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Ocean Conservancy is a nonprofit organization that educates and empowers citizens to take action on behalf of the ocean. From the Arctic to the Gulf of Mexico to the halls of Congress, Ocean Conservancy brings people together to find solutions for our water planet. Informed by science, our work guides policy and engages people in protecting the ocean and its wildlife for future generations.

*Recommended Actions:*

- Require project objectives that are specific, measurable and achievable
- Identify restoration benchmarks at the program level to continually gauge success and make changes as necessary
- Principle: Coordination among partners to maximize results

*Recommended Actions:*

- Identify additional partnership opportunities for local, state and federal stakeholders to align and coordinate efforts
- Principle: Integration of science—including monitoring and research—throughout the process

*Recommended Actions:*

- Create a science advisory board to inform program-level decision-making
- Subject all projects to independent scientific peer review
- Identify mechanisms and activities to facilitate coordination of science across various processes and funding sources (e.g., RESTORE Act, NRDA and NFWF)
- Principle: Public engagement

*Recommended Actions:*

- Provide continued opportunities for public participation in shaping the program, setting milestones and specific outcomes
- Identify opportunities for coastal residents to take part in the creation of a restoration economy
- Conduct Council meetings in public

We have organized our detailed comments by the sections of the Plan and address the specific questions the Council asks regarding next steps in the appropriate section. Our comments provide additional considerations that will help the Council members develop a final initial plan that meets the criteria above and that encourages and facilitates coordination across political boundaries to move the Gulf ecosystem forward to its rightful place as a national treasure.

Ocean Conservancy submits these comments with the aim of helping the Council develop an effective and enduring restoration strategy. Council members have a historic opportunity to advance restoration of the Gulf of Mexico, which will significantly improve the health of our coastal and marine environments as well as the health of coastal communities.

We look forward to continuing to engage with you and other Council members as the final initial plan is developed and implementation of restoration projects begin. I am happy to discuss any of these recommendations or provide additional detail to you at your convenience. I can be reached at 504-208-5814.

Again, thank you for your commitment to the Gulf Coast and for your continued efforts to engage the community in shaping the future of the Gulf.

Regards,



Bethany Kraft  
Director, Gulf Restoration Program  
Ocean Conservancy



Enclosures (online):

*Restoring the Gulf of Mexico: A Framework for Ecosystem Restoration in the Gulf of Mexico*  
<http://www.oceanconservancy.org/places/gulf-of-mexico/restoring-the-gulf-of-mexico.pdf>

*The Gulf of Mexico Ecosystem: A Coastal and Marine Atlas*  
<http://www.oceanconservancy.org/gulfatlas>

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## **Ocean Conservancy Comments and Recommendations for the Draft Initial Comprehensive Plan**

### **Overarching Comments**

We commend the Council members and staff on their efforts to create a plan that is comprehensive in scope, recognizing that a fully functioning Gulf ecosystem requires addressing systemic stressors and restoration needs in both coastal and marine environments. The interlinked nature of coastal and marine resources, combined with the fact that environmental stressors are associated with both land- and ocean-based activities, underscores the importance of a holistic approach to restoration, which is essential to ensure that the Gulf of Mexico is able to provide the services essential to the region and the nation.

The Council's emphasis on using the best available science (see Appendix I for additional information on the use of best available science) and adaptive management principles to inform decision-making and restoration planning is critical to achieving long-term success. To achieve desired restoration outcomes, it is imperative that decision-makers and the public have the best possible information to guide project planning, implementation and refinement. The importance of meaningful investments in science to support an effective restoration program is one important lesson learned from past restoration processes. To this end, the Council should dedicate a portion of its operating budget to internal science capacity and consider funding high-priority science activities in its 3-year funding cycle consistent with its Comprehensive Plan or a companion science plan.

Section 1604 of the RESTORE Act, which provides 2.5% of RESTORE Act dollars to a long-term science, observation and fisheries monitoring program, is a stand-alone program that was neither intended to be the Council's supporting science arm, nor will be sufficiently funded to meet the Council and region's science needs. We believe the staff administering the 1604 program should coordinate with the Council to avoid duplication of investments, leverage resources and ensure scientific findings are communicated to the Council for integration into decision making. However, the Council should establish and rely on its own internal science capacity for day-to-day operations support.

Ocean Conservancy recommends the Council develop and implement a science plan to support the Council's goals of achieving Gulf ecosystem recovery using the best available science. It is a good practice for a restoration body like the Council to use a science plan that clearly establishes how science will be structured and used to support decision-making and priority-setting at the program level. A science plan will help the Council establish internal and external review processes, identify performance benchmarks, develop monitoring-consistent protocols for projects, evaluate progress at the project and program levels, and identify and prioritize gaps in knowledge key to funding Council science projects. The Council should ask the National Research Council (NRC) to review the initial science plan and have the NRC independently review the science plan on a periodic basis (e.g., every five years). The role and feedback provided by NRC would support the Council's commitment to a science-based approach to restoration.

The Plan recognizes that the work of the Council is related to the ongoing work of the Deepwater Horizon Natural Resource Damage Assessment (NRDA) Trustee Council and the National Fish and Wildlife Foundation (NFWF). Taken together, these three processes represent an opportunity to fund efforts to better understand the Gulf ecosystem and undertake a broader effort to restore and protect these vital natural resources. We recognize that this Plan cannot possibly address the entire suite of restoration needs in this vast ecosystem, but rather, we believe that the Plan can and should serve as a guide to help shift our focus from a localized and issue-specific perspective to one that recognizes the interdependence of communities and coastal and marine resources.

As the restoration process moves from the planning phase to the implementation phase, the rigorous application of project selection criteria will ensure that only the best and most appropriate projects are funded. It is incumbent upon the Council to develop those criteria before restoration begins in earnest.

A program of this scale must be supported by a core staff independent of any participating agencies. To that end, in addition to the selection of an Executive Director, Ocean Conservancy recommends the Council hire a Chief Scientist, who would lead development and implementation of the science-related aspects of the Council's program, such as hiring other supporting science staff, forming a scientific advisory body (see Appendix II), developing a science plan, establishing and managing a peer review process for projects, and liaising with other restoration science programs. The Chief Scientist should be independent of the Council member agencies and serve the Executive Director and Council at a senior level. The Chief Scientist would work closely with the scientific advisory body, participate in its meetings and draw on its experts to address and make recommendations on key issues.

#### Additional Administrative Recommendations:

- All participating agencies should devote adequate resources, including a full-time staff person dedicated to the Council from each agency, to enable robust participation and to function as a liaison between the independent staff and the agency.
- The Council should set forth clear policies for how it will govern itself and should have the authority to hold participating agencies accountable for project implementation.
- The federal agencies should establish a procedure to ensure that the actions and votes of the chair take into account and reflect the views of the relevant federal agencies.
- The Council should establish or adopt a conflict resolution mechanism.

Finally, we thank the Council for its efforts to engage the public regarding their vision for restoration throughout the process of developing this document. Public support for a lasting restoration initiative will ensure that decision-makers continue to have the support they need to implement restoration projects. Investing time and effort to engage citizens in meaningful ways throughout the implementation process will increase public buy-in and contribute to the long-term success of projects. As you prepare the final initial plan, please continue to identify opportunities to engage the public and ask them to invest their time, energy and talents in the effort to preserve and protect our Gulf resources.

#### **Section by section comments**

##### Section II Overview

##### **Commitment to Science-Based Decision Making**

We commend the Council's commitment to fund projects that "implement or improve: science-based adaptive management and project-level and regional ecosystem monitoring; including the coordination and interoperability of ecosystem monitoring programs..." However, the specific process and objectives needed to achieve this goal are missing from the Plan. As science and adaptive management are the core underpinnings of a successful restoration program, the Council must articulate in the final plan how science will inform restoration decision-making and measure project success over time.

The importance of adaptive management to successful restoration through the scientific activities of monitoring, modeling and research (i.e., restoration science) cannot be overstated. However, without a significant and sustained funding source for restoration science, agencies implementing restoration measures will not have the resources to measure project or program performance, and key environmental changes may go undetected, which will affect ecosystem services and impact livelihoods.

**Recommendation:** The Council should devote the necessary resources to provide or obtain the science needed to support effective restoration, as well as to promote long-term sustainable use of the Gulf ecosystem. This program should be cooperative in nature, taking advantage of existing and new efforts, including but not limited to the Gulf Coast Ecosystem Restoration Science, Observation, Monitoring and Technology Program and the Centers of Excellence, both established under the RESTORE Act, as well as any ongoing science program related to the Deepwater Horizon NRDA process. Use of the best available science is paramount. This should include environmental science, social science and the incorporation of local and tribal knowledge, regardless of official federal or state recognition.

Ocean Conservancy supports the Council's inclusion of the need for adaptive management as a key factor of restoration planning and implementation. It is important to make the distinction between sufficient funding needed to support and implement science associated with the Council's work and an endowment for funding monitoring and research on a permanent basis. A meaningful and effective science-based adaptive management framework must have sufficient funding. In addition, an endowment would provide a reliable source of funding for recommended monitoring, modeling and scientific research. Such an endowment would be one of the positive legacies resulting from the Deepwater Horizon disaster.

**Recommendation:** Include in your initial Funded Priorities List a project to endow a Gulf of Mexico ecosystem monitoring, modeling and applied research program. A significant and sustained source of funding is critical to the timely evaluation of restoration projects on a long-term basis, so that progress toward overall restoration goals is maintained. Taking the pulse of the Gulf through monitoring and research will improve predictions of ecosystem function, support adaptive management and give coastal communities more warning when ocean conditions change and related ecosystem services (e.g., fisheries) might be affected.

**Recommendation:** Develop and implement a science plan to support the Council's goals of achieving Gulf ecosystem recovery using the best available science. It is good practice for a restoration body like the Council to use a science plan that clearly establishes how science will be structured and used to support decision-making and priority setting at the program level. A science plan will help the Council establish internal and external peer review processes, identify performance benchmarks, develop monitoring-consistent protocols for projects, evaluate progress at the project and program levels, and identify and prioritize gaps in knowledge key to funding Council science projects. The Council should ask the National Research Council (NRC) to review the initial science plan and have the NRC independently review the science plan on a periodic basis (every five years). The role and feedback provided by NRC would support the Council's commitment to a science-based approach to restoration.

**Recommendation:** Ocean Conservancy recommends the Council establish a scientific advisory body (see Appendix II) to serve in an independent, scientific advisory capacity, providing program-level, ecosystem-wide perspectives. In close cooperation with the Chief Scientist, the scientific advisory body should help shape the science plan, provide input on restoration plans and programs, evaluate progress toward restoration goals, identify gaps and conflicts, and otherwise address issues important to successful restoration efforts. Ocean Conservancy recommends the scientific advisory body integrate new science into the Council process by reviewing the science plan and restoration plan before the end of the first three

years. The body would take stock of the latest science, identifying emerging issues, science gaps and research needs and recommend that the Council consider these in setting restoration priorities and projects for the next three-year cycle. The body should review projects on an annual basis as well, identifying problems and recommending adjustments. Both of these represent adaptive management in practice.

#### Commitment to a Regional Ecosystem-based Approach to Restoration

We commend the Council's commitment to an ecosystem-based approach to restoration. To accomplish this goal, the Plan must demonstrate an integrated, regional approach and include specific objectives and detailed information on how progress will be monitored to ensure that projects are contributing to an overall approach that addresses restoration of both coastal and marine environments as well as coastal communities.

**Recommendation:** The Council should enter into a formal agreement with the BP Deepwater Horizon NRDA Trustee Council, the National Fish and Wildlife Foundation, NOAA (1604 Program), North American Wetlands Conservation Fund and the National Academy of Sciences to link and coordinate restoration efforts in response to the oil disaster, as well as to the decades of degradation in the Gulf.

#### Commitment to Engagement, Inclusion and Transparency

Sustained, meaningful public participation is critical to the long-term success of the Council's goals and objectives. Meaningful public participation includes: meetings open to the public (except for occasional executive sessions when necessary), advance public notice of meetings, opportunities for public comment at meetings, and opportunities for comment on draft strategies, plans and projects. Council meetings should be rotated across the Gulf states to afford opportunities for the public to attend meetings in person. Additionally, adequate notice (a minimum of 15 business days) of meeting dates and locations must be provided to ensure meaningful public participation and input.

The Council should ensure transparency in terms of its project selection process, grant and contracting procedures and awards, and project status. Preferably, an easily accessible online data source should be created to track the Council's decisions and their progress.

#### Establishment of Advisory Committees

The Council should establish the following advisory committees: a scientific advisory committee (see Appendix II) to provide advice on the best available science and on restoration at a programmatic level; a public policy committee to address issues of existing policy impeding restoration; and a public advisory committee (see Appendix III) with regional stakeholder representation to ensure public participation and transparency in decision-making.

#### Commitment to Leveraging Resources and Partnerships

Utilizing existing partnerships and building new relationships will be essential if we are to achieve long-term success in implementing a restoration plan. In the Gulf region, there are several bodies that are important partners in the restoration effort, including: the Gulf of Mexico Alliance (GOMA), the NRDA Trustee Council,

NFWF, the Hypoxia Task Force, the National Ocean Council and the Gulf of Mexico Fishery Management Council (GMFMC).

**Recommendation:** Include specific language in the Plan that details how the Council plans to interact, coordinate and share information across the various bodies engaged in Gulf restoration efforts.

**Recommendation:** The Council should seek to leverage existing federal, state and local discretionary funding and interagency, intergovernmental or public-private partnerships to promote job and skills training opportunities to help local workers find economic opportunities in the restoration economy, particularly among underemployed and socially vulnerable populations. The Council should utilize its authority to develop appropriate preferences in procurement and grant policies that promote the hiring of local workers and collaboration between grant recipients and/or contractors with local workforce development agencies and programs to promote the training and placement of local workers, particularly those from disadvantaged, underserved and resource-constrained communities.

### Commitment to Delivering Results and Measuring Impacts

#### Recommendations:

- All projects should be monitored for performance and results using standard methods and as much integration and efficiency as possible.
- The status of the entire ecosystem should be monitored, synthesized and communicated to the public every 5 years, with biennial symposia reporting out on projects and program progress in coordination with other restoration programs (NFWF, NAS, NRDA, NOAA/1604, etc.)
- Monitoring results should inform restoration actions and priorities at both programmatic and project levels.

### Section III Goals

The Council's Plan recognizes five overarching goals for the Comprehensive Restoration Plan, four of which focus on environmental restoration and one on economic recovery. Ecosystem restoration projects benefit the economy and communities by generating demand for goods and services provided by local contractors or by supporting local jobs. However, economic development projects might not be compatible with environmental restoration goals, with some potentially resulting in undesirable environmental impacts. Therefore, the Council should select projects for funding with the intent of maximizing environmental benefits and avoiding or minimizing project impacts on natural resources it aims to restore. This requires the commitment of all of the Council members to think beyond political boundaries to ensure that restoration projects are coordinated to create an outcome that is larger than the sum of the individual projects.

### Section IV Council-Selected Restoration Component

#### Objectives

Ocean Conservancy believes the objectives outlined in the plan are the right ones. The task before the Council is to identify specific outcomes and milestones in the Plan to ensure that we are moving towards achieving one or more objectives with every project. We look forward to working with Council members in

that effort, because a restoration strategy without specific measures of success or timelines for implementation will not be a sufficient guide to drive restoration planning and implementation.

**Recommendation:** Develop a matrix to track projects from both a geographic and ecosystem perspective to ensure that each Project List contains a number of projects that meet multiple objectives from the freshwater to offshore environments and across the entire Gulf Region.

#### Evaluation Criteria

As we move from the development of overarching goals to the planning and implementation of restoration projects, success—which must be measured by the health and resilience of the ecosystem—relies on the selection, implementation and evaluation of a series of integrated projects, consistent with a Gulf-wide plan and rigorous application of criteria to ensure that only the best and most appropriate projects are funded.

The Council is in a strong position to make recommendations as to how best prioritize projects that will accomplish our restoration goals. The criteria described below can be applied at the strategic level, as well as at the level of individual projects. They are based in part on those developed and tested by the *Exxon Valdez* Oil Spill Trustee Council (1994).

**Recommendation:** The Council should adopt additional selection criteria. See Appendix IV for our recommended project selection criteria.

#### Submittal of Proposals to the Council

#### Section V State Expenditure Plans

There is some concern the Plan does not include clear definition from the Council as to what qualifies as economic restoration, particularly when it comes to infrastructure—funding for which is limited under the RESTORE Act. Economic restoration in the context of RESTORE must consider project sustainability and environmental impact. Since RESTORE Act funds will flow through penalties for violation of an environmental law, the Council must commit to ensuring that economic restoration projects, whether funded through the Council-controlled or state impact components, will not degrade the environment nor negatively impact ecosystem restoration projects funded under the RESTORE Act, NRDA or NFWF.

We have several concerns about the Plan’s proposed process for soliciting and evaluating project proposals (p. 16), as explained in detail below.

1. There is a lack of specificity in the Plan regarding the project submission sponsorship requirement. The word “sponsorship” as used on page 16 of the Plan is not defined within the RESTORE Act. As such, we encourage the Council to clearly describe what duties and obligations project sponsorship entails, including the following clarifications:
  - The extent to which sponsorship conveys responsibility for long-term monitoring, evaluation, and stewardship of projects, including the acquisition of land or other rights and adaptive management measures;



- The extent to which sponsorship requires the same agency that sponsors a project or program to implement it;
  - If sponsorship necessitates any level of local, state or other matching requirements;
  - The extent to which sponsorship affects pass-through grant or subcontracting requirements.
2. Requiring proposed projects to be sponsored by individual Council members may restrict the implementation of large-scale, collaborative, and/or regional projects. We are concerned that requiring that projects or programs be sponsored by a single Council member may, in essence, pigeonhole potential projects/programs into single agencies' geographic regions or priorities and thereby impede the Council's ability to realize its stated commitment to "promot[ing] ecosystem-based and landscape-scale restoration without regard to geographic location within the Gulf Coast region." To address this concern, we recommend that the Council consider the following:
- Allowing for projects or programs to have one or more agency "sponsors," thereby enabling two or more Council members to work together to propose and implement large-scale, cross-boundary projects; and/or
  - Allowing for the responsibility for the implementation and/or the long-term monitoring, evaluation and stewardship of projects or programs to be delegated by the project sponsor to another appropriate entity with mutually agreed upon terms of commitment.
3. Varying requirements and standards among project sponsors may lead to inconsistent practices relating to project subcontractors, grantees, and/or project partners. To address this concern, we propose:
- Including provisions in the final plan that require any policies or requirements associated with pass-through grants and subcontracting opportunities to be consistent among all the agencies involved in the restoration of the Gulf Coast; and
  - Including provisions in the final plan which require that any policies or requirements associated with matching requirements should be applied uniformly among all implementers and projects/programs involved in the restoration of the Gulf Coast; and
  - Considering the possibility of appointing a lead agency from the Council members' affiliations to administer all restoration programs and serve as a single point of contact and central support unit throughout the project selection and implementation processes. Administration would include ensuring projects/programs are implemented according to the Final Comprehensive Plan, benchmarks and completion occur on schedule, budgets are evaluated for accountability, and general oversight is provided throughout the process.
4. There is a lack of specificity in the Plan regarding the timing of project solicitations. The current text of the Plan indicates that the Council will "periodically request proposals from its eleven state and federal members." We urge the Council to specify in its final plan the following:

- The general time frame for which the Council will solicit project and program proposals (annually, semi-annually, etc.). We recommend that project solicitations be made at least semi-annually and follow a schedule similar to established federal restoration grant programs that have been successfully proven over time, such as the NOAA Community Restoration Program or the USFWS Coastal Program.
- The timeline of review for project or program selection.
- A schedule for scientific and public input and review.

## Environmental Assessment

Given the uncertainties at this early stage of the restoration process and the generality of the PEA's impact analysis, it will be critical to perform additional NEPA analysis as restoration efforts begin to solidify. The PEA itself appropriately recognizes that additional "NEPA analysis will be performed on subsequent updates to the Plan." (p. 44). The Council should make clear that a PEA-level analysis may not be sufficient. As the Plan is updated, NEPA may require the Council to prepare a more comprehensive Programmatic Environmental Impact Statement to fully assess potential impacts.

The PEA also acknowledges that specific proposed projects will require their own NEPA analyses. The PEA rightly points out that future NEPA analyses for individual projects must "take into account site-specific conditions and identify the environmentally preferable alternative, as applicable." (p. 8). In particular, analyses of future projects must include careful evaluation of potential direct impacts, as the PEA does not even attempt to cover this category of impacts. Analysis of future projects must also include a much more detailed analysis of indirect and cumulative impacts than that which is found in the PEA. While NEPA regulations allow for subsequent analyses to "tier" to a programmatic assessment to avoid duplicative assessments, it would be inappropriate to tier to the extremely generalized analysis contained in the PEA. As more and more information about potential projects becomes available, the cursory impact analyses in this PEA will quickly become outdated, and more detailed analyses will be required.

## **Appendix I: Best Available Science in the RESTORE Act**

(27) the term ‘best available science’ means science that—(A) maximizes the quality, objectivity, and integrity of information, including statistical information; (B) uses peer-reviewed and publicly available data; and (C) clearly documents and communicates risks and uncertainties in the scientific basis for such projects;

(1) STATE ALLOCATION AND EXPENDITURES.—(E) CONDITIONS.—As a condition of receiving amounts from the Trust Fund, a Gulf Coast State, including the entities described in subparagraph (F), or a coastal political subdivision shall—(ii) certify in such form and in such manner as the Secretary of the Treasury determines necessary that the project or program for which the Gulf Coast State or coastal political subdivision is requesting amounts—(IV) in the case of a natural resource protection or restoration project, is based on the best available science;

(2) COUNCIL ESTABLISHMENT AND ALLOCATION.—(B) COUNCIL EXPENDITURES.—(i) IN GENERAL.—In accordance with this paragraph, the Council shall expend funds made available from the Trust Fund to undertake projects and programs, using the best available science, that would restore and protect the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, coastal wetlands, and economy of the Gulf Coast.

(D) COMPREHENSIVE PLAN.—(iii) RESTORATION PRIORITIES- Except for projects and programs described in subclause (ii) (IV)(bb), in selecting projects and programs to include on the 3- year list described in subclause (ii) (IV)(dd), based on the best available science, the Council shall give highest priority to projects that address 1 or more of the following criteria:...

### **Best Available Science in various statutes**

#### **MSA**

The Magnuson-Stevens Act requires that “[c]onservation and management measures shall be based upon the best scientific information available.” 16 U.S.C. § 1851(a)(2).

According to case law, “[i]t is well settled ... that the Secretary can act when the available science is incomplete or imperfect, even where concerns have been raised about the accuracy of the methods or models employed.” *General Category Scallop Fishermen v. Secretary, U.S. Dept. of Commerce*, 635 F.3d 106, 115 (3rd Cir.2011) (citing *North Carolina Fisheries Association, Inc. v. Gutierrez*, 518 F.Supp.2d 62, 85 (D.D.C. 2007)).

#### **ESA**

The Endangered Species Act requires the Secretary to make determinations as to listing species as endangered or threatened “based solely on the basis of the best scientific and commercial data available.” 16 U.S.C. § 1533(b)(1)(A).

The Court of Appeals for the D.C. Circuit has found that under the ESA’s “best data available” standard, agencies have no obligation to conduct independent studies, and are entitled to rely upon the best data available to it. In *Southwest Center for Biological Diversity v. Babbitt*, the court found it acceptable that the agency relied on existing scientific estimates of the species’ population, rather than conducting its own population count in order to determine whether a species is endangered. The requirement for best data available “merely prohibits the Secretary from disregarding available scientific evidence that is in some way better than the evidence he relies on.” *Friends of Blackwater v. Salazar*, 691 F.3d 428, 435 (D.C. Cir. 2012)

(citing *Southwest Center for Biological Diversity v. Babbitt*, 215 F.3d 58, 60–61 (D.C. Cir. 2000) (internal quotation marks and citation omitted)).

#### Other

Holly Doremus, *Listing Decisions Under the Endangered Species Act: Why Better Science Isn't Always Better Policy*, 75 Wash. U. L.Q. 1029, 1033–34, FN 9 (1997) (internal citations omitted):

This phrase [best available science], or a close variant, occurs in the following statutes: the ESA, the Magnuson-Stevens Fishery Conservation and Management Act, the Marine Mammal Protection Act, the Salmon and Steelhead Conservation & Enhancement Act of 1980, the Pacific Salmon Treaty Act of 1985, the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, the Wild Bird Conservation Act of 1992, the Atlantic Coastal Fisheries Cooperative Management Act, and the National Fishing Enhancement Act of 1984.

Although they occur with particular frequency in conservation statutes, best available science requirements are not limited to that context. A provision of the Toxic Substances Control Act concerning removal of asbestos from school buildings requires consideration of the best available scientific evidence. The Safe Drinking Water Amendments of 1996 require that the Environmental Protection Agency use “the best available, peer-reviewed science.” A Clinton Administration executive order detailing general procedures for internal executive branch review of proposed regulations requires that agencies base regulatory decisions on the best reasonably obtainable scientific and other information.

#### **Courts give deference to the expertise of the agency**

In deciding whether scientific information is the “best available,” substantial deference is accorded to the Agency’s assessment of the quality of what is available. See *General Category Scallop Fishermen v. Secretary, U.S. Dept. of Commerce*, 635 F.3d 106, 115 (3<sup>rd</sup> Cir. 2011); *Washington Crab Producers, Inc. v. Mosbacher*, 924 F.2d 1438, 1448–1449 (9<sup>th</sup> Cir. 1990); *C & W Fish Co., Inc. v. Fox*, 931 F.2d 1556, 1562 (D.C. Cir. 1991) (a court’s task on review is simply “to determine whether the Secretary’s conclusion that the standards have been satisfied is rational and supported by the record.”).

#### **Law Review Articles on Best Available Science**

- Robert L. Glicksman, *Bridging Data Gaps Through Modeling and Evaluation of Surrogates: Use of the Best Available Science to Protect Biological Diversity Under the National Forest Management Act*, 83 Ind. L.J. 465, 472–474 (2008) (internal citations omitted):

Some of the federal environmental laws require that agencies base their decisions on the “best available science,” thereby recognizing that complete information may never be available. In such situations, the statutes charge the agencies with doing the best they can to mine the information that it is practical to obtain before discharging their statutory responsibilities. Some agencies, including the Forest Service, have interpreted statutory provisions requiring that decisions be based on science as permitting decision making based on the best available science.

...

Provisions requiring that federal environmental and natural resource management agencies base their decisions on consideration of the “best available science” are common. Perhaps the best known of these is the provision of the ESA requiring the Interior and Commerce Departments to base their decisions on whether or not to list a species as endangered or threatened “solely on the basis of the best scientific and commercial data available.” 16 U.S.C. § 1533(b)(1)(A). But Congress has used the same or similar language in a variety of other pollution control and natural resource management statutes.

Although Congress has never defined the term “best available science” in any of the environmental statutes in which that term is used, it has explicitly recognized that, in directing that agencies make

decisions on that basis, the optimal amount of scientific evidence for making the decision involved may not be available. As Holly Doremus has explained, a “best available science” mandate may serve multiple purposes. These include ensuring that an agency’s decisions accurately reflect known scientific information, imposing a mandate on the agency to make its best efforts to ferret out available information, placing an imprimatur of objectivity on agency decisions to increase public trust and enhance the agency’s credibility, and creating a basis for resolving judicial challenges to agency decisions. Ultimately, it is possible for the adoption of a statutory or regulatory mandate that an agency base its decisions solely on the “best available science” to make it harder for environmental agencies to weaken environmental and natural resource protection mechanisms by relying on political opposition or on factors, such as economic considerations, that tend to cut against stringent pollution control requirements or meaningful constraints on natural resource development.

- Holly Doremus, *The Purposes, Effects, and Future of the Endangered Species Act’s Best Available Science Mandate*, 34 *Env’tl. L.* 397, 424-426 (2004) (internal citations omitted):

In terms of improving decision making, the ESA’s best available science mandate might impose at least one thing that the APA and other background requirements do not—an affirmative obligation to find data, rather than to simply evaluate what others present. A few courts have interpreted the best available science mandate to impose precisely such an obligation. For example, in *Roosevelt Campobello International Park Commission v. EPA*, the First Circuit read the ESA’s best available science mandate to require real time simulation studies of navigation in an area proposed for an oil refinery and tanker terminal before a permit allowing construction could be granted. All parties agreed that such studies “would contribute a more precise appreciation of risks of collision and grounding,” which could result in an oil spill harmful to listed species. The court concluded that the simulations were feasible, could be financed by the permit applicant, and would provide information needed to assess the risks of a catastrophic oil spill. Those studies and others, the court wrote, “obviously represent as yet untapped sources of ‘best scientific and commercial data.’” Similarly, the Ninth Circuit held in *Connor v. Burford* that ESA section 7 required the agency to develop projections of the impacts of oil and gas development, even if those projections would be imprecise estimates.

Following *Roosevelt Campobello*, the district court for the District of Massachusetts required that a biological opinion await the results of ongoing, “demonstrably feasible” studies bearing directly on the impacts of a proposed action in *Conservation Law Foundation v. Watt*. Similarly, noting that a congressional report on 1978 amendments to the ESA explained that the best available science mandate requires that biological opinions prepared under section 7 be based on the best evidence “that is available or can be developed during consultation,” a federal district court concluded in *Village of False Pass v. Watt*, that the action agency has a duty “to continue acquiring information until an affirmative finding of no jeopardy can be made.”

A more recent decision, however, rejects the claim that the best available science mandate requires development of new information. In *Southwest Center for Biological Diversity v. Babbitt*, the D.C. Circuit overturned a trial court’s requirement that FWS conduct a population census before deciding whether or not to list the Queen Charlotte goshawk. According to the appellate court, “The ‘best available data’ requirement makes it clear that the Secretary has no obligation to conduct independent studies.” Despite that broad language, the *Southwest Center* decision can be distinguished from the earlier ones on two bases. First, there was no claim in *Southwest Center* that the study demanded by the trial court was feasible. Second, *Roosevelt Campobello* and the decisions that follow it deal with the section 7 duty not to jeopardize the continued existence of listed species, whereas *Southwest Center* deals with the listing requirements of section 4. The two are different in important respects. Section 7 requires that the action agency “insure” that its actions are not likely to cause jeopardy. That word, which does not appear in section 4, can be read to impose a stronger duty to gather information. The purposes of the two sections support that distinction. Listing provides protection for species thought to be dwindling. If existing

information indicates that the species needs protection, it should be listed. Demands for additional information should not stand in the way of listing, which will provide an incentive for affected parties to gather and reveal information that might show that the species does not in fact need protection. Section 7, on the other hand, protects species already shown to be in critical condition from extinction. Requiring the collection and analysis of reasonably obtainable information will enhance, not undermine, conservation efforts.

- Michael J. Brennan, et al., *Square Pegs and Round Holes: Application of the "Best Scientific Data Available" Standard in the Endangered Species Act*, 16 Tul. Envtl. L.J. 387, 402-404 (2003) (internal citations omitted):

Standards similar to the best scientific data available standard have been utilized in a number of statutes other than the ESA. Indeed, the concept of best scientific data available (with some permutations) recurs throughout the United States Code. Standards similar to the best scientific data available standard are found in several federal acts, including the Marine Mammal Protection Act, the Safe Drinking Water Act, and the Magnuson-Stevens Act.

Perhaps the most interesting example from other federal acts for our current discussion is the Safe Drinking Water Act (SDWA). Section 300g-1 of the SDWA establishes the framework for national drinking water regulations, which form a water quality baseline. A critical part of the water quality baseline is the establishment of National Primary Drinking Water Regulations and National Secondary Drinking Water Regulations. Because both sets of regulations are keyed to human health, the process of developing the regulations involves an analysis of potential health risks. While the SDWA requires that the science employed by the United States Environmental Protection Agency (EPA) is "the best available," the Act goes on to further require that the science be "peer reviewed" and "in accordance with sound and objective scientific practices." Accordingly, unlike the stand-alone best scientific data available standard in the ESA, the SDWA standard attempts to impose objective criteria on utilized science.

## **Appendix II: Establishment of a science advisory body**

Ocean Conservancy recommends the Council establish a scientific advisory body to serve in an independent, scientific advisory capacity, providing program-level, ecosystem-wide perspectives. In close cooperation with the Chief Scientist, the scientific advisory group would help shape the science plan, provide input on restoration plans and programs, evaluate progress toward restoration goals, identify gaps and conflicts, and otherwise address issues important to successful restoration efforts. See the attached Graphic, Page 4. To be effective and credible, a scientific advisory body should be representative of different scientific disciplines and have expertise from both within and beyond the Gulf region. The Council should take the necessary steps to avoid perceived or real conflicts of interest.

A key responsibility for the scientific advisory body is to obtain input on the restoration plan and groups of project proposals as they are advanced through the decision-making process. Members can look at the overall Comprehensive Restoration Plan and comment on its sufficiency from the standpoint of the Gulf ecosystem, and they can look at groups of projects to consider how they do or don't fit the Plan, serve the ecosystem in a comprehensive way. This body reviews the major scientific thrust and elements of a science plan and guides development of monitoring and performance benchmarks at the project and program level. Advisory body members can identify gaps and priorities, looking through their scientists' lenses. They also can point out needs and opportunities for coordination between and among programs.

### **a. Science advisory body development, membership and relationship to the Council**

Ocean Conservancy recommends the Council adopt the following elements when considering the scientific advisory body's development, membership and relationship to the Council:

- i. The Council should appoint 12 to 15 members to the science advisory body to provide independent, scientific advice to the Council. Members of the scientific advisory body should not be affiliated with any agency (or its bureaus) represented on the Council (this is critical for avoiding conflicts of interest and maintaining the advisory body's integrity and credibility.);
- ii. The Council should establish a third-party process by which candidate members are nominated for Council appointment. The Gulf of Mexico University Research Collaborative (GOMURC) may be able to nominate individuals from the Gulf region and the National Academy of Sciences (NAS)<sup>1</sup> a few individuals from outside the region. Some members should be selected from outside the Gulf region to provide a different perspective that could be beneficial;
- iii. Members' expertise should reflect the full range of scientific disciplines required to restore the Gulf ecosystem from the coast to the offshore environment; and
- iv. The scientific advisory body should report directly to the ED.

### **b. Composition of scientific advisory body**

Ocean Conservancy recommends the scientific advisory body have the full complement of technical expertise needed to help the Council implement its commitment to a "regional ecosystem-based approach to restoration." In general, this means having a body capable of advising the Council on issues and projects as diverse as upland, estuarine and marine resource

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<sup>1</sup> Specifically, the Restore Council might explore with Chris Elfring, Director, NAS Gulf Program, the role her program might have in helping the Council establish a scientific advisory body. [CElfring@nas.edu](mailto:CElfring@nas.edu)



restoration, while helping the Council take an ecologically integrated, landscape-level and coast to offshore approach to ensure restoration has the broadest possible impact. Specifically, the following disciplines should be represented on the body:

- I. Physical oceanography
- II. Plankton ecology (biological oceanography)
- III. Fisheries science (finfish and shellfish)
- IV. Hydrology
- V. Marsh/estuarine ecology
- VI. Ornithology
- VII. Marine mammal expert
- VIII. Conservation biology
- IX. Restoration science
- X. Resource economics
- XI. Social science

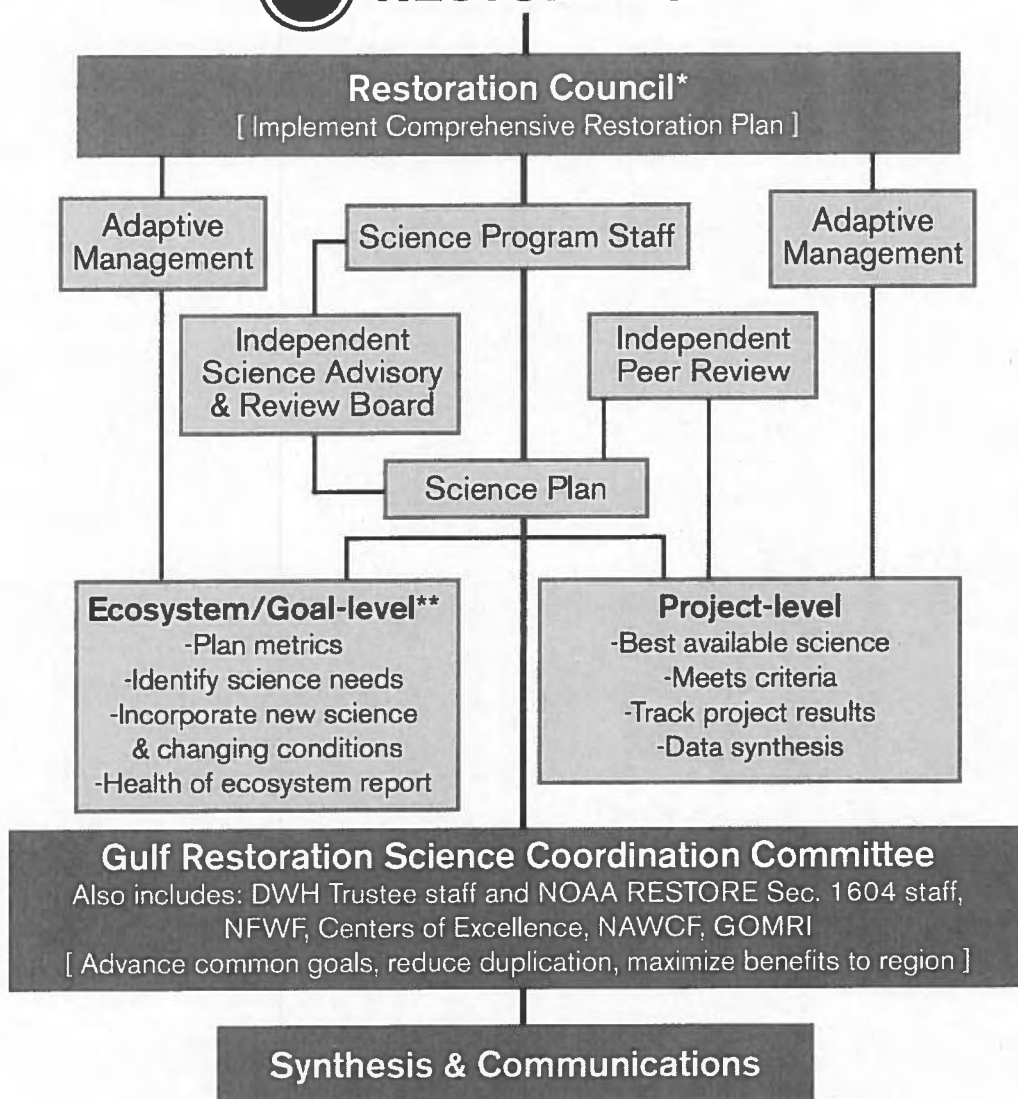
# Defining Restoration Science under the Gulf Coast Ecosystem Restoration Council

DRAFT

04/05/2013



**RESTORE Act**



\* Public Input on Plan and Projects

\*\* Based on overarching goals identified in the *Path Forward*



### **Appendix III: Public Advisory Committee Structure**

#### **I. Commercial Fishing (Five members: One representing each state)**

1. Representative of a regional commercial shrimping association (not processors);
2. Representative of a regional commercial oyster harvesting association (not processors);
3. Representative of minorities in the commercial fishing/processing enterprise;
4. Representative of small family owned commercial fishing/processing enterprise; and
5. Representative of a multi-cultural fisher owned cooperative.

#### **II. Conservation/Environmental Advocates (Five members: One representing each state)**

1. Representative of a nonprofit with expertise advocating for marine habitat conservation;
2. Representative of a nonprofit with expertise advocating for addressing coastal land loss or with expertise in wetlands ecology and restoration;
3. Representative of a nonprofit with expertise advocating on behalf of water quality/quantity;
4. Representative of a nonprofit with expertise advocating for land acquisition and habitat conservation; and
5. Representative of a nonprofit with expertise in climate change and coastal resiliency.

#### **III. Socially Vulnerable/Community-based Organizations/Affected Community (Five members: One representing each state)**

1. Representative of a community-based nonprofit representing an affected coastal Southeast Asian American Community;
2. Representative of a community-based nonprofit representing an affected coastal African American community;
3. Representative of a community-based nonprofit representing an affected rural coastal community;
4. Representative with expertise in environmental justice and land use; and
5. Representative with expertise in community-based workforce and economic development.

#### **IV. Recreational Water Use/Tourism/Business (Five members: One representing each state)**

1. Representative of charter boat operator association or recreational fishing;
2. Representative of coastal real estate owners;
3. Representative of coastal ecotourism operators;
4. Representative of recreational water use community, other than recreational fishing, with experience in habitat restoration; and
5. Representative of regional coastal business association.

#### **V. At Large Members (Five members: One representing each state)**

1. Tribal/Indigenous and cultural/historical/traditional communities;
2. Expert in social resiliency;
3. Scientist or Academic either chosen from the general public or representing a nongovernmental organization with expertise in marine restoration/marine biology;
4. Scientist or Academic either chosen from the general public or representing a nongovernmental organization with expertise in coastal ecology / coastal restoration; and
5. Scientist or Academic either chosen from the general public or representing a nongovernmental organization with expertise in ecosystem services valuation.

#### **Caveats:**

1. Exclude from membership any person, including but not limited to anyone who benefits from oil and gas development or any contractor involved in wetland restoration, who has a financial interest

or a regulatory conflict relative to any activities or projects upon which the CAC would provide advice.

2. Consider attorneys with knowledge in these fields to provide broader understanding of the policy or legislation behind the issues;
3. Fishing is defined as crabbers, shrimpers, trappers, oyster harvesters, fin-fishing at a minimum and there is a strong request to ensure the fishing component includes as many actual family fishers as possible as opposed to a larger contingent of processors;
4. CAC representatives should have knowledge about the importance of wetlands and the best methods to protect them.
5. Since elected officials are adequately represented elsewhere in the process, there is no reason for them to be represented on the Citizens Advisory Committee. Ensure impacted communities are well represented across all five states. In large & diverse coastal states like Florida and Texas, council members should come from areas that had the greatest ecosystem damages;
6. Ensure citizens are drawn from and connected to the community; and
7. Selected candidates should have the ability to speak for his/her specific community and state, but also have at least a general understanding and of the broader Gulf Coast issues, e.g. by being connected through networks.

## **Appendix IV: Criteria for Defining the Restoration Program and Selecting Projects under the Gulf of Mexico Comprehensive Restoration Plan**

### **Introduction**

The RESTORE Act specifies that 30 percent of the total amount made available to the Trust Fund each year shall be disbursed to the Gulf Coast Ecosystem Restoration Council (Council) to carry out the Comprehensive Restoration Plan (Plan). The Council will also have responsibility for administering another 30 percent of Trust Fund funds that are to be spent in accordance with individual state expenditure plans consistent with the Plan. The Plan will define the program and guide development of the types of projects, using the best available science, to be implemented with the Council's portion of Trust Funds, focusing on restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast.

To help the Council restore and protect the Gulf ecosystem, the RESTORE Act directs the Council to use the "best available science" in defining the restoration program and selecting and undertaking relevant projects. The RESTORE Act also states that the Council shall give preference to projects that address one or more criteria addressing key restoration priorities. Therefore, the Plan should: 1) serve as a guide for selecting preferred projects; and 2) contain science-based criteria to ensure that only the best and most appropriate projects are funded by the Council.

The ultimate success of the restoration program and the projects selected to implement it—which must be measured by the recovery and resilience of the ecosystem—rests on selection, implementation, evaluation, and adaptive management of a series of integrated projects. The Council has an unprecedented opportunity to develop a Plan that embraces a comprehensive, integrated ecosystem approach to restoration and that strives for results that are greater than the sum of the individual projects.

### **Guidance for Selecting Preferred Restoration Projects**

- The proposed project addresses at least one of the following criteria specified in the RESTORE Act aimed at restoring or protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region:
  - Projects that are projected to make the greatest contribution without regard to geographic location within the Gulf Coast region;
  - Large-scale projects and programs projected to contribute substantially to Gulf ecosystem recovery;
  - Projects contained in existing Gulf Coast State comprehensive plans; and
  - Projects that restore long-term resiliency based on impacts resulting from the Deepwater Horizon oil spill.

### **Science-based Project Selection Criteria**

The criteria listed below are based in part on the Council's duties as specified in the RESTORE Act or were adapted from other natural resource restoration plans. The criteria can be applied at the strategic and programmatic level as well as at the level of individual projects. *Threshold* criteria represent a minimum standard, and all threshold criteria must be met in order for individual projects to be considered further. *Supplemental* criteria are those intended to help decision makers further prioritize projects based on benefit and other attributes. That is, the greater the number of supplemental criteria met, the greater the contribution of projects to ecosystem recovery and to the local economies and communities.

## Threshold Criteria

### Restoration Benefit Defined

- The proposed project clearly defines the expected benefits and is consistent with and contributes to fulfilling comprehensive ecosystem restoration plans and objectives.

### Feasible

- The proposed project is appropriate under federal and state law, technically feasible and can realistically be implemented within a reasonable timeframe;

### Meets Minimum Design Standards

- Project sponsors demonstrate due diligence that includes scientific, technical, economic and social evaluation of design, design alternatives and implementation;
- Restoration activities should have clear, measurable and achievable end points;
- The proposed project incorporates a monitoring plan that will enable evaluation of its progress and ultimate success;

### Likely to Succeed

- The proposed project is likely to result in a successful outcome, measurably contribute (even if indirectly) at an appropriate scale to the recovery of a natural resource or ecosystem service, or is a small-scale pilot intended to demonstrate effectiveness before larger scale funding or implementation is considered;

### Cost Effective

- The cost to carry out and monitor the proposed project or program is reasonable relative to benefits and available funds; and

### Implementation Impacts

- *Environmental restoration projects:* Any potential harmful effects on non-target resources and services are evaluated and deemed as acceptable given the project's benefits or can be mitigated by restoring, replacing, rehabilitating or acquiring the equivalent of the same or similar resources harmed by the project;
- *Economic recovery projects:* Any possible harmful effects on natural resources are identified upfront or can be avoided or mitigated by restoring, replacing, rehabilitating or acquiring the equivalent of the same or similar resources harmed by the project;

## Supplemental Criteria

### Benefits Multiple Resources

- Priority will be given to projects or programs that benefit multiple species or resources; and
- The project contributes to an ecologically balanced (coast to offshore environment), integrated approach to restoration.

### Benefits to Economy, People and Communities

- Priority will be given to projects or programs that:

- give a preference to individuals and companies that reside in, are headquartered in, or are principally engaged in business in a Gulf Coast State;
- protect or restore livelihoods in any of the following economic sectors: tourism, fisheries, maritime, and recreation; and
- build community resiliency and benefit communities vulnerable to disasters.

#### Addresses Root Causes of Degradation

- The project addresses underlying sources of environmental stress and seeks long-term approaches and solutions to restoring natural processes rather than addressing the symptoms of environmental degradation through short-term fixes.

#### Climate change

- The project should yield long-term ecological benefits commensurate with investment and with due consideration of sea-level rise; and
- The project would enhance resilience and adaptation of coastal and marine environments and species with respect to climate change impacts;

#### Proposal Quality and Scope

- Competitive, innovative, collaborative and cost effective proposals for restoration projects or programs will be encouraged;
- Projects or programs that leverage funding from public or private sources outside the restoration process will be encouraged; and
- Projects or programs that are scalable may be funded in part, provided that the funded component stands alone in terms of its benefits, even if the rest of the project is not funded.

#### Public Support

- The project represents a restoration approach for which the public has expressed support or would likely support based on previous public comment or input; and
- The project contains a public education component such as on-site interpretation, signage or some other means to inform the public about the project's importance and results.



3 June 2013

Dear Council Members —



Mr. Walter McClatchey  
203 Terra Ave.  
Alexandria, LA 71303-2237

I am writing to comment on the draft initial comprehensive plan for spending Clean Water Act fines.

The draft plan fails to include a priority list or spending allocation plan for projects that will restore the Gulf's ecosystem and economy.

I propose the these projects be ~~un~~implemented quickly to restore the Gulf Coast:

① Create a Beneficial Use Trust Fund to use dredged sediments beneficially and rebuild barrier islands like Deer Island and Ship Island;

② Restore oyster reefs or place designed reefs for habitat in Mississippi Sound;

③ Restore seagrass beds to historic levels, and

④ Create a Coastal Preserve Trust Fund to acquire private marshes and shorelines or to manage public lands for preservation. Thank you.

W. McClatchey



July 3, 2013

Gulf Coast Ecosystem Restoration Council,  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

**Re: Comments on Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy**

The Gulf Coast Bird Restoration Initiative is a collaborative project of bird conservation groups working throughout the Gulf coast. The initiative has been developed specifically to support states in their efforts to remedy harm caused to birds by the *Deepwater Horizon* oil spill in its violation of the Migratory Bird Treaty Act, and to reduce the risk of future harm to these birds and their habitats. Our coalition for The Gulf Coast Bird Restoration Initiative includes the following partners who are well-established in bird conservation Gulf-wide: American Bird Conservancy (ABC), Gulf Coast Bird Observatory (GCBO), Barataria-Terrebonne National Estuary Program, Ducks Unlimited (Texas), Houston Audubon, International Bird Rescue, and Plaquemines Parish (Louisiana). Birds were the most visible and numerous major wildlife victims of the *Deepwater Horizon* Oil Spill and our projects focus on these species and their habitats.

While we understand that many “authorized, but not yet commenced” projects were submitted prior to the passage of the RESTORE Act and have been disclosed in Appendix A, we would like to request that the Council add the following list of projects our coalition of partners recently submitted to National Fish and Wildlife Foundation (NFWF). We understand that this does not guarantee funding of these projects. We also understand that the Council will work closely with state trustees, NFWF, and other pertinent stakeholders to avoid project duplication. Partners have pledged that this will be the only submission of these project proposals to NFWF; however, we would like to bring these projects to the attention of the Council as well.

Phase I of the initiative includes a suite of “shovel ready” projects that are ready for immediate implementation, and that aim to begin delivering immediate beneficial results. ***The total budget for these projects is \$151.5 million.***

**1. Restoring Pelican (Cat) Island, LA - Request: \$8.8M. Matching Funds: \$3M.**

This project could be replicated at additional sites with an investment of c. \$10M per island.

**Project Location and History:** Barataria Bay, Louisiana - Pelican Island (frequently also called Cat Island\*) is often considered the epicenter of the spill in terms of bird impacts. The mangroves were destroyed by the oil, and lacking their stabilizing effect, the island has since almost completely washed away (see before and after photos below right). Note that nearby island restoration has been highly successful; however, even withstanding Hurricane Katrina.



5. **Osprey Nesting Platforms, Fourchon to Grand Isle, LA - Request: \$110,000.**  
Matching Funds: \$7,000 and in-kind.  
**Project Location and History:**— Nesting platforms would be constructed and installed at numerous locations around the Fourchon and Grand Isle areas. These magnificent birds of prey are commonly found along the coast with a concentration in this area. Many nesting attempts on power poles fail. This would provide for a superior nesting platform/opportunity for these birds.  
**Expected 5 year Outcomes:** Construction and deployment of numerous safe, mammalian predator free, nesting platforms. Improved nesting success of this raptor.  
**Species benefitting:** Osprey.
6. **Marsh Protection along Gulf Intracoastal Waterway (GIWW), Texas - Request \$50M for 50 miles of breakwaters.**  
**Project Location and History:** Coastal marsh habitats along the GIWW are disappearing or degrading due to shoreline erosion and saltwater intrusion. Vessel and wind generated waves cause up to 10 feet of annual erosion on some shores. Additionally, saltwater deposition and intrusion from the GIWW into adjacent fresh and intermediate emergent marsh creates open water habitats with reduced value for birds and fish. A successful and widely accepted conservation practice to address these concerns is constructing breakwaters.  
**Expected 5 year Outcomes:** Construction of breakwaters for the highest priority marsh areas, mitigation of shoreline erosion, protection of existing coastal marsh functions and values, and restoration of marsh.  
**Species benefitting:** Clapper Rail, Willet, Mottled Duck, Black Rail, American Bittern, Snowy Egret
7. **Coastal Marsh Infrastructure Repair and Replacement, entire Gulf Coast - Request \$5M.**  
**Project Location and History:** Coastal marsh habitats managed by public and private landowners are vital to conserving resident and migratory bird populations along the Gulf of Mexico. Significant efforts are made by landowners to create desirable and beneficial habitat conditions. These management techniques require the use of infrastructure such as levees, pumps, water control structures, salinity barriers, and weirs to keep water on the landscape. Much of this infrastructure is inefficient, deteriorated, or out-dated. Replacement of these components using modern, corrosion resistant materials can increase marsh productivity and improve landowner dependability.  
**Expected 5 year Outcomes:** Coordinate and repair infrastructure for 7,500 acres of coastal marsh.  
**Species benefitting:** Clapper Rail, Willet, Mottled Duck, Black Rail, American Bittern, Snowy Egret
8. **Creating Safe Nesting Beaches, entire Gulf Coast - Request: \$10M. Matching Funds: \$0.25M.**  
**Project Location and History:** Multiple Sites Gulf-wide (more than 20 locations, expanding on existing successful NFWF grants). This project will create safe nesting habitat for skimmers, terns, and other shorebirds at existing nesting locations through on-



much of the property is protected and managed for coastal wildlife, many critical properties remain vulnerable to development.

**Expected 5 year Outcomes:** Protection and restoration of key inholdings of a globally important shorebird sanctuary through acquisition.

**Species benefitting:** Shorebirds and other coastal species e.g. Piping Plover, Snowy Plover, Wilson's Plover, Red Knot, Sanderling, Willet, Marbled Godwit, Reddish Egret, American Oystercatcher, Gull-billed Tern.

**13. Spill Response Preparedness - Request \$1.1M.**

**Project Location and History:** The effects of the spill were exacerbated by a lack of sturdy boom, and lack of knowledge of the impacts of cleanup operations on beach-nesting birds.

**Expected 5 year Outcomes:** Increased awareness among industry and first responders on how to minimize spill impacts on birds. Project will include a best practices manual, video and other information resources, and a series of training workshops and community outreach programs.

**Species benefitting:** All coastal birds.

**14. Bird Tourism and Conservation Outreach, Gulf-wide - Request: \$12M.**

**Project Location and History:** This project will help to stimulate local economic development and jobs based around bird tourism. It will include a series of short films, support for local bird festivals, and outreach and help to promote the existing birding trails in the region with improved infrastructure at key sites.

**Expected 5 year Outcomes:** Increased awareness of birds and bird conservation Gulf-wide, and increased visitation from birders from across the U.S. to the region.

**Species benefitting:** Migratory birds including shorebirds and songbirds.

**15. Tracking Restoration Success, Gulf-wide - Request: \$10.15M. Matching \$0.25M.**

**Project Location and History:** We propose to develop a Gulf-wide baseline for bird restoration projects developed with funding related to the Deepwater Horizon spill, and to track success to report to donors and the bird community as a whole on how populations are rebounding.

**Expected 5 year Outcomes:** A baseline status report with regular monitoring and reporting on restoration projects, leading to a full report on successes over a five-year time frame. This project includes the construction of a training center on the upper Texas coast, and a specific component studying barrier islands in Louisiana with a focus on the endangered Piping Plover.

**Species benefitting:** All beach and island colonial nesting birds.

**16. Best Practices for Bird Restoration, Gulf-wide - Request: \$4.8M.**

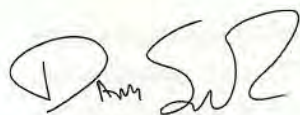
**Project Location and History:** Many restoration projects have been carried out across the gulf region in the past that have benefitted birds, and lessons from these can help inform projects planned under the plea agreement (and other future projects). This project will conduct a thorough analysis of current projects and determine and document best practices for each restoration technique and conduct outreach to stakeholders.



ABC and its partners stress the importance of implementing collaborative large-scale restoration projects that will have the most benefits to the Gulf Coast's unique habitats and natural resources and it is clear the Council shares this vision. We have an interest in the implementation of Gulf-wide avian-based projects that focus on protecting and growing affected populations; creating new and conserving existing habitat for wintering, migrating, and breeding birds; and educating and engaging the public in learning more about how birds are an integral part of a healthy, well-functioning ecosystem.

Thank you for the opportunity to comment on this matter. We look forward to working together with you as this process moves forward. Please feel free to contact either of our organizations if we can be of additional assistance.

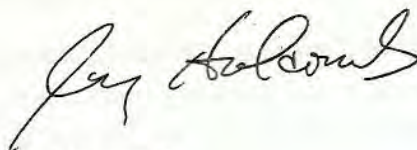
Sincerely,



Darin Schroeder  
Vice President  
American Bird Conservancy  
1731 Connecticut Avenue, NW  
Third Floor  
Washington, DC 20009  
(202) 234-7181



Cecilia M. Riley  
Executive Director  
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Jay Holcomb  
Director  
International Bird Rescue  
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P.J. Hahn  
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Plaquemines Parish  
8056 Hwy 23, Suite 307  
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# BOARD OF COUNTY COMMISSIONERS ESCAMBIA COUNTY, FLORIDA



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June 25, 2013

Gulf Coast Ecosystem Restoration Council,  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

Dear Chairman Ehrenwerth:

Escambia County is the westernmost political subdivision in the State of Florida, only 112 miles from the Deepwater Horizon well head. We are the largest county by population in the Florida panhandle and have the only fully dedicated environmental department including a water quality laboratory, Water Quality and Land Management Division, Coastal Resources Program, Marine Resources Division, Natural Resources Conservation Division and the Florida Sea Grant Extension. These resources and scientists allow us to take a proactive and forward leaning policy approach to managing and enhancing environmental quality, ecotourism and environmental health. Escambia County has 35 miles of Gulf-front barrier beaches and the entrance into the Pensacola Bay system, the fourth largest watershed on the Florida gulf coast. Over 52 miles of shoreline were oiled in Escambia County, affecting the County's entire Gulf-front and 17 miles of inland shoreline. The only coastal segment left in active response outside Louisiana is within the Pensacola Bay system on Naval Air Station Pensacola immediately opposite Pensacola Pass. Ninety seven percent by volume of all oil impacting the shores of Florida was recovered in Escambia County.

Escambia County provides these comments on the *Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy* and *Draft Programmatic Environmental Assessment* pursuant to Federal Register notice dated May 29, 2013. Escambia County also appreciates the vast scope of this effort and planning process to address the needs of the ninth largest water body in the world. We support building on the previous work of the Gulf Coast Ecosystem Restoration Task Force such as the *Gulf of Mexico Ecosystem Science Assessment and Needs* document and the *Gulf of Mexico Regional Ecosystem Restoration Strategy*. We also understand that it takes time to develop the supporting science and that all the planning needs to be driven by a watershed and science-based approach. Watersheds do not necessarily know political or jurisdictional boundaries. Because of the vast scope of the Council-Selected Restoration Component, this particular Plan is truly positioned to be able to take a watershed approach across state and local government boundaries.

With no actual program budget, the development of this Plan has been daunting. We understand that the Council is still organizing, staff resources are uncertain, there are no guiding regulations for the



process and producing this Plan within one (1) year has been challenging. We also understand that this is a “living document” with the intent that as soon as there is a better understanding of a program budget, staff resources, etc. the planning process can continue with a goal of developing a more detailed approach and initial queue of projects.

Escambia County recognizes that this is a draft document and appreciates the opportunity to provide input. That said, Escambia County also recognizes the monumental task the Council must accomplish inside of short deadlines. Recognizing those challenges and constraints, we offer the following comments and raise the following issues to assure the local government perspective is reflected as this particular planning process advances. Our comments are provided in finer detail attached to this correspondence, but for summary purposes they are as follows:

- **Defining “authorized but not yet commenced” projects.** The “authorized but not yet commenced” threshold for inclusion in Appendix A should be defined with more detail so that it is clearer whether or not certain projects are eligible for inclusion in the Council’s Plan (3-Year Prioritized Project List).
- **Defining the process for future project evaluation.** The Council should better define how the process will move forward from this point for project evaluation. Items to define include the project submittal process; what documentation will be required; at what staff, committee or Council level projects will be reviewed; establishing project submittal timeframes, and how parties will be responsible for project implementation.
- **Begin Plan Update and 3-Year Prioritized Project List as soon as possible.** The Plan Update process and development of the first 3-Year Prioritized Project List must commence as quickly as possible so that the State Expenditure and locally-driven Multi-Year Implementation Plans can be consistent and dovetail with the Comprehensive Plan. A timeline regarding future steps should be added to the Comprehensive Plan. Despite the fact that Comprehensive Plan updates are only required every five (5) years, the Council should begin the first update much sooner.
- **Clarify NEPA Evaluation requirements for all required planning processes.** The Programmatic Environmental Assessment currently states that ‘appropriate’ project NEPA evaluation will occur **prior** to approval by the Council. Full NEPA review of projects **prior** to selection by the Council could significantly increase the time to develop the 3-Year Prioritized Project List and the first Plan update. The process for NEPA evaluation of projects across all three (3) planning efforts needs to be better described.
- **Establish clear and consistent policies and procedures across all RESTORE Act activities.** Other issues should be addressed throughout policies and procedures developed for restoration such as consistency amongst the planning efforts; reimbursements and advance payments for project implementation; and developing a consistent and streamlined project submittal and approval documentation process.
- **The Council’s Plan should be based on a scientifically-driven process prioritizing criteria based on the RESTORE Act Priorities.** Based on the questions posed throughout the public input process on the Plan, the Council should further define the “Priority Criteria”, prioritize the objectives consistent with the RESTORE Act and establish a scientifically-driven process coordinating across watersheds.



It is in this spirit of cooperation Escambia County offers the attached comment detail regarding the Draft Initial Comprehensive Plan, the Draft Programmatic Environmental Assessment and other general and specific comments. For any questions regarding these comments, please do not hesitate to contact myself or Keith Wilkins at (850) 595-4988.

Sincerely,



Grover C. Robinson, IV  
Escambia County Commissioner  
District 4



June 11, 2013

*Submitted Online and Sent via U.S. Mail*

Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Avenue N.W., Room 4077  
Washington, DC 20230

**Re: Support for Acquisition and Restoration of Essential Habitat for the Endangered Dusky Gopher Frog**

To Whom It May Concern:

On behalf of the Center for Biological Diversity and Gulf Restoration Network, we are writing to offer our support for use of *Deepwater Horizon* oil spill settlement funds for acquisition and restoration of essential endangered species habitat that is currently owned by a development company called Columbus Communities, LLC or "Tradition." As explained below, survival of the highly endangered dusky gopher frog requires restoration of the longleaf pine ecosystem on this 250-acre parcel. Because the parcel straddles Tiger Creek, its restoration would contribute to improved health of watersheds that border the Gulf Coast, as needed for a Gulf-wide ecosystem approach to restoration.

The Center for Biological Diversity is a national, nonprofit conservation organization with more than 500,000 members and online activists dedicated to the protection of endangered species and wild places. Gulf Restoration Network is a network of environmental, social justice, and citizens' groups and individuals committed to restoring the Gulf of Mexico to an ecologically and biologically sustainable condition.

### **Dusky Gopher Frog**

The U.S. Fish and Wildlife Service ("FWS") listed the dusky gopher frog (*Rana sevosa*) under the Endangered Species Act in December of 2001 and designated critical habitat in June of 2012. The frog is primarily threatened by habitat loss. Due to its small numbers, it is also highly susceptible to genetic isolation, inbreeding, and random demographic or human related events. FWS has estimated that less than 100 adult Mississippi gopher frogs remain.

The dusky gopher frog is currently known from just a handful of sites in Harrison and Jackson counties in southern Mississippi, with only one of these sites – Glen's Pond – regularly showing reproduction by the frog.



## **The Tradition Development**

A 4,600-acre master-planned community called the “Town of Tradition” is being developed on property next to Glen’s Pond. The development plan calls for 2,260 acres of single and multi-family units; 200 acres of commercial, office, retail, and light industry; 40 acres of schools, churches, and other civic related developments; and 300 acres for two golf courses.

The Tradition property boundary is approximately 200 meters from Glen’s Pond. In collaboration with Tradition, we have identified a 250-acre parcel of Tradition land located immediately adjacent to Glen’s Pond, which is essential for the frog’s survival. The FWS has recognized the importance of this parcel by including it in the frog’s designated critical habitat.

## **Proposal for Acquisition and Restoration**

Tradition has asked state and federal agencies to support (a) acquisition of the 250-acre parcel by an appropriate agency, (b) placement of this acquisition/preservation project on the priority lists of projects to be funded in Mississippi with settlement funds from the *Deepwater Horizon* oil spill, and (c) funding of the restoration of longleaf pine on the parcel through an endowment from the National Fish and Wildlife Foundation funds, Gulf Coast Ecosystem Restoration Council funds, or other sources.

We are writing to offer our support for Tradition’s recommendation because preservation of this habitat is absolutely essential for the frog’s survival. The dusky gopher frog is one of the most highly endangered amphibians in the country with likely less than 100 adult frogs remaining. The 250-acre parcel surrounds Glen’s Pond, which is the frog’s last viable breeding pond.

Acquisition of this parcel by an appropriate agency would ensure that the frog’s longleaf pine habitat is preserved and appropriately managed through controlled burns to ensure that it continues to meet the frog’s highly specialized habitat requirements. In addition, preservation of the longleaf pine on this parcel could also provide habitat for the endangered gopher tortoise and red-cockaded woodpecker.

The gopher frog parcel straddles Tiger Creek, a natural stream that flows into the Biloxi River, which flows into the Bay of Biloxi and thence to the Mississippi Sound and Gulf of Mexico. If an agency were to acquire and restore the parcel, this land would provide natural filtering of storm water runoff and would enhance water quality contributing to restoration of the estuarine ecosystem of the Biloxi River, Biloxi Bay and Mississippi Sound, which was harmed by the oil spill.

Preserving this parcel and others bordering watersheds of the Gulf Coast is essential to a Gulf-wide ecosystem approach to restoration. Impaired water quality and ecosystem functioning due to widespread destruction of the virgin longleaf pine forest likely has contributed to the decline of marine life in our rivers, bays, and the Gulf itself, in addition to wildlife dependent on longleaf pine, such as the dusky gopher frog, gopher tortoise, and red-cockaded woodpecker.

For all these reasons, we believe that settlement funds should be used to acquire and preserve the 250-acre gopher frog parcel. If you have any questions or would like to discuss further, please do not hesitate to contact any of us.

Sincerely,

A handwritten signature in black ink, appearing to read "Collette J. Adkins".

Collette Adkins Giese  
Amphibian and Reptile Attorney  
Center for Biological Diversity  
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Executive Director  
Gulf Restoration Network  
(504) 525-1528 ext 202  
cyn@healthygulf.org





COLUMBUS  
COMMUNITIES,  
L.L.C. ("TRADITION")

VIA U.S. MAIL

June 11, 2013

Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230


Re: Restoring the Gulf Coast's Ecosystem and Economy

Members of the Council:

Please see enclosed my comments dated June 11, 2013 on the Council's Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy, May 2013.

Sincerely,

COLUMBUS COMMUNITIES, LLC ("TRADITION")

By:   
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Enclosures: Comment June 11, 2013 by Gerald Blessey

## COMMENT

**RE: DRAFT INITIAL COMPREHENSIVE PLAN**  
**Restoring the Gulf Coast's Ecosystem and Economy**

**SUBMITTED TO:** Gulf Coast Ecosystem Restoration Council and  
Trudy Fisher, Executive Director, Mississippi DEQ

**SUBMITTED BY:** Gerald Blessey, General Counsel  
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**DATE:** June 11, 2013

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Mississippi Dusky Gopher Frog



## SUMMARY OF COMMENTS/RECOMMENDATIONS

### RECOMMENDATIONS TO THE COUNCIL AND MDEQ:

#### **(1) CLARIFY THAT COASTAL WATERSHEDS ARE ESSENTIAL TO ECOSYSTEM-BASED**

**RESTORATION:** The Council's plan should clarify that projects for acquisition and preservation of land bordering fresh water creeks, rivers and streams of watersheds in the Coastal Zone, preservation of endangered and threatened species in and near watersheds, and restoration of longleaf pine in uplands bordering watersheds are essential to a holistic, ecosystem-based approach for restoration of the ecosystem and economy of the Gulf Coast.

#### **(2) PLACE THE DUSKY GOPHER FROG PARCEL AT TRADITION ON THE LIST OF AUTHORIZED**

**PROJECTS:** The plan should place on the Council's preliminary list of authorized but not yet commenced projects and programs a project for (a) state or land trust acquisition of a 270-acre parcel from Tradition on the headwaters of the Biloxi River and bordering the Desoto National Forest and (b) an endowment for preservation of the parcel to (i) enhance future water quality, nutrients and sediments that nourish marine life in the Biloxi River-Biloxi Bay estuary; (ii) provide additional habitat to enhance the survivability of the Mississippi dusky gopher frog, the red-cockaded woodpecker and the gopher tortoise; and (iii) restore longleaf pine ecosystem in the parcel.

**(3) PLACE THE DUSKY GOPHER FROG PARCEL AT TRADITION ON THE 2013 PRIORITY LIST FOR THE NFWF GULF ENVIRONMENTAL BENEFIT FUND FOR MISSISSIPPI:** The Council and MS DEQ should recommend to National Fish and Wildlife Foundation that a project for state or land trust acquisition and an endowment for preservation of the 270-acre Mississippi Dusky Gopher Frog Preservation Parcel at Tradition should be on the 2013 priority list for NFWF's Gulf Environmental Benefit Fund for Mississippi.

### SUMMARY OF COMMENTS:

**WATERSHEDS, ENDANGERED SPECIES, AND LONGLEAF PINE.** Watersheds are essential to holistic restoration of the gulf coast ecosystem and economy. The plan should clarify that enhancement of watersheds in the Coastal Zone, preservation of endangered and threatened species in watersheds, acquisition of land bordering watersheds, and restoration of longleaf pine in uplands bordering watersheds are essential to a holistic, ecosystem-based approach toward restoration of the Gulf Coast's ecosystem and economy.

**COMPREHENSIVE PLANS AND GUIDELINES.** Acquisition and preservation of land to enhance future water quality of coastal zone watersheds, save endangered species, and restore longleaf pine ecosystem serve strategic plans and guidelines stated in the GCERC's Draft Initial Comprehensive plan, the BP and Transocean Criminal Plea Settlement Agreements, and the Mississippi GoCoast 2020 Commission Report.

**COUNCIL'S LIST OF AUTHORIZED PROJECTS.** The plan should place on the Council's preliminary list of authorized but not yet commenced projects and programs a project for state or land trust



acquisition of a 270-acre parcel from Tradition on the headwaters of the Biloxi River and bordering the Desoto National Forest, with an endowment for preservation and restoration, to (i) enhance future water quality, nutrients and sediments that nourish marine life in the Biloxi River-Biloxi Bay estuary; (ii) provide additional habitat to enhance the survivability of the Mississippi dusky gopher frog, the red-cockaded woodpecker and the gopher tortoise; and (iii) restore longleaf pine ecosystem in the parcel.

**NFWF's GULF ENVIRONMENTAL FUND 2013 PRIORITY LIST.** The Council and MS DEQ should recommend to National Fish and Wildlife Foundation that a project for state or land trust acquisition of the 270-acre Mississippi dusky gopher frog parcel at Tradition, with an endowment for preservation and restoration, should be on the 2013 priority list for NFWF's Gulf Environmental Benefit Fund for Mississippi (BP/Transocean criminal plea settlement funds. The State of Mississippi or a state-approved land trust should acquire the parcel from Columbus Communities, LLC ("Tradition"), a willing seller, at fair market value determined by appropriate governmental procurement laws and regulations. A current MAI appraisal values the land at \$4.3 Million (\$16,000 per acre.) The project funding should include a small endowment (approximately \$200,000) for future state or land trust management and restoration activities.

**ECONOMIC RECOVERY AND SUSTAINABILITY DEPENDS ON ECOSYSTEM RECOVERY AND SUSTAINABILITY.** These comments and recommendations for ecosystem restoration and protection of endangered species also serve holistic strategies for economic recovery of the Mississippi Coast and the whole Gulf Region. Recreation and ecotourism in forests and watersheds are essential to a diversified recovery of the Gulf Coast tourism industry. E.O. Wilson states that 80% of all income from forests comes from recreation, not logging. He emphasizes that, "Everywhere, and not just in hot spots and wildernesses, we need to direct special attention to the lakes and river systems, which are the most threatened ecosystems of all."<sup>1</sup>

Programs for research, education and preservation of endangered species generate jobs not only for scientists, educators, managers and staff in laboratories and the field, but also for ecotourism rangers, guides, and managers. Enhancing the water quality, nutrients and sediments from watersheds that flow into the marine nursery areas in the estuaries of the Gulf are essential elements of restoring not only the marine life of the Gulf Region, but also the fishery and tourism industries that depend now and forever upon the recovery and sustainability of marine life.

**GLOBAL WARMING, RESILIENCE AND SUSTAINABILITY.** Implementation of these recommendations would support the resilience and sustainability of Gulf Coast communities, economies and ecosystems. Implementing these recommendations will reduce carbon dioxide in the atmosphere, thus reducing global warming.<sup>2</sup>

**SCIENCE-BASED.** The foregoing comments and recommendations are science based. See the footnotes and Appendices herein.

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<sup>1</sup> Schueler, Donald G., Mississippi Department of Wildlife, Fisheries and Parks, *Preserving the Pascagoula* (University Press of Mississippi, 2d ed. 2002). Afterword Keynote Address by E.O. Wilson at p. 187.

<sup>2</sup> *Standing Tall: How Restoring Longleaf Pine Can Help Prepare the Southeast for Global Warming*, National Wildlife Federation (2009). Foreword by E.O. Wilson.



## DUSKY GOPHER FROG PARCEL OVERVIEW

**ACQUISITION AND PRESERVATION OF THE DUSKY GOPHER FROG PARCEL WILL ENHANCE ESTUARINE WATER QUALITY AS WELL AS HABITAT FOR ENDANGERED SPECIES:** The map in Figure 2, below, identifies a 270-acre parcel, currently owned by Columbus Communities, LLC, contiguous with the DeSoto National Forest in central Harrison County, that is available for acquisition and preservation by an appropriate public agency or land trust to (a) enhance future water quality of the Biloxi River watershed flowing into the Biloxi Bay-Mississippi Sound ecosystem and (b) increase permanent habitat around Glen's Pond, the primary breeding site of the Mississippi Dusky Gopher Frog, an endangered species.

**ACQUISITION AND PRESERVATION OF THE PARCEL WILL GREATLY ENHANCE RESTORATION OF THE BILOXI RIVER-BAY OF BILOXI-MISSISSIPPI SOUND ESTUARY AND THEREBY REMEDY HARM, AND REDUCE THE RISK OF FUTURE HARM, TO GULF COAST NATURAL RESOURCES:** "In general the coastal zone encompasses both the neighboring uplands and the adjacent salt waters that are mutually influenced by the interactive complex of various ecological processes (natural and human-influenced) occurring in each region."<sup>3</sup> The currently undeveloped 270-acre dusky gopher frog parcel at Tradition straddles Tiger Creek, a natural stream that flows into the Biloxi River which flows into the Bay of Biloxi and thence to the Mississippi Sound and Gulf of Mexico. If acquired by a public agency or land trust, this land would provide natural filtering of storm water runoff, and, if the longleaf pine ecosystem were also restored on this parcel, it would restore historic, natural nutrients and sediments in this watershed to enhance future water quality contributing to restoration of the estuarine ecosystem formed by the Biloxi River watershed, Bay of Biloxi and Mississippi Sound that serve as nursery grounds for marine life harmed by the Macondo oil spill.<sup>4</sup> Therefore, acquisition and preservation of the parcel and restoration of longleaf pine on it would remedy harm, and reduce the risk of future harm, to Gulf Coast natural resources.

**PRESERVATION OF ENDANGERED SPECIES:** This additional habitat would likely increase the population and survivability of the Mississippi Dusky Gopher Frog. This 270-acre parcel borders critical habitat recently designated by USFWS for the Mississippi Dusky Gopher Frog.<sup>5</sup> Approximately 100 Mississippi Dusky Gopher Frogs breed in Glen's Pond, in the National Forest adjacent to the parcel proposed for acquisition, making this parcel and the Desoto National Forest contiguous for ease of controlled burns and other ecosystem management techniques. Recently, USFWS has successfully

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<sup>3</sup> Vernberg, F. John, and Vernberg, Winona B. *The Coastal Zone: Past, Present and Future*, Columbia: University of South Carolina Press, 2001, p. 3.

<sup>4</sup> Holland, A. F., D. M. Sanger, C. P. Gawle, S. B. Lerberg, M. S. Santiago, G. H. M. Riekerk, L. E. Zimmerman, and G. I. Scott. 2004. "Linkages between tidal creek ecosystems and the landscape and demographic attributes of their watersheds." *Journal of Experimental Marine Biology and Ecology*. 298: pp. 151-178; see also, Holland, A. F., D. M. Sanger. 2008. *Tidal Creek Habitats: Sentinels of Coastal Health*, available at [http://www.scseagrant.org/pdf\\_files/tidal\\_creeks\\_booklet.pdf](http://www.scseagrant.org/pdf_files/tidal_creeks_booklet.pdf).

<sup>5</sup> 77 FR 35117 35161, *Designation of Critical Habitat for Dusky Gopher Frog (Previously Mississippi Gopher Frog)*; *Final Rule*, Department of the Interior Fish and Wildlife Service.



### Location Maps:



Figure 1 - Harrison County Map Showing Tradition, Major Cities, and Coastal Geography





Figure 2 - Dusky Gopher Frog Preservation Parcel at Tradition: Detail View With DeSoto Natl. Forest and Glen's Pond





Figure 3 - Dusky Gopher Frog Preservation Parcel Map Showing Biloxi River Watershed







## ACQUIRING THE PARCEL MEETS GUIDELINES AND PRIORITIES

Acquisition and preservation of this parcel by a public agency or land trust would contribute to regional, holistic, ecosystem-based, landscape-scale, science-based restoration of the natural resources, economy and communities of the Gulf Coast by providing:

- Enhancement of water quality contributing to restoration of the estuarine ecosystem of the Biloxi River, Bay of Biloxi & Mississippi Sound that was harmed by the Macondo oil spill
- Additional Habitat to enhance the survivability of Mississippi Dusky Gopher Frog (Endangered Species) and Gopher Tortoise (Threatened Species)
- Longleaf pine ecosystem restoration and habitat for Red-cockaded Woodpecker (Endangered Species)
- Diversification and enhancement of public recreation, eco-tourism and general tourism
- Opportunities for education and research regarding survivability of the dusky gopher frog and restoration of the longleaf pine ecosystem in the watersheds of the Gulf region
- Reduction of carbon dioxide in the atmosphere

This additional habitat would likely increase the population and survivability of the frog. The purchase price would be fair market value, set by MAI appraiser selected by the buyer. Approximately 100 of the frogs breed in Glen's Pond, in the National Forest adjacent to the parcel proposed for acquisition. This parcel would provide additional habitat within 1,000 meters of Glen's Pond, the estimated range of the frog.

Although the 2010 Macondo oil spill has resulted in multiple funding sources subject to somewhat varying guidelines, rules, and decision-making bodies, the guidelines published to date about project eligibility and priority exhibit consistent parallels. Additionally, NFWF will seek input from MDEQ, USFWS, and NOAA to identify projects and help develop consensus. These organizations' input will also be the "primary means" through which NFWF's Gulf Environmental Benefit Fund projects are coordinated with those being implemented through the RESTORE Act and other funds. Like NFWF, the Gulf Coast Ecosystem Restoration Council, and other involved agencies, are committed to cooperation and coordination of projects to maximize efforts and efficiency. This section demonstrates how acquiring the gopher frog parcel using NFWF'S funds from the BP/Transocean criminal plea settlements would constitute a project that satisfies goals, priorities, criteria, and guidelines across the board, facilitating easy cooperation and coordination at the decision-making level.

### *Deepwater Horizon criminal settlement plea agreement guidelines and NFWF criteria*

The plea agreement for the BP and Transocean criminal settlements state that ½ of the \$2.5 billion in settlement funds directed to the National Fish & Wildlife Foundation must be used "to **remedy harm** and eliminate or **reduce the risk of future harm** to Gulf Coast **natural resources**" across the five affected Gulf states.<sup>11</sup> (Emphasis added.)

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<sup>11</sup> Order, par. 37, p. 17, implementing the Guilty Plea Agreement, *United States of America v. BP Exploration & Production, Inc.*, ( E. D. La., 2012).



Permanent enhancement of water quality in the estuarine ecosystem will “remedy harm” and reduce the “risk of future harm” to “Gulf Coast natural resources”, especially marine life dependent upon the nursery grounds in the Biloxi River, Bay of Biloxi and Mississippi Sound. Additional permanent habitat for the gopher frog, gopher tortoise and red-cockaded woodpecker will “reduce the risk of future harm” to those species.

NFWF’s published information on the Gulf Environmental Benefit Fund for Mississippi states that “Mississippi is working to develop a holistic approach to restoration efforts that maximizes the benefit of current and future funding with the overall goal of achieving long-lasting and sustainable environmental benefit for the state and region” and that “Projects are expected to occur within reasonable proximity to where the impacts occurred, as appropriate.”<sup>12</sup> The dusky gopher frog parcel at Tradition is within Harrison County, one of Mississippi’s three Coastal Zone counties, is on the headwaters of the Biloxi River, and is approximately 12 miles from the Mississippi Sound.

State or land trust acquisition of the gopher frog parcel represents a holistic approach that meets these overall goals in several ways. Preservation of this parcel of land protects two endangered and one threatened species, and also adds permanent habitat into which they can expand and increase their numbers. Protection and restoration of the longleaf pine ecosystem that shelters these three species is critical to maintaining biological diversity in the Gulf region, as well as preserving the integrity of Tiger Creek, a freshwater creek which feeds the Biloxi River and Biloxi Bay/Mississippi Sound estuarine and marine ecosystems with a critical influx of fresh water and nutrients drained from the upland watershed. Recovery of the coastal and marine ecosystems directly affected by the spill is dependent on recognizing the “big picture” of the entire coastal ecosystem, and taking measures to ensure each part is healthy.<sup>13</sup> Thus, preserving the gopher frog parcel represents a double-header in that not only does it directly benefit the endangered and threatened species of the longleaf pine ecosystem within its borders, but it also contributes to the recovery and continued resilience of the entire coastal ecosystem downstream.

In addition to the plea agreement criteria, NFWF also states that further criteria may call for projects that:

- Advance priorities in natural resource management plans;
- Are cost-effective and maximize environmental benefits;
- Are science-based; and
- Produce measurable and meaningful conservation outcomes<sup>14</sup>

Again, preservation of this parcel and restoration of the longleaf pine ecosystem constitutes an extremely cost-effective project with maximized environmental benefits that advance priorities in natural resource management plans because it (a) enhances survivability of two endangered and one threatened species and (b) encourages the restoration, sustainability, and future resilience of not just

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<sup>12</sup> “Gulf Environmental Benefit Fund: Mississippi”; <http://www.nfwf.org/Pages/gulf/GEBF-Mississippi.aspx#.Ua4Cvet4Np9>.

<sup>13</sup> See, Sklar, Fred H., Joan A. Browder. “Coastal Environmental Impacts Brought About by Alterations to Freshwater Flow in the Gulf of Mexico.” *Environmental Management*, July 1998, Volume 22, Issue 4, pp 547-562.

<sup>14</sup> “Gulf Environmental Benefit Fund: Mississippi”, *supra*.



the coastal and estuarine ecosystem whose headwaters it is a part of, but of the longleaf forest ecosystem -- which itself is tied to the Gulf's ecosystems because the forest's health affects the water type, quality, toxicity, and nutrient availability that feeds into the estuaries and Gulf (See map of Mississippi Coastal Preserves and the watershed of the three coast counties, published by Mississippi Department of Marine Resources, in Figure 4, below). See also the extensive conservation mapping in "Conservation Strategy for the Mississippi Gulf Coast" published by the Land Trust for the Mississippi Coastal Plain under a grant from USFWS and Mississippi DMR.<sup>15</sup>

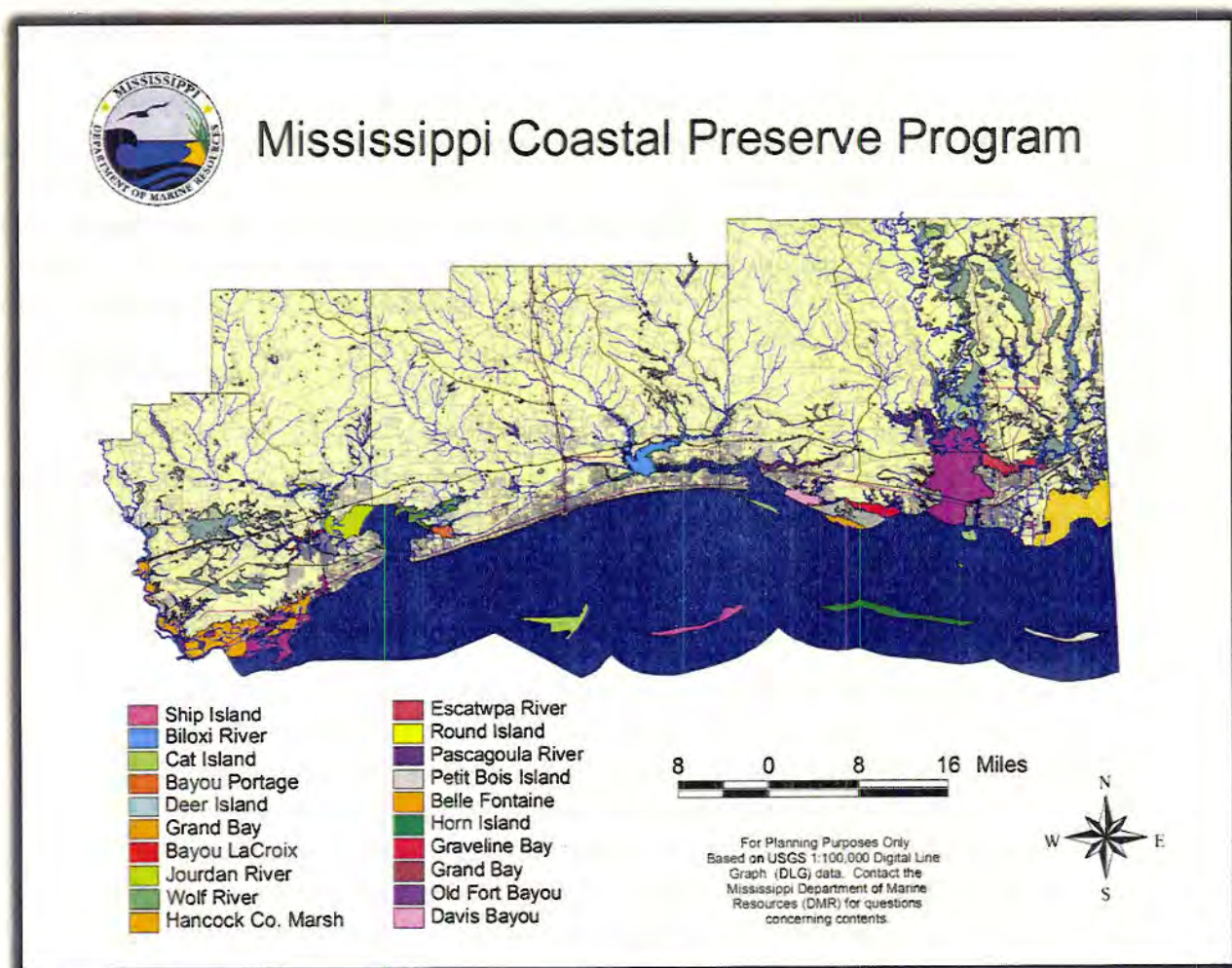


Figure 4 - Mississippi Coastal Preserve Program Map

<sup>15</sup> *Conservation Strategy for the Mississippi Gulf Coast, Conservation Mapping Report*, Land Trust for the Mississippi Coastal Plain, Miss. Dept. of Marine Resources, Miss. Dept. of Wildlife, Fisheries and Parks, CDM (Nov. 2001)



recovery for marine ecosystems downstream by reducing the amount of contaminants and increasing the amount of natural nutrients feeding into the system. Further, longleaf pine restoration will mitigate the impacts of climate change. Longleaf pine can withstand hurricane winds, fire, and drought better than loblolly and slash pine, and restoration of the mature longleaf canopy and the flora and fauna that thrive in the mature longleaf ecosystem will reduce carbon dioxide in the atmosphere, thus contributing to the reduction of global warming.<sup>17</sup>

### Specific goals and objectives

The Council lists 5 specific goals for the Plan:<sup>18</sup>

1. Restore and conserve habitat
  - a. Acquiring the parcel ensures conservation of critical habitat for an endangered species and will allow for future efforts to restore longleaf pine in the area.
2. Restore water quality
  - a. Acquiring the parcel would help protect the integrity and quality of Tiger Creek, which feeds directly into the Biloxi River and the estuarine ecosystem of the MS Gulf Coast.
3. Replenish and protect living coast and marine resources
  - a. Protecting this area of land allows it to continue to perform critical functions for the Gulf's estuaries by reducing the amount of toxins and pollutants that reach the Gulf, as well as feeding it with essential nutrients young fish, crabs, and shrimp need to thrive. As a result, coastal and marine resources will be assisted in their recovery from the oil spill.
4. Community resilience
  - a. Community resilience in a coastal region depends on resilience of the coastal environment itself. This project would contribute to the overall resilience, recovery, and sustainability of the region's ecology.
5. Restore and revitalize the Gulf economy
  - a. The Gulf economy depends on the health of its natural environment. By assisting in the recovery of marine resources affected by the spill, as well as maintaining or increasing the diversity of species in marine ecosystem's headwaters, this project directly and indirectly helps the Gulf economy by healing its environmental woes.

All of the above benefits can be expected should the dusky gopher frog parcel be acquired and preserved, and all would be further enhanced by future efforts to restore the longleaf pine forest in the area in collaboration with the USDA Forest Service in the contiguous Desoto National Forest.

### Council Objectives

Section IV of the plan also provides many sample Objectives for selection by the Council. Projects must fall within the scope of at least one these Objectives for ecosystem restoration. The Gopher Frog Parcel falls under the scope of several of these Objectives:

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<sup>17</sup> See, Finch, Bill, Beth Maynor Young, Rhett Johnson and John C. Hall. *Longleaf, Far as the Eye Can See: A New Vision of North America's Richest Forest*, *supra*; *Standing Tall: How Restoring Longleaf Pine Can Help Prepare the Southeast for Global Warming*, *supra*.

<sup>18</sup> Draft Initial Comprehensive Plan, p. 8



- Restore, Enhance, and Protect Habitats: Restore, enhance, and protect the extent, functionality, resiliency, and sustainability of coastal, freshwater, estuarine, wildlife, and marine habitats.
- Restore, Improve, and Protect Water Quality: By reducing or treating nutrient and pollutant loading; and improving the management of freshwater flows, discharges to, and withdrawals from critical systems.
- Protect and Restore Living Coastal and Marine Resources: Restore and protect healthy, diverse, and sustainable living coastal and marine resources. The types of projects and programs that could be implemented under this objective may address recovery of threatened and endangered species.

Finally, the Council has stated in the Draft Plan that it will give highest priority for at least the first three years to ecosystem projects that meet one or more of its four Priority Criteria.<sup>19</sup> These are:

1. Projects that are projected to make the greatest contribution to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region, without regard to geographic location within the Gulf Coast region.
2. Large-scale projects and programs that will substantially contribute to restoring and protecting the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.
3. Projects contained in existing Gulf Coast State comprehensive plans for the restoration and protection of Gulf Coast region's natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands.
4. Projects that restore long-term resiliency of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands most impacted by the *Deepwater Horizon* oil spill.

Timely actions to add habitat and enhance survivability of endangered and threatened species are always of the highest priority in comprehensive plans for environmental restoration and protection. See: plans of Miss. Dept. of Wildlife, Fish & Parks, and USFWS for preserving the Dusky Gopher Frog and Red-cockaded Woodpecker.

Acquisition of the gopher frog parcel easily meets the Council's Priority Criteria. By benefitting our marine, estuarine, and longleaf pine forest ecosystems, preservation of the gopher frog parcel constitutes a large benefit to the area. Furthermore, active restoration of the longleaf pine ecosystem in and around this parcel would represent an important piece of a larger, ongoing effort throughout the Southeast US to restore this critical habitat and natural resources. These actions combined result in both immediate and long-term restoration and health of the environment on the MS Gulf Coast.

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<sup>19</sup> Draft Initial Comprehensive Plan, p. 14

community development can serve as a model for a positive business environmental where there can be “progress with preservation.” As E.O. Wilson so wisely stated in his keynote address at ‘Celebrate the Pascagoula’, “I think it is also essential to make conservation profitable.”<sup>24</sup>

**Seafood GoTeam:** The Seafood GoTeam GoTeam committee identified “habitat development and restoration” and “seafood research” as two of its six priority areas.<sup>25</sup> Projects that preserve and enhance the water quality, nutrients and sediments that flow from the watersheds of the Coastal counties into the estuarine nursery grounds for marine life clearly serve habitat development and restoration, as well as future sustainability of the marine life upon which the commercial and recreational seafood and fisheries industries depend, all of which are served by acquisition and preservation of land bordering Coastal watersheds and in particular acquisition and preservation of the dusky gopher frog parcel. Likewise, acquisition by a public agency or land trust that will preserve the dusky gopher frog parcel and restore the longleaf pine ecosystem on it in order to enhance the water quality of the fresh water flowing into the estuary formed by the Biloxi River, Bay of Biloxi and Mississippi Sound will provide an excellent opportunity for the following areas of specific research identified by the Seafood GoTeam:

- “Understanding of water quality issues that an guide management issues focused on improving water quality throughout the Northern Gulf, and in particular in the areas supporting oysters.
- Identification of declining species and management decisions that can be made to reduce or eliminate these declines.”<sup>26</sup>

**Tourism GoTeam:** The Tourism GoTeam found specific “gaps” that “inhibit the success of the Value Propositions” that will bring substantially more visitors to the Coast, as outlined in the Tourism GoTeam’s report.<sup>27</sup> The GoTeam defined one of the major gaps as follows:

There are tremendous unspoiled natural assets to explore, and worldwide eco-tourism is exploding. But the Coast lacks quality campgrounds, walking trails, recreational parks, biking trails, etc.<sup>28</sup>

Although access to Glen’s Pond in the Desoto National Forest should be limited to supervised scientific and educational groups, the state agency or land trust that acquires and manages the dusky gopher parcel could allow hiking trails, some of which already exist on the parcel and in the contiguous Desoto National Forest. Proper management could provide a unique eco-tourism opportunity for hikers, bird-watchers, students, teachers and scientists to observe and study the restoration of the longleaf pine ecosystem and the extraordinarily biodiversity that it will support along Tiger Creek and in the contiguous National Forest.

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<sup>24</sup> Schueler, Donald G., *Preserving the Pascagoula*, p. 188, , *supra*.

<sup>25</sup> GO COAST 2020 Final Report, pp. 23-24.

<sup>26</sup> GO COAST 2020 Final Report, p. 24.

<sup>27</sup> GO COAST 2020 Final Report, pp. 41-44.

<sup>28</sup> GO COAST 2020 Final Report, pp. 43-44.



The dusky gopher frog parcel at Tradition includes private wetlands and is an integral part of Harrison County's coastal and wetland ecosystem, because it provides a critical influx of clean freshwater, nutrients and sediments essential to estuarine health and the sustainability of marine life. Preservation of the land also allows it to continue the vital function of naturally removing potentially harmful toxins and pollutants from the coastal ecosystem, thereby reducing the risk of potential harm to coastal and wetland natural resources as well as helping to minimize added stress on the Gulf Coast ecosystem as it continues to recover from the Deepwater Horizon oil spill.

## PLANNING, TECHNICAL ASSISTANCE, AND IMPLEMENTATION

At the basic level the proposed preservation of the dusky gopher frog parcel is ready for immediate execution and requires minimal work. There is nothing to construct. Environmental agency groups are already doing scientific work on the frog. Immediate acquisition, with a modest endowment, would motivate immediate planning and implementation of enhancement of gopher frog habitat and longleaf restoration, which would serve to further enhance and greatly magnify over time all the same benefits that simply preserving the parcel would achieve. Technical assistance for controlled burns, habitat restoration, water quality enhancement and restoration of longleaf pine are available through USFWS, USDA Forest Service, Mississippi Forestry Commission, Mississippi Department of Environmental Quality, Mississippi Department of Wildlife, Fisheries and Parks, Mississippi Department of Marine Resources. Tradition has already expressed its willingness to cooperate in, and not object to, controlled burns in the dusky gopher frog parcel and the contiguous Desoto National Forest. Implementation can begin in 2013.

## CONCLUSION

State or land trust acquisition and preservation of the dusky gopher frog parcel at Tradition, in 2013, would provide both immediate and long-term benefits to the overall sustainability, recovery, resilience, health, and biodiversity of the entire Gulf Coast ecosystem and its interdependent regional economy and communities.

Restoring longleaf pine on the parcel will reduce carbon dioxide in the atmosphere, thus reducing global warming.

The comments and recommendations in this document are science-based. See further scientific references in the Appendices.

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### ABOUT THE AUTHOR OF THESE COMMENTS:

Gerald Blessey is General Counsel for Columbus Communities, LLC, a Mississippi limited liability company, dba "Tradition", recognized, according to state law criteria, by the Mississippi Development Authority and the Harrison County Board of Supervisors as a "master-planned community". He received a B.A. and J.D. from the University of Mississippi and an LL.M from Harvard Law School. He served as a Member of the Mississippi House of Representatives from Harrison County (1972-1981) and was the author of the Mississippi Coastal Wetlands Protection Act of 1973. He served as Mayor of Biloxi from 1981-1989.



## Appendix A:

**Endnotes:** *Standing Tall: How Restoring Longleaf Pine Can Help Prepare the Southeast for Global Warming*, National Wildlife Federation (2009). Foreword by E.O. Wilson.

<sup>1</sup> Devall, M.S., and B.R. Parresol, 1998. Effects of global climate change on biodiversity in forests of the southern United States. In *The productivity and sustainability of southern forest ecosystems in a changing environment*, R.A. Mickler and S. Fox (eds.), Springer-Verlag: 663-682.

<sup>2</sup> U.S. Global Change Research Program (USGCRP), 2009. *Global Climate Change Impacts in the United States*, T.R. Karl, J.M. Melillo, and T.C. Peterson, (eds.), Cambridge University Press: 191 pp.

<sup>3</sup> Climate Change Science Program (CCSP), 2008. *Weather and Climate Extremes in a Changing Climate. Regions of Focus: North America, Hawaii, Caribbean, and U.S. Pacific Islands*. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research, T.R. Karl, G.A. Meehl, et al. (eds.), Department of Commerce, NOAA's National Climatic Data Center: 164 pp.

<sup>4</sup> Seager, R., A. Tzanova, and J. Nakamura, 2009. Drought in the Southeastern United States: Causes, variability over the last millennium and the potential for future hydroclimate change. *Journal of Climate* 22: 5,021-5,045.

<sup>5</sup> CCSP, 2008.

<sup>6</sup> Groisman, P.Ya., et al., 2004. Contemporary changes of the hydrological cycle over the contiguous United States: trends derived from in situ observations. *Journal of Hydrometeorology* 5(1): 64-85.

<sup>7</sup> National Interagency Fire Center, 2007. Fires and Complexes Over 40,000 Acres in 2007. Available at: [www.nifc.gov/nicc/predictive/intelligence/2007\\_statssumm/charts\\_tables.pdf](http://www.nifc.gov/nicc/predictive/intelligence/2007_statssumm/charts_tables.pdf)

<sup>8</sup> Krawchuk, M.A., M.A. Moritz, M.-A. Parisien, J. Van Dorn, and K. Hayhoe, 2009. Global Pyrogeography: the Current and Future Distribution of Wildfire. *PLoS ONE* 4(4): e5102.

<sup>9</sup> Emanuel, K., 2005. Increasing destructiveness of tropical cyclones over the past 30 years. *Nature* 436: 686-688.

<sup>10</sup> CCSP, 2008.

<sup>11</sup> Vecchi, G.A., and B.J. Soden, 2007. Increased tropical Atlantic wind shear in model projections of global warming. *Geophysical Research Letters*, 34: L08702.

<sup>12</sup> CCSP, 2008.

<sup>13</sup> Frost, C.C., 1993. Four centuries of changing landscape patterns in the longleaf pine ecosystem. *Tall Timbers Fire Ecology Conference Proceedings* 18: 17-43.

<sup>14</sup> America's Longleaf Regional Working Group, 2009. *Range-Wide Conservation Plan for Longleaf Pine*. Available at: [www.americaslongleaf.org](http://www.americaslongleaf.org).

<sup>15</sup> Landers, J.L., D.H. Van Lear, and W.D. Boyer, 1995. The longleaf pine forests in the Southeast: requiem or renaissance? *Journal of Forestry* 93: 39-44. □ Johnson, R., and D. Gjerstad, 1998. Landscape-scale restoration of the longleaf pine ecosystem. *Restoration and Management Notes* 16: 41-45.

<sup>16</sup> Grimm, E.C., et al., 2006. Evidence for warm wet Heinrich events in Florida. *Quaternary Science Reviews* 25: 2,197-2,211.



- <sup>17</sup> Huang, Y., et al., 2006. Climatic and environmental controls on the variation of C3 and C4 plant abundances in central Florida for the past 62,000 years. *Palaeogeography, Palaeoclimatology, Palaeoecology* 237: 428-435.
- <sup>18</sup> National Council for Science and the Environment (NCSE), 2007.
- Conserving Biodiversity Through Sustainable Forestry: A Guide To Applying NCSSF Research*. Report commissioned by the National Commission on Science for Sustainable Forestry. Available at: [www.ncseonline.org/NCSSF](http://www.ncseonline.org/NCSSF)
- <sup>19</sup> Price, T.S., C. Doggett, J.M. Pye, and B. Smith, 1998. *A history of southern pine beetle outbreaks in the Southeastern United States*. Georgia Forestry Commission: 72 pp.
- <sup>20</sup> Williams, D.W., and A.M. Liebhold, 2002. Climate change and the outbreak ranges of two North American bark beetles. *Agricultural and Forest Entomology* 4: 87-100.
- <sup>21</sup> Gan, J., 2004. Risk and damage of southern pine beetle outbreaks under global climate change. *Forest Ecology and Management* 191: 61-71.
- <sup>22</sup> Thatcher R.C., J.L. Searcy, J.E. Coster, G.D. Hertel, (eds.), 1980. The Southern Pine Beetle. *Expanded Southern Pine Beetle Research and Application Program*, U.S. Department of Agriculture Forest Service, Science and Education Administration, Pineville, LA. Technical Bulletin 1631: 265 pp.
- <sup>23</sup> Thatcher, R.C., and P.J. Barry, 1982. Southern pine beetle. *Forest and Disease Leaflet No. 49*, U.S. Department of Agriculture Forest Service: 7 pp.
- <sup>24</sup> Friedenber, N.A., B.M. Whited, D.H. Slone, S.J. Martinson, and M.P. Ayres, 2007. Differential impacts of the southern pine beetle, *Dendroctonus frontalis*, on *Pinus palustris* and *Pinus taeda*. *Canadian Journal of Forest Resources* 37: 1,427–1,437.
- <sup>25</sup> Martinson, S., R.W. Hofstetter, and M.P. Ayres, 2007. Why does longleaf pine have low susceptibility to southern pine beetle? *Canadian Journal of Forest Resources* 37: 1,966–1,977.
- <sup>26</sup> Kush, J.S., R.S. Meldahl, C.K. McMahon, and W.D. Boyer, 2004. Longleaf pine: A sustainable approach for increasing terrestrial carbon in the southern United States. *Environmental Management* 33(Supplement 1): S139-S147.
- <sup>27</sup> McNulty, S.G., J.M. Vose, and W.T. Swank, 1996. Potential climate change affects on loblolly pine productivity and hydrology across the southern United States. *Ambio*, 25(7): 449-453.
- <sup>28</sup> Engstrom, R.T., L.K. Kirkman, and R.J. Mitchell, 2001. The Natural History of the Fire Forest. In *The Fire Forest: Longleaf Pine-Wiregrass Ecosystems*, J.R. Wilson (ed.), Georgia Wildlife Press: 5-17.
- <sup>29</sup> McNulty, S.G., 2002. Hurricane impacts on U.S. carbon sequestration. *Environmental Pollution* 116: S17-S24.
- <sup>30</sup> Greham, C.A., T.M. Williams, and D.J. Lipscomb, 1991. Hurricane Hugo wind damage to Southeastern U.S. coastal forest tree species. *Biotropica* 23(4): 420-426.
- <sup>31</sup> Sheikh, P.A., 2006. The Impact of Hurricane Katrina on Biological Resources. CRS Report for Congress, number RL33117: 12 pp.
- <sup>32</sup> Hughes, G., Hurricane Katrina Impacts on Pine Species: Implications for Landowners. Mississippi State University Extension Service. Available at: [www.sref.info/news\\_items/newsitem\\_01.31.2006a](http://www.sref.info/news_items/newsitem_01.31.2006a) (accessed November 3, 2009).



- <sup>33</sup> Johnsen, K.H., J.R. Butnor, J.S. Kush, R.C. Schmidting, and C.D. Nelson, 2009. Hurricane Katrina winds damaged longleaf pine less than loblolly pine. *Southern Journal of Applied forestry*, in press.
- <sup>34</sup> America's Longleaf Regional Working Group, 2009. <sup>35</sup> Browning, R., and J. Elledge, 2005. Restoring Longleaf Pine after Hurricane Katrina, *Wildlife Mississippi*, Fall 2005.
- <sup>36</sup> Kush et al., 2004.
- <sup>37</sup> Dickens, E.D., C.W. Dangerfield, Jr., and D.J. Moorhead, 2001. Short rotation management options for slash and loblolly pine in Southeast Georgia. *Proceedings of the 31st Annual Southern Forest Economics Workshop*: 61-66.
- <sup>38</sup> Boatright, S.R., and J.C. McKissick, 2003. Two-thousand and two farmgate value report. University of Georgia, College of Agricultural and Environmental Sciences, Center for Agribusiness and Economic Development, AR-03-01: 180 pp.
- <sup>39</sup> Mills, S.D., and C.T. Stiff, 2008. Financial Performance of Loblolly and Longleaf Pine Plantations. FORSight Resources, LLC, North Charleston, South Carolina.
- <sup>40</sup> Brockway, D.G., K.W. Outcalt, D.J. Tomczak, and E.E. Johnson, 2005. Restoring longleaf pine forest ecosystems in the southern U.S. In *Restoration of Boreal and Temperate Forests*, J.A. Stanturf and P. Madsen (eds.), CRC Press: 501-519.
- <sup>41</sup> Nowak, J., A. Blount, and S. Workman, 2002. Integrated timber, forage and livestock production-benefits of silvopasture. Florida Cooperative Extension Service, IFAS, University of Florida, Circular 1430: 7 pp.
- <sup>42</sup> Stainback, G.A., and J.R.R. Alavalapati, 2004. Restoring longleaf pine through silvopasture practices: an economic analysis. *Forest Policy and Economics* 6(3-4): 371-378.
- <sup>43</sup> Diop, A., and R. Fraser, 2009. A community-based forestry approach to poverty alleviation in Alabama's Black Belt Region. *International Forestry Review* 11(2): 186-196.
- <sup>44</sup> Cubbage, F., 1983. *Economic of forest tract size: theory and literature*. U.S. Department of Agriculture, Forest Service, General Technical Report SO-41: 21 pp.
- <sup>45</sup> Bell, D.C., R.K. Roberts, B.C. English, and W.M. Park, 1994. A logic analysis of participation in Tennessee's forest stewardship program. *Journal of Agricultural and Applied Economics* 26(2): 464-472.
- Molnar, J.J., A. Bitto, G. Brant, and T. Hoban, 2000. Core conservation practices: paths and barriers perceived by small and limited resource farmers. Staff paper, Department of Agricultural Economics and Rural Sociology, Auburn University.
- <sup>46</sup> Cowen, T., and J. Feder, 2009. The Pigford Case: USDA settlement of a discrimination suit by Black farmers. Congressional Research Service Report RS 20430. Available at: [wikileaks.org/wiki/CRS-RS20430](http://wikileaks.org/wiki/CRS-RS20430).
- <sup>47</sup> Diop and Fraser, 2009. <sup>48</sup> Sorrie, B.A., and A.S. Weakley, 2001. Coastal Plain vascular plant endemics: phytogeographic patterns. *Castanea* 66: 50-82. <sup>49</sup> Engstrom et al., 2001.
- <sup>50</sup> Noss, R.F., E.T. laRoe, and J.M. Scott, 1995. Endangered ecosystems of the United States: A preliminary assessment of loss and degradation. U.S. Department of Interior, National Biological Service, Biological report: 28-58.





# Dauphin Island

## PROPERTY OWNERS ASSOCIATION

P.O. Box 39  
Dauphin Island, AL 36528

(251)861-2433  
[office@dipoa.org](mailto:office@dipoa.org)

July 6, 2013

Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

To whom it may concern:

Re: Dauphin Island, Alabama Shoreline Restoration

Acting on behalf of approximately 3,000 members that we represent, the Board of Directors of the Dauphin Island Property Owners Association (DIPOA) appreciates the opportunity to provide comments during the public comment period that has been extended to July 8<sup>th</sup> on the **Draft Initial Comprehensive Plan: *Restoring the Gulf Coast's Ecosystem and Economy*** and accompanying **Draft Programmatic Environmental Assessment**.

It has been three years since the Gulf oil spill, the worst environmental disaster in American history, we are requesting that the Restoration Council take appropriate action to provide the necessary funding to restore and stabilize the shoreline of Dauphin Island that was greatly affected by the oil spill, and which will prove beneficial not only to Dauphin Island, but to the entire Mobile County shoreline as well as the downstream Mississippi barrier islands. In addition it is important to note that Dauphin Island's shorelines absorbed both the direct effects of the contaminants, as well as the recurring impacts associated with the resulting clean-up efforts.

As we believe you are aware, Dauphin Island is located within the central area impacted by the oil spill and the associated clean-up efforts. The environmental impacts that affected and continue to occur on our Island include water quality degradation, and contaminated beaches. The mechanical clean-up activities that were aimed at removing the spilled oil, resulted in extensive reworking of Dauphin Island's beaches, dune system, and shorelines on the island's Gulf of Mexico and the Mississippi Sound shorelines. The physical alteration to the shorelines created by these activities occurred at a time when Dauphin Island was already experiencing considerable instability and extensive erosion that has reduced both the width and elevations of portions of the island.

The Town took approved steps to protect the southern shoreline from the oil spill by excavating sand creating ponds on the northern side of the island to produce an earthen embankment south of Bienville Boulevard to provide protection from the oil spill to the Dauphin Island infrastructure. Unfortunately, this approach to provide protection has created a weakened Dauphin Island at a critical location of the Island which means the Island is more vulnerable to breaking apart during a big hurricane." The present weakened condition makes the island more susceptible to the risk of breaching is evidenced by the Katrina Cut that severed the island in half in 2005.

Such a breach would expose the mainland marshes to the full force of the waves from the open Gulf and accelerate ongoing erosion of Alabama's coastal marshes. This is far from a hypothetical possibility. The well-



documented deficiency of sand in the Alabama's coastal littoral drift system indicates a storm-created breach condition can approach a permanent condition as shown by events during the 2000 decade.

The Dauphin Island Board of Directors desire that the adverse impacts of the oil spill on property owned by our membership and the Town of Dauphin Island be mitigated. Of equal importance, the Board of Directors also recognizes the important environmental functions that Dauphin Island, as Alabama's only barrier island, provides to the important and fragile estuarine ecosystem that occurs within Mississippi Sound to the north. The estuarine resources in that area include the most significant continuous extent of coastal marsh and the major producing oyster reefs occurring within Alabama. In addition, the shallow coastal waters of the Sound serve as essential nursery areas for a host of the principal commercial and recreational fish species sought throughout the northern Gulf of Mexico.

The impacts of the oil spill demonstrated another important fact: A healthy Dauphin Island is essential to protecting and maintaining the significant estuarine resources of Mississippi Sound shared by both Alabama and Mississippi. Further, a strong Dauphin Island protects the mainland coastal communities from the full force of major tropical storm events by dampening wind driven waves. Presently, Dauphin Island is neither healthy nor strong from a geophysical standpoint. The fact that it is starved for sand is evidenced by the highly eroded condition of the island's entire Gulf shoreline principally caused by the ship channel dredging which has left a sand starved shoreline. This is a condition that is recognized and accepted by coastal geologists and engineers knowledgeable about Dauphin Island.

To enhance the strength of Dauphin Island as an effective barrier between the Gulf of Mexico and Mississippi Sound, the Dauphin Island Board of Directors strongly encourages the Restoration Council to provide the essential funding required to restore and stabilize the southern shoreline of Dauphin Island which will provide long-term benefits to Alabama's and Mississippi's estuarine resources occurring within Mississippi Sound.

It is also important for the Restoration Council know that essential steps have already taken place to pursuing a shoreline restoration project. The Town of Dauphin Island completed a \$1.9 million study in 2011 to develop the necessary engineering and design data and information for a shoreline stabilization project to begin. The study included three alternatives with estimates from approximately \$30 million to \$71 million. That information includes the location of suitable offshore sand sources required to construct a restoration project. Since the Town already has a completed design, this would allow a shoreline restoration project to be pursued for Dauphin Island without having to conduct the usual upfront engineering studies. Further, the Town has already begun the permit application process to better prepare a shoreline restoration project for immediate construction should funding become available. All that is needed now for construction to begin is funding which ranges up to \$71 million. If funding is approved, construction for stabilizing the shoreline and the benefits to accrue could begin in a short time period.

Thank you for this opportunity to convey our views. We stand ready to assist the Restoration Council if additional information is needed for your consideration.

Sincerely,

The Board of Directors, Dauphin Island Property Owners Association

/s/ Laura Martin, President

/s/ Bruce Jones, Vice President

/s/ Brian Hunt, Treasurer

/s/ Stan Graves, Secretary

/s/ Jay Minus

/s/ Glen Coffee

/s/ Virginia Bratt

/s/ Jackie Gaines

/s/ Sam Levio



June 25, 2013

Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

Via email: [RestoreCouncil@doc.gov](mailto:RestoreCouncil@doc.gov)

To Whom It May Concern:

On behalf of the Galveston Island Park Board of Trustees, we appreciate the opportunity to comment on the Gulf Ecosystem Restoration Council's (Council) Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy (Plan). The Park Board of Trustees is a governmental entity created by a special act of the Texas Legislature in 1962 for the purpose of directing all tourism efforts for Galveston Island. The Park Board oversees several island beach parks and the Galveston Island Beach Patrol. The Park Board also oversees the Galveston Island Convention and Visitors Bureau which promotes Galveston as a premier destination. The organization is funded solely by Hotel Occupancy Tax revenue and beach user fees.

Galveston Island is the second most popular tourist destination in Texas. More than 6 million people visit Galveston Island annually, generating an estimated \$880 million economic impact to the Island's tourism industry. 32 percent of all jobs on the Island are sustained by tourism and state and local tourism tax receipts offset the average household tax burden by nearly \$3,000 per household.

The coastal tourism industry in Texas, particularly along the upper coast, was significantly impacted by the Deepwater Horizon spill and the negative tourism publicity it caused. With that in mind, we are closely engaged in the implementation of the RESTORE Act and look forward to working with you to improve the health of the Gulf, the Texas Gulf shoreline, our community, and our tourism industry, all of which are intrinsically tied together.

In general, we are pleased with the Plan and understand that it is in many ways a living document, one that will be updated as events warrant. However, one of the Plan's Goals is to "Restore and Revitalize the Gulf Economy" by enhancing "the sustainability and resiliency of the Gulf economy." However, this goal is not fully realized later in the Plan's Objectives. While we understand that Gulf water quality is important to the health of our tourism economy, we also believe economic restoration could be more clearly stated as a Plan Objective.

Later, the third Priority Criteria mentions that projects should be "contained in existing Gulf Coast State comprehensive plans." In Texas, the General Land Office (GLO) has developed a number of coastal-related plans over the years, including the Coastwide Erosion Response Plan that was most recently updated in 2009 and the Texas Coast: Shoring Up Our Future, issued in April 2013. The GLO also administers the annual Coastal Erosion Planning and Response Act Program to fund restoration projects. However, the agency tapped to manage Texas's engagement with the RESTORE Act, the



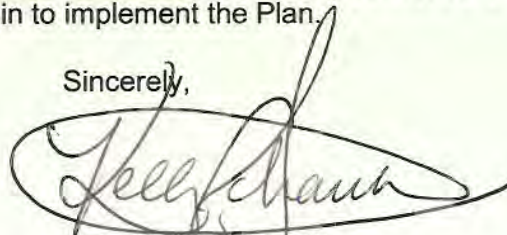
Texas Commission on Environmental Quality (TCEQ), is relatively new to coastal issues. We are sure TCEQ will be ready to implement successful RESTORE Act projects when the funding arrives by working with the GLO and others, but Texas must not be penalized for any perceived lack of a comprehensive, statewide coastal restoration plan. We also urge the Council to look to the Galveston District of the Corps of Engineers. The Corps has spent more than a decade evaluating storm surge, shoreline protection and enhancement, and other ecosystem restoration projects for the upper Texas Coast via the Sabine Pass to Galveston Bay feasibility study. We hope the Council will make use of the Corps' vast expertise on how to protect and restore our coastline.

We are also intrigued by the Plan Objective to "Promote Community Resilience." After our experience with Hurricane Ike in 2009, any effort to potentially allow for the funding of projects to protect our communities is welcome. Much of the discussion in this section revolves around non-structural solutions to responding to increased flood risks. The Council should clarify as to whether beach nourishment projects to increase beach width and dune height that protect against storm surge, which was the significant damaging factor of Hurricane Ike, will be allowable under the Plan. In order to be effective, we urge the Council not to limit our options in developing a project or planning proposal that could mitigate risk to our community, even one that may be deemed structural.

Finally, in reviewing the detail of the "Preliminary Authorized But Not Yet Commenced Projects and Programs List," we suggest that more consideration be directed at the Gulf shoreline, and improving its sustainability through the development of wider beaches and higher dunes. The Texas Gulf shoreline provides habitat and foraging areas to many endangered species, yet over 60 percent of the Texas coastline is eroding, placing this valuable habitat at considerable risk. With the Gulf shoreline ecosystem at risk, all coastal areas landward of the coast are at equal risk. Coastal restoration projects that increase beach width and dune height have proven to be of long term economic benefit to every level of government and should be prioritized by the Council.

Thank you again for the opportunity to comment on the Plan. We look forward to working with the Council over the next several years as you begin to implement the Plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Kelly De Schaun", written over a large, loopy oval flourish.

KELLY DE SCHAUN  
Executive Director  
Galveston Park Board of Trustees

CC: Texas Commission on Environmental Quality





July 3, 2013

Gulf Coast Ecosystem Restoration Council  
c/o US Department of Commerce  
1401 Constitution Avenue, NW Room 4077  
Washington, DC 20230

#### OFFICERS

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Melanie Allen  
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Alice Duckett  
Secretary

#### Re: Draft Initial Comprehensive Plan

Dear Council:

The Land Trust for the Mississippi Coastal Plain (LTMCP) appreciates the opportunity to submit comments on the Gulf Coast Ecosystems Restoration Council's Draft Initial Comprehensive Plan.

LTMCP was founded in 2000, with the mission - to conserve, promote, and protect the open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. Since its formation, LTMCP has worked to fulfill its mission by protecting over 5,600 acres of environmentally sensitive land in the six coastal counties. These productive, fragile lands are a beautiful patchwork of habitats and histories that make South Mississippi so beloved by residents and visitors alike.

Although, the primary goal of LTMCP is to protect areas with ecological, cultural and scenic significance for future generations; our secondary goal is to promote grassroots conservation through education and community partnerships. LTMCP works with local governments, citizens groups, and communities in a proactive, non-confrontational manner to promote conservation awareness. Over the years we have hosted many activities within our communities, schools, and local festivals that allow a wide range of the public to more fully understand and appreciate the diverse habitats of coastal Mississippi. LTMCP has spearheaded numerous publicly accessible projects. Many of our properties include walking trails or observation decks allowing visitors to interact with nature and learn about the intricate relationships found in the coast's varied ecosystems.

It is through this body of work and experience that LTMCP would like to submit the following comments:

- Encourages the use of RESTORE funds for land acquisition in coastal Mississippi utilizing good conservation strategies, such as ones developed in the Conservation Mapping Report by LTMCP, USFWS, MDMR, and CDM. The Conservation Legacy GIS Mapping tool is a good example of a vetted, science-based plan for land protection in the six county area of coastal Mississippi. Using geographical information system (GIS) tools, a map of potential conservation lands was developed. The map identifies and ranks potential lands for conservation, reflecting environmental/ecological value, cultural and historical value, and proximity to development and existing conservation lands, among other factors. All maps are presented in a simple, color-coded format that ranks land according to its priority for conservation. The maps are held in a dynamic database that can be updated as priorities change and additional information is acquired.  
url: <http://gisdemo2.cdm.com/lmcp/index.html>

#### BOARD OF DIRECTORS

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Justin Ehrenwerth, Executive Director  
Gulf Coast Ecosystem Restoration Council  
Washington, DC

Dear Mr. Ehrenwerth:

Please reconsider the proposed plan by the public over the last several months to restore the Gulf.

For Gulf Communities dependent for their livelihoods on the natural resources of the Gulf, environmental restoration is essential to economic recovery.

It is disappointing to see the Council's Draft Plan did not include a priority list of projects or spending allocation plan.

It is important that the Council commits to full compliance with environmental laws for all projects and programs that receive funding.

We are concerned about improving the environment while still boosting the economy.

It is good to see that the Council is considering a Citizen Advisory Committee.

Sincerely,

A handwritten signature in black ink, appearing to read "Lori Nordgren", with a long horizontal flourish extending to the right.

Lori Nordgren

401 Millwood Dr.

Covington, La 70433





June 28, 2013

Via Email and U.S. Mail

Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, NW  
Washington, DC 20230

Re: Public Comments for the Draft Initial Comprehensive Plan: Restoring the Gulf Coast's  
Ecosystem and Economy

Dear Council Members,

On behalf of our four million members and supporters nation-wide, including approximately 390,000 in the Gulf States, the National Wildlife Federation (NWF) appreciates this opportunity to provide comments on the Council's Draft Initial Comprehensive Plan. For our membership, and sportsmen and anglers throughout the country, restoring the Gulf ecosystem is a top priority. Rapid land loss, declining water quality, overfishing, natural disasters, and the tragic 2010 Deepwater Horizon Oil disaster have devastated marine and coastal habitats, fish and wildlife populations, and undermined the resiliency of coastal communities on the Gulf Coast. The long term impacts on both people and wildlife are substantial, and these issues will need to be addressed through a comprehensive, science-based, and transparent process. NWF and its state affiliates have a long history in the region, providing support to local, state, and federal organizations and agencies to rebuild and restore coastal ecosystems throughout the Gulf. We believe the RESTORE Act represents an unprecedented opportunity to ensure a healthy, resilient, and sustainable Gulf environment for the benefit of future generations. In addition to our broader Gulf presence, as a member of the Mississippi River Delta Coalition (MRD), NWF works specifically to rebuild and preserve vital ecosystems along Louisiana's coastline. The MRD Coalition will also submit comments for the record that reflect restoration priorities in the Mississippi River Delta — a cornerstone of the broader Gulf environment.

Studies show that there is broad public support for restoring the Gulf ecosystem. A recent poll by Chesapeake Beach Consulting shows that eighty-seven percent of sportsmen strongly believe that fines and penalties from the Deepwater Horizon oil spill should be used exclusively to



## **Comments of the National Wildlife Federation on the Draft Initial Comprehensive Plan**

**RESTORE Implementation Principle.** Congress passed the RESTORE Act in direct response to the Deepwater Horizon oil spill—the largest environmental disaster in U.S. history. In this context, Congress intended the Gulf Coast Restoration Trust Fund to benefit the environment *and* economy of the region. As the disaster made abundantly clear, harming the Gulf ecosystem adversely impacts the regional economy. To carry out this overarching theme of the RESTORE Act, NWF recommends that the Council adopt the following principle:

- Each project and program selected by the Council or approved in State Expenditure Plans must avoid, minimize, and mitigate environmental harm *and* provide a net environmental benefit.

**Council-selected Ecosystem Restoration Component.** NWF supports provisions in the Draft Initial Comprehensive Plan that confirm the statutory requirement that Council-selected restoration projects “restore and protect the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.” **We recommend that the Council reaffirm and strengthen this focus in the Final Initial Comprehensive Plan.**

**Science-based Decision-Making.** NWF supports the Council’s commitment to support decision-making based upon the best available science. In order to achieve this, the Council must commit to supporting a sound RESTORE Science Program that requires an ecosystem approach to restoration by supporting integrated research, monitoring, and modeling throughout the Gulf of Mexico, while leveraging existing partnerships. An important piece of this work was completed by the Gulf Coast Ecosystem Restoration Task Force through development of their Ecosystem Science Assessment and Needs report.<sup>1</sup> The Council has committed to incorporating findings and strategies from the Task Force into the Final Comprehensive Plan, however there is no mention of this report or how the Council intends to incorporate it. NWF also **urges the Council to approve, develop, and utilize, to the maximum extent possible, a Restoration Science Advisory Committee (SAC)** that will compile, update, translate, and make publically accessible, the best available science on the state of Gulf ecosystems, restoration management practices, and comprehensive monitoring and evaluation, and make recommendations to the Council based thereon. As part of this process **we recommend that the Council appoint a senior-level Chief Scientist** that would serve as Chair to the SAC in order to coordinate science objectives moving forward in implementing the Comprehensive Plan.

**Project Selection Criteria.** The RESTORE Act requires the Council to establish priorities for funding based on best available science and according to four required restoration priority criteria, provided below. **While NWF recommends that the Council further define statutory criteria and provide interpretive guidelines, we urge the Council not to adopt criteria outside of the scope of those specifically provided for in the statute.** NWF supports inclusion of the following considerations in evaluating whether projects or programs meet restoration criteria:

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<sup>1</sup> Gulf of Mexico Ecosystem Science Assessment and Needs, Gulf Coast Ecosystem Restoration Task Force Science Coordination Team, April 2012.



**Sample Project Evaluation.** With our partners in the Mississippi River Delta Coalition, NWF has provided a project list prioritized using statutory criteria for funding projects within Louisiana. In addition, we provide below examples of how various kinds of projects within Texas, Alabama, Mississippi and Florida might be evaluated. These projects each help accomplish the goals of the RESTORE Act and provide benefits consistent with statutory prioritization criteria. These projects are provided for example only, are not listed according to any priority, and do not constitute all projects and programs that NWF would support.

In providing examples of projects in Texas, NWF has focused on protection and enhancement of freshwater inflows. For many Texas estuaries, the assurance of adequate freshwater inflows is arguably the most critical long-term restoration need. Freshwater inflows to the estuary systems from rivers and streams are the primary variable determining estuarine health, particularly when considered in terms of long-term viability.

Because so much of the reliably available water in Texas already has been allocated through perpetual water-rights permits that authorize complete consumptive use, a two-step process will be needed to deliver the necessary quantities of freshwater inflows to many estuaries within the Gulf Coast region. In the first step, property interests would be acquired to all or a portion of selected existing water-diversion permits to prevent the water from being taken out of the river or stream before it reaches the coast. The second step would involve adding legally enforceable downstream delivery points and mechanisms--basically moving the acquired permit downstream--to provide for physical delivery of the increased inflows to key habitat features within the Gulf Coast region.

To ensure needed freshwater inflows for some estuaries, it may be necessary to acquire interests in water permits that are located inland of the Gulf Coast region as the RESTORE Act defines it. These transactions would provide, through permit amendment or other legal means, an enforceable mechanism resulting in physically delivering water at new delivery points downstream within the defined Gulf Coast region. The result is analogous to purchasing raw materials or component parts only available from outside the region for construction of a fish hatchery along the coast. There is no requirement in the Act, and no compelling reason to infer a limitation, that would deprive the Gulf Coast region of these critical benefits. Accordingly, NWF urges the Council to avoid adopting any interpretation that would inhibit providing funding for meritorious projects designed to deliver critically important freshwater inflows to the Gulf Coast region from inland areas.

#### ***Example Restoration Projects, Texas:***

*Nueces Bay Productivity Enhancement Through Wastewater Relocation and Dedication:* The continued productivity and health of the Nueces Bay estuary system is at risk because of reduced inflows of fresh water, and accompanying nutrients, particularly into the Nueces Bay delta. Freshwater inflows from streams and rivers are critical for the continued productivity of estuaries: delivering nutrients to support food webs, supplying sediments to sustain marshlands, and maintaining areas of moderate salinity for critical life stages of many species. Recognizing the difficulty of securing increased inflows from upstream in the river system flowing into the estuary, this project involves obtaining voluntary "dedications" of treated wastewater discharges to be delivered at advantageous locations in the Nueces Estuary. Through a voluntary dedication



coastal habitats, fisheries, and coastal wetlands by restoring and enhancing long-term resiliency on an ecosystem scale. (This project meets priority criteria 1, 2, and 4.)

#### ***Example Restoration Projects, Mississippi:***

*Gulf Islands National Seashore “GINS”:* This project serves as a primary example of protecting and conserving significant habitat and living coastal and marine resources in Mississippi and the Gulf of Mexico. As proposed by the U.S. Department of the Interior’s National Park Service, this project supports nesting for migratory waterfowl, important fisheries, and several state and federally-listed species. It promotes community resilience against storm surge and sea level rise and supports the local economy through eco-tourism. This project complements the U.S. Army Corps of Engineers’ Mississippi Comprehensive Barrier Island and Ecosystem Restoration project. (This project meets all four priority criteria.)

*Turkey Creek Ecosystem Restoration:* Supported by the Mississippi Department of Environmental Quality, this project proposes to restore the hydrology and natural vegetation of a degraded wet pine savannah habitat, which is one of the most endangered ecosystems in the United States. Notably, communities throughout Turkey Creek watershed recognize the storm surge protection this area provides. (This project meets priority criteria 3 and 4).

*Pascagoula River Marsh Restoration:* This project is a prime example among the broad suite of emergent aquatic vegetation projects being proposed that demonstrates the value of restoring living shorelines. Projects that involve marsh restoration will support habitat for fisheries, migratory waterfowl, and shore birds. As supported by the Mississippi Department of Environmental Quality, this marsh restoration project also complements the U.S. Army Corps of Engineers’ state-wide Aquatic Ecosystem and Reef Restoration Project. (Marsh restoration projects meet priority criteria 1, 3 and 4).

*Bay St. Louis and Biloxi Bay Oyster Reef Restoration:* This project is an ecosystem restoration opportunity that has been identified by NWF and our Gulf Restoration Partnership allies. Specifically, the proposal is to construct up to 30 acres of subtidal oyster reef habitat in Bay St. Louis and up to 70 acres in Biloxi Bay using natural oyster shell on suitable water bottoms. As existing pilot projects have shown in these waters, this project would restore the productivity and biodiversity of Bay St. Louis and Biloxi Bay by providing water filtration, nursery habitat for commercially and recreationally important fishes and invertebrate species, food sources for wildlife such as shore birds, and additional protection for shorelines and marshlands. The project is being designed in a manner that is consistent with state and federal restoration plans for restoring Mississippi’s subtidal oyster reefs. In addition, the proposal will support the economy of the local and regional recreational and commercial seafood industry. (This project meets priority criteria 1 and 4.)

#### ***Example Restoration Projects, Alabama:***

*100-1000: Restore Coastal Alabama:* Mobile Bay, with the fourth-largest drainage basin in the U.S., has experienced significant loss of oyster reefs, coastal marsh and seagrass beds. Despite these challenges, Mobile Bay represents one of the largest potential areas for outright restoration,



### ***Example Restoration Projects, Florida:***

*C-43 West Basin Storage Reservoir Project:* In Labelle, FL, this project is critical to restoring the estuaries of southwest Florida, including Charlotte Harbor National Estuary, one of the primary drivers of Gulf of Mexico fisheries. This project, sponsored by South Florida Water Management District, is an important component of the Comprehensive Everglades Restoration Plan which involves an above-ground reservoir (170,000 ac-ft capacity) located south of the Corkscrew Regional Ecosystem Watershed and west of the Ortona Lock (S-78), and will comprise a significant portion of total water storage requirement for the C-43 Basin. This project is also part of the National Estuary Program Southwest Florida Regional Restoration plan. (This project meets all four priority criteria.)

*St. Marks National Wildlife Refuge:* This project, in Wakulla, Jefferson, Taylor, and Franklin Counties FL, submitted by Department of the Interior/USFWS, provides habitat conservation through land acquisition, permanent conservation easements, and agreements with willing landowners. The refuge spans over 43 miles of coastline and supports 52 species of mammals such as the Florida black bear and bobcat; 40 species of amphibians such as the endangered flatwoods salamander; 65 species of reptiles; and numerous fish species, including gulf sturgeon and gulf striped bass. In addition, this project, as well as other North Florida coastal projects, provides tremendous benefit to migratory bird species. Natural salt marshes, freshwater swamps, pine forests and lakes provide a haven for wildlife and people. This project meets the Council's restoration goals of Restore and Conserve Habitat, Restore Water Quality, Enhance Community Resilience, and Replenish and Protect Living and Coastal and Marine Resources. (This project meets priority criteria 1 and 3.)

*Tamiami Trail Next Steps Project:* This project in Everglades National Park, FL, will help restore historic fresh water flows to Everglades National Park and Florida Bay and the Gulf of Mexico, providing improvements to wetlands and coastal fisheries of Florida Bay by dramatically improving water flows into the estuaries of Southwest Florida. (This project meets priority criteria 1, 2 and 3.)

*Apalachicola River, St. Vincent Sound to Lake Wimico Ecosystem:* This famed ecosystem supports one of the nation's last natural oyster fisheries as well as providing the source of one of America's great fisheries habitats: Apalachicola Bay. Acquisition of parcels totaling 11,214 acres would protect and enhance water quality going to the bay, and buffer one of the world's last great mainly-undeveloped rivers. Restoration of Tate's Hell State Forest will likewise directly benefit Apalachicola Bay. The St. Vincent Sound to Lake Wimico Ecosystem includes a vast 40,000 acre wetland tract south of Lake Wimico. Protection by conservation easement would afford water quality and quantity benefits to the Lake, as well as to Apalachicola and St. Joseph Bays and St. Vincent Sound. (This project meets priority criteria 1, 2 and 4.)

*West Bay Preservation Area:* This Bay County project would complement lands already protected by mitigation for the new Panama City Airport. This 4,494 acre project secures the northern side of West Bay, and has a direct impact on protection of water quality. Moreover, it is possible additional land directly on the Bay and north thereof could be part of larger conservation project to protect additional wetland areas. Alone or combined with other



project to incorporate such project-level scientific monitoring and adaptive management strategies.

**State-specific Restoration Expenditure Plans.** As the Draft Initial Comprehensive Plan notes, State Restoration Expenditure Plans must be consistent with goals and objectives of the Comprehensive Plan. The RESTORE Act requires the Council to consider and approve, or deny, state plans. The Act also limits spending on infrastructure in state plans - a state may only exceed the infrastructure spending limitation if there are no remaining environmental restoration needs.

While the Draft Initial Comprehensive Plan outlines permissive elements that *may* be included in a State Restoration Expenditure Plan, it does not specify what *must* be included or what *must not* be included. **We recommend that the Council revise the Draft Initial Comprehensive Plan to more clearly delineate required elements of state plans, criteria and process for a consistency determination, and the method for evaluating sufficiency of a state-certification that environmental restoration needs have been fully met.**

**Specifically, the following elements should be mandatory:**

- The amount of funding needed for each project, program, and activity selected by the State for planning and implementation; the proposed start and completion dates; and specific mechanisms that will be used to monitor and evaluate the outcomes and impacts of each project, program, and activity.
- A description of how the best available science, as applicable, informed the State's project, program, and activity selection.
- A justification statement of how all included projects, programs, and activities are eligible activities under the RESTORE Act.
- A description of how each included project, program, and activity contributes to the overall economic or ecosystem recovery of the Gulf Coast.
- A certification that all included projects, programs, and activities do not exceed the 25 percent funding limit for infrastructure.
- If the state intends to claim an exception to this 25 percent limitation for infrastructure in accordance with the RESTORE Act, the state must provide the percentage to be spent on infrastructure, evidence that the environmental restoration needs of the state have been met, and certify that the state has provided adequate public notice of its intent to claim an exception.
- A description of how each project, program, and activity is consistent with the Goals and Objectives of this Plan. The Council should clarify that it views "consistent" to mean:
  - Each eligible project, program, and activity will further one or more of the five Goals; **and** will not negatively impact the Gulf Coast ecosystem.
- A description of the process the State will use or has used to ensure appropriate public and tribal participation and transparency in the project, program, and activity selection process.

**Bob Perciasepe**  
Acting Administrator  
Environmental Protection Agency  
1200 Pennsylvania Ave NW  
Washington, DC 20460

**Janet Napolitano**  
Secretary  
Department of Homeland Security  
300 7th St SW  
Washington, DC 20024

**Sally Jewell**  
Secretary  
Department of the Interior  
1849 C St NW  
Washington, DC 20240



July 3, 2013

Gulf Coast Ecosystem Restoration Council,  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

**Re: Comments on Draft Initial Comprehensive Plan: Restoring the Gulf Coast's Ecosystem and Economy**

The Gulf Coast Bird Restoration Initiative is a collaborative project of bird conservation groups working throughout the Gulf coast. The initiative has been developed specifically to support states in their efforts to remedy harm caused to birds by the *Deepwater Horizon* oil spill in its violation of the Migratory Bird Treaty Act, and to reduce the risk of future harm to these birds and their habitats. Our coalition for The Gulf Coast Bird Restoration Initiative includes the following partners who are well-established in bird conservation Gulf-wide: American Bird Conservancy (ABC), Gulf Coast Bird Observatory (GCBO), Barataria-Terrebonne National Estuary Program, Ducks Unlimited (Texas), Houston Audubon, International Bird Rescue, and Plaquemines Parish (Louisiana). Birds were the most visible and numerous major wildlife victims of the *Deepwater Horizon* Oil Spill and our projects focus on these species and their habitats.

While we understand that many “authorized, but not yet commenced” projects were submitted prior to the passage of the RESTORE Act and have been disclosed in Appendix A, we would like to request that the Council add the following list of projects our coalition of partners recently submitted to National Fish and Wildlife Foundation (NFWF). We understand that this does not guarantee funding of these projects. We also understand that the Council will work closely with state trustees, NFWF, and other pertinent stakeholders to avoid project duplication. Partners have pledged that this will be the only submission of these project proposals to NFWF; however, we would like to bring these projects to the attention of the Council as well.

Phase I of the initiative includes a suite of “shovel ready” projects that are ready for immediate implementation, and that aim to begin delivering immediate beneficial results. ***The total budget for these projects is \$151.5 million.***

**1. Restoring Pelican (Cat) Island, LA - Request: \$8.8M. Matching Funds: \$3M.**

This project could be replicated at additional sites with an investment of c. \$10M per island.

**Project Location and History:** Barataria Bay, Louisiana - Pelican Island (frequently also called Cat Island\*) is often considered the epicenter of the spill in terms of bird impacts. The mangroves were destroyed by the oil, and lacking their stabilizing effect, the island has since almost completely washed away (see before and after photos below right). Note that nearby island restoration has been highly successful; however, even withstanding Hurricane Katrina.



5. **Osprey Nesting Platforms, Fourchon to Grand Isle, LA - Request: \$110,000.**  
 Matching Funds: \$7,000 and in-kind.  
**Project Location and History:**— Nesting platforms would be constructed and installed at numerous locations around the Fourchon and Grand Isle areas. These magnificent birds of prey are commonly found along the coast with a concentration in this area. Many nesting attempts on power poles fail. This would provide for a superior nesting platform/opportunity for these birds.  
**Expected 5 year Outcomes:** Construction and deployment of numerous safe, mammalian predator free, nesting platforms. Improved nesting success of this raptor.  
**Species benefitting:** Osprey.
  
6. **Marsh Protection along Gulf Intracoastal Waterway (GIWW), Texas - Request \$50M for 50 miles of breakwaters.**  
**Project Location and History:** Coastal marsh habitats along the GIWW are disappearing or degrading due to shoreline erosion and saltwater intrusion. Vessel and wind generated waves cause up to 10 feet of annual erosion on some shores. Additionally, saltwater deposition and intrusion from the GIWW into adjacent fresh and intermediate emergent marsh creates open water habitats with reduced value for birds and fish. A successful and widely accepted conservation practice to address these concerns is constructing breakwaters.  
**Expected 5 year Outcomes:** Construction of breakwaters for the highest priority marsh areas, mitigation of shoreline erosion, protection of existing coastal marsh functions and values, and restoration of marsh.  
**Species benefitting:** Clapper Rail, Willet, Mottled Duck, Black Rail, American Bittern, Snowy Egret
  
7. **Coastal Marsh Infrastructure Repair and Replacement, entire Gulf Coast - Request \$5M.**  
**Project Location and History:** Coastal marsh habitats managed by public and private landowners are vital to conserving resident and migratory bird populations along the Gulf of Mexico. Significant efforts are made by landowners to create desirable and beneficial habitat conditions. These management techniques require the use of infrastructure such as levees, pumps, water control structures, salinity barriers, and weirs to keep water on the landscape. Much of this infrastructure is inefficient, deteriorated, or out-dated. Replacement of these components using modern, corrosion resistant materials can increase marsh productivity and improve landowner dependability.  
**Expected 5 year Outcomes:** Coordinate and repair infrastructure for 7,500 acres of coastal marsh.  
**Species benefitting:** Clapper Rail, Willet, Mottled Duck, Black Rail, American Bittern, Snowy Egret
  
8. **Creating Safe Nesting Beaches, entire Gulf Coast - Request: \$10M. Matching Funds: \$0.25M.**  
**Project Location and History:** Multiple Sites Gulf-wide (more than 20 locations, expanding on existing successful NFWF grants). This project will create safe nesting habitat for skimmers, terns, and other shorebirds at existing nesting locations through on-



much of the property is protected and managed for coastal wildlife, many critical properties remain vulnerable to development.

**Expected 5 year Outcomes:** Protection and restoration of key inholdings of a globally important shorebird sanctuary through acquisition.

**Species benefitting:** Shorebirds and other coastal species e.g. Piping Plover, Snowy Plover, Wilson's Plover, Red Knot, Sanderling, Willet, Marbled Godwit, Reddish Egret, American Oystercatcher, Gull-billed Tern.

**13. Spill Response Preparedness - Request \$1.1M.**

**Project Location and History:** The effects of the spill were exacerbated by a lack of sturdy boom, and lack of knowledge of the impacts of cleanup operations on beach-nesting birds.

**Expected 5 year Outcomes:** Increased awareness among industry and first responders on how to minimize spill impacts on birds. Project will include a best practices manual, video and other information resources, and a series of training workshops and community outreach programs.

**Species benefitting:** All coastal birds.

**14. Bird Tourism and Conservation Outreach, Gulf-wide - Request: \$12M.**

**Project Location and History:** This project will help to stimulate local economic development and jobs based around bird tourism. It will include a series of short films, support for local bird festivals, and outreach and help to promote the existing birding trails in the region with improved infrastructure at key sites.

**Expected 5 year Outcomes:** Increased awareness of birds and bird conservation Gulf-wide, and increased visitation from birders from across the U.S. to the region.

**Species benefitting:** Migratory birds including shorebirds and songbirds.

**15. Tracking Restoration Success, Gulf-wide - Request: \$10.15M. Matching \$0.25M.**

**Project Location and History:** We propose to develop a Gulf-wide baseline for bird restoration projects developed with funding related to the Deepwater Horizon spill, and to track success to report to donors and the bird community as a whole on how populations are rebounding.

**Expected 5 year Outcomes:** A baseline status report with regular monitoring and reporting on restoration projects, leading to a full report on successes over a five-year time frame. This project includes the construction of a training center on the upper Texas coast, and a specific component studying barrier islands in Louisiana with a focus on the endangered Piping Plover.

**Species benefitting:** All beach and island colonial nesting birds.

**16. Best Practices for Bird Restoration, Gulf-wide - Request: \$4.8M.**

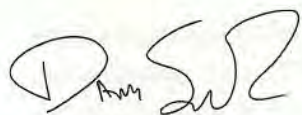
**Project Location and History:** Many restoration projects have been carried out across the gulf region in the past that have benefitted birds, and lessons from these can help inform projects planned under the plea agreement (and other future projects). This project will conduct a thorough analysis of current projects and determine and document best practices for each restoration technique and conduct outreach to stakeholders.



ABC and its partners stress the importance of implementing collaborative large-scale restoration projects that will have the most benefits to the Gulf Coast's unique habitats and natural resources and it is clear the Council shares this vision. We have an interest in the implementation of Gulf-wide avian-based projects that focus on protecting and growing affected populations; creating new and conserving existing habitat for wintering, migrating, and breeding birds; and educating and engaging the public in learning more about how birds are an integral part of a healthy, well-functioning ecosystem.

Thank you for the opportunity to comment on this matter. We look forward to working together with you as this process moves forward. Please feel free to contact either of our organizations if we can be of additional assistance.

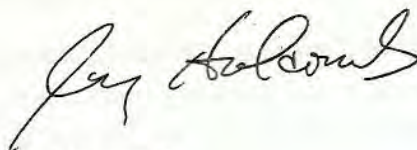
Sincerely,



Darin Schroeder  
Vice President  
American Bird Conservancy  
1731 Connecticut Avenue, NW  
Third Floor  
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(202) 234-7181



Cecilia M. Riley  
Executive Director  
Gulf Coast Bird Observatory  
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Jay Holcomb  
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International Bird Rescue  
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Helen Drummond  
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P.J. Hahn  
Director of Coastal Zone Management  
Plaquemines Parish  
8056 Hwy 23, Suite 307  
Belle Chasse, LA 70037  
(504) 297-5629





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June 10, 2013

**Comments for the Gulf Coast Ecosystem Restoration Council:**

From the Gulf Coast Office of the Sea Turtle Restoration Project  
Submitted by Official Representatives Carole H. Allen, Gulf Office Director  
and Joanie Steinhaus, Assistant Campaign Director

Thank you for giving us the opportunity to again request funding for the restoration of the Gulf of Mexico and especially the Kemp's Ridley sea turtles that died by the thousands as a result of the Deep Water Horizon oil spill.

On May 23, 2011, the Sea Turtle Restoration Project submitted a request for actions that would help the Kemp's ridleys and other sea turtle species recover and make plans to assure growing populations in the Gulf of Mexico. (The confirmation number of this request was 4FVU2H1M.) We asked for permanent funding for expanded patrols on the Upper Texas Coast, an incubation facility to negate the hours needed to transfer fragile sea turtle eggs to the Padre Island National Seashore and a rehabilitation facility and clinic for treatment of sea turtles at present and in the event of a future oil spill in Texas waters. Many sea turtles are brought to the Galveston facility of National Marine Fisheries Service after being caught in shrimp trawls and ghost nets, hit by propeller boats and caught on hook and line.

Needless to say, it is exceedingly disappointing to read through the "Preliminary List of Authorized but Not Commenced Projects and Programs" and see the mention of the Kemp's Ridley Sea Turtle one time and only then to continue a program of egg transfer away from Galveston Island which does not recognize the requests of the Galveston Island Commissioners Court, the Galveston City Council and the people of



Galveston to retain Kemp's ridley eggs for incubation and release of hatchlings on the Upper Texas Coast.

At this hearing, we are asking again for funding and actions that will prevent the killing of thousands of Kemp's ridleys and support the increase of the population of nesters on the Upper Texas Coast with educational opportunities for Galveston and surrounding counties and Houston students as well.

Frankly, the Kemp's Ridley sea turtles on the Upper Texas Coast are being ignored by the current list of "Authorized but Not Commenced Projects." The lack of mention of this endangered sea turtle is proof that very little attention is being paid to their plight. We are asking for policy changes and actions that will demonstrate that the Official Sea Turtle of the State of Texas deserves a lot more concern than presently receiving. The following will Kemp's ridleys in the Galveston area:

- 
1. Build a Sea Turtle Education Center with a clinic to treat injured sea turtles and allow the public to see them;
  2. Stop transporting fragile Kemp's ridley eggs to the Padre Island National Seashore, incubate them in the Galveston area and then release nearby. Later, the eggs can be left in place with protection by some of Galveston's many volunteers before they hatch out as nature intended. (Corrals have been approved in far South Texas; why not Galveston?)
  3. Stop near shore trawling similar to the ban in place in south Texas and Mexico but extend it to all year. A recent paper written by Dr. Donna Shaver states that the "nearshore Gulf of Mexico waters serve as prime foraging habitat for post nesting Kemp's ridley turtles." The paper also recognizes a "foraging corridor" and calls for "international cooperation for conservation of this imperiled species."
  4. Manage beach-raking activities on Galveston beaches so that hatchlings or eggs are not buried under tons of sand and sargassum by heavy machinery.
  5. Fund a Visitor Center in Galveston for Sea Turtle Restoration Project with educational films and materials for tourists, residents and teachers to build public awareness.
  6. Provide funding for pamphlets, bookmarks, posters and beach signs for tourists and coastal residents.



- 
7. Restore dunes on Bolivar Peninsula and elsewhere to encourage nesting sea turtles.
  8. Recognize the coalition of businesses and entities now working for the Kemp's ridley recovery including the Houston Zoo, Moody Gardens, Galveston Bay Master Naturalists, West Galveston Island Property Owners Association, Texas A&M University at Galveston, Galveston City Council, Galveston County Commissioners and the Galveston Island Nature Tourism Council.
  9. We must not miss the opportunity to participate in the proposed Lone Star Coastal National Recreation Area which would include sites spanning four Upper Texas Coast coastal counties: Matagorda, Brazoria, Galveston, and Chambers. This region has natural areas, outdoor recreation opportunities, historical sites and nesting Kemp's ridley sea turtles. The steering committee includes former Secretary of State James A. Baker, III, John L. Nau III, and life-long Galvestonian Doug McLeod.
- 

Thank you for this opportunity to add some extremely important projects and programs to your current list.

Sincerely,



Carole H. Allen, Gulf Office Director

Joanie Steinhaus, Associate Campaign Director

## United States Senate

WASHINGTON, DC 20510-1804

June 20, 2013

Gulf Coast Ecosystem Restoration Council  
c/o U.S. Department of Commerce  
1401 Constitution Avenue, N.W., Room 4077  
Washington, DC 20230

Dear Council Members:

The release of the Draft Initial Comprehensive Plan last month marks another important milestone in the implementation of the RESTORE Act and the ongoing recovery of the Gulf of Mexico from the 2010 Deepwater Horizon oil spill. As one of the lead architects of the RESTORE Act, I am committed to the success of this unprecedented restoration effort, and I appreciate this opportunity to comment on the draft plan.

I have grave concerns about the Council's intent to consider revisions or modifications to the project prioritization criteria established in the RESTORE Act. The bill balances the competing needs of various Gulf Coast stakeholders, and it is imperative that the Council adheres to the Congressional limitations explicitly established for the Council-selected Restoration Component. As Chair of the Council, the Department of Commerce has a responsibility to ensure that this carefully crafted compromise is not altered or amended through the implementation process.

The initial \$323 million installment of the \$1 billion Transocean settlement was deposited into the Gulf Ecosystem Restoration Trust Fund earlier this year, and I encourage you to work closely with your federal, state and local partners to ensure these funds are invested wisely in the comprehensive restoration of the Gulf Coast.

With warm regards, I am

Sincerely,



Mary L. Landrieu  
United States Senator

MLL:jwk



## Perry, Alice

---

**From:** Ehrenwerth, Justin  
**Sent:** Thursday, June 20, 2013 9:03 PM  
**To:** Perry, Alice; Ache, Brent; Lauster, Aaron  
**Subject:** FW: Draft Comprehensive Plan Public Comment- Landrieu  
**Attachments:** 130620 Draft Initial Comprehensive Master Plan- Landrieu Comment.pdf

**From:** Kungel, Wes (Landrieu) [[mailto:Wes\\_Kungel@landrieu.senate.gov](mailto:Wes_Kungel@landrieu.senate.gov)]  
**Sent:** Thursday, June 20, 2013 1:01 PM  
**To:** Hedgepeth, Ryan; 'jpollack@who.eop.gov'; Stowers, Jim  
**Subject:** Draft Comprehensive Plan Public Comment- Landrieu

Good Afternoon,

The attached letter will go in the mail today, but I wanted to make sure y'all had a copy as well. I enjoyed meeting with you last week, and I look forward to working together throughout the implementation of the RESTORE Act. Please keep us in the loop about community meetings and other outreach efforts and let me know if I or this office can be of assistance to y'all going forward.

Best,

Wes Kungel  
Legislative Assistant  
U.S. Senator Mary L. Landrieu  
703 Hart Senate Office Building  
Washington, DC 20510  
(202)224-4833

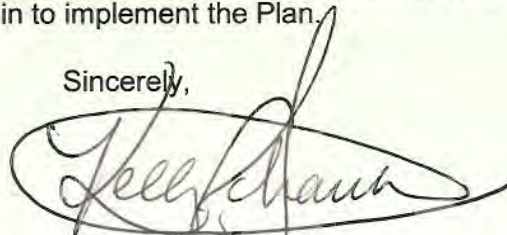
Texas Commission on Environmental Quality (TCEQ), is relatively new to coastal issues. We are sure TCEQ will be ready to implement successful RESTORE Act projects when the funding arrives by working with the GLO and others, but Texas must not be penalized for any perceived lack of a comprehensive, statewide coastal restoration plan. We also urge the Council to look to the Galveston District of the Corps of Engineers. The Corps has spent more than a decade evaluating storm surge, shoreline protection and enhancement, and other ecosystem restoration projects for the upper Texas Coast via the Sabine Pass to Galveston Bay feasibility study. We hope the Council will make use of the Corps' vast expertise on how to protect and restore our coastline.

We are also intrigued by the Plan Objective to "Promote Community Resilience." After our experience with Hurricane Ike in 2009, any effort to potentially allow for the funding of projects to protect our communities is welcome. Much of the discussion in this section revolves around non-structural solutions to responding to increased flood risks. The Council should clarify as to whether beach nourishment projects to increase beach width and dune height that protect against storm surge, which was the significant damaging factor of Hurricane Ike, will be allowable under the Plan. In order to be effective, we urge the Council not to limit our options in developing a project or planning proposal that could mitigate risk to our community, even one that may be deemed structural.

Finally, in reviewing the detail of the "Preliminary Authorized But Not Yet Commenced Projects and Programs List," we suggest that more consideration be directed at the Gulf shoreline, and improving its sustainability through the development of wider beaches and higher dunes. The Texas Gulf shoreline provides habitat and foraging areas to many endangered species, yet over 60 percent of the Texas coastline is eroding, placing this valuable habitat at considerable risk. With the Gulf shoreline ecosystem at risk, all coastal areas landward of the coast are at equal risk. Coastal restoration projects that increase beach width and dune height have proven to be of long term economic benefit to every level of government and should be prioritized by the Council.

Thank you again for the opportunity to comment on the Plan. We look forward to working with the Council over the next several years as you begin to implement the Plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Kelly De Schaun", written over a large, loopy oval flourish.

KELLY DE SCHAUN  
Executive Director  
Galveston Park Board of Trustees

CC: Texas Commission on Environmental Quality





July 3, 2013

Gulf Coast Ecosystem Restoration Council  
c/o US Department of Commerce  
1401 Constitution Avenue, NW Room 4077  
Washington, DC 20230

#### OFFICERS

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Alice Duckett  
Secretary

#### Re: Draft Initial Comprehensive Plan

Dear Council:

The Land Trust for the Mississippi Coastal Plain (LTMCP) appreciates the opportunity to submit comments on the Gulf Coast Ecosystems Restoration Council's Draft Initial Comprehensive Plan.

LTMCP was founded in 2000, with the mission - to conserve, promote, and protect the open spaces and green places of ecological, cultural, or scenic significance in the counties of the Mississippi Coastal Plain. Since its formation, LTMCP has worked to fulfill its mission by protecting over 5,600 acres of environmentally sensitive land in the six coastal counties. These productive, fragile lands are a beautiful patchwork of habitats and histories that make South Mississippi so beloved by residents and visitors alike.

Although, the primary goal of LTMCP is to protect areas with ecological, cultural and scenic significance for future generations; our secondary goal is to promote grassroots conservation through education and community partnerships. LTMCP works with local governments, citizens groups, and communities in a proactive, non-confrontational manner to promote conservation awareness. Over the years we have hosted many activities within our communities, schools, and local festivals that allow a wide range of the public to more fully understand and appreciate the diverse habitats of coastal Mississippi. LTMCP has spearheaded numerous publicly accessible projects. Many of our properties include walking trails or observation decks allowing visitors to interact with nature and learn about the intricate relationships found in the coast's varied ecosystems.

It is through this body of work and experience that LTMCP would like to submit the following comments:

- Encourages the use of RESTORE funds for land acquisition in coastal Mississippi utilizing good conservation strategies, such as ones developed in the Conservation Mapping Report by LTMCP, USFWS, MDMR, and CDM. The Conservation Legacy GIS Mapping tool is a good example of a vetted, science-based plan for land protection in the six county area of coastal Mississippi. Using geographical information system (GIS) tools, a map of potential conservation lands was developed. The map identifies and ranks potential lands for conservation, reflecting environmental/ecological value, cultural and historical value, and proximity to development and existing conservation lands, among other factors. All maps are presented in a simple, color-coded format that ranks land according to its priority for conservation. The maps are held in a dynamic database that can be updated as priorities change and additional information is acquired.  
url: <http://gisdemo2.cdm.com/ltmcp/index.html>

#### BOARD OF DIRECTORS

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Johnny Marquez

Allen Reed

Flowers White



- Endowments or dedicated funds should be provided for long-term restoration and management.
- LTMCP recommends the MS Dept of Environmental Quality develop a state comprehensive plan for expenditures that is holistic, landscape level and incorporates other landscape level conservation plans (e.g. MS Comprehensive Wildlife Conservation Strategy by MS Dept of Wildlife, Fisheries and Parks, America's Longleaf plan for MS, MS Forest Assessment and Resource Strategy by the MS Forestry Commission.
- LTMCP supports the establishment of a Citizens Advisory Committee and Land Acquisition/Protection Committee and would like to offer the participation of its staff and/or qualified board members for such committees.
- Our trustee should reach out to the other state agencies (e.g. MS Dept. of Wildlife, Fisheries and Parks, MS Natural Heritage Program, MS Forestry Commission, MS Soil and Water Conservation Districts, MS Dept of Marine Resources) to collaborate with them on the development of the state RESTORE plan and to identify priority landscape scale projects (incorporating their existing planning efforts). They have a tremendous amount of planning, technical expertise and existing data and priorities to bring to the table.
- LTMCP would like to stress the importance of permanent protection of natural resources and the need for conservation measures on inland and upland properties to protect the health of our watersheds.
- LTMCP recommends the release of a more detailed plan for review by the general public to illicit more meaningful and informed comments.
- LTMCP agrees with the "objectives" of the Draft Plan but encourage the addition of language to allow for permanent protection of water quality, habitats and living resources. Further LTMCP recommends the Council not prioritize it's restoration Objectives, but rather prioritize projects based on how many Objectives the project meets.

During our work on land conservation research has proven that lands in conservation serve a great value to the community in advancing their goal of making these communities more resilient and helping them reach the goal of more green space within the community. LTMCP perceives this Comprehensive Plan as a positive advancement of the good conservation foundation already established and looks forward to working with the Council on its continued development and implementation.

Sincerely,



Judy Steckler  
Executive Director

JS/ct

cc: Trudy Fisher  
MS Department of Environmental Quality  
PO Box 2261  
Jackson, MS 39225-2261