



Coalition to Restore Coastal Louisiana

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April 2, 2007

To: Jon Porthouse
CPRA Integrated Planning Team

RE: Comments on the Preliminary Draft Comprehensive Coastal Protection Master Plan

Dear Mr. Porthouse:

The Coalition to Restore Coastal Louisiana wants to thank you for the opportunity to comment on the State's Draft Integrated Ecosystem Restoration and Hurricane Protection: Louisiana's Comprehensive Master Plan for a Sustainable Coast (Draft Master Plan). With the current collapse of the Mississippi delta and the constant deterioration of our coast, there is urgency in all of our actions. The State has acted upon this urgency in the release of the Preliminary Plan followed by the Draft Master Plan with a quick turnaround to submit the Plan to the state legislature. The Coalition encourages the State to continue to act with urgency in the planning, design, implementation and funding of coastal restoration and protection projects. The Coalition is committed to working with the State as we proceed into a more sustainable and safer future.

Public Review

The Coalition appreciates the level of public involvement in the preparation of the Preliminary Plan and the Draft Master Plan. The Coalition feels that some of the comments made on the Preliminary Plan were addressed within the Draft Master Plan, however there are still many concerns. The Coalition understands that numerous edits may be made to the Draft Master Plan prior to submittal to the legislature. We want to ensure that the public will have the opportunity to review and comment on any substantial edits to the Final Plan prior to submittal to the legislature. Although the public has been very involved in the process to this point, the level of changes that may be occurring will require an additional public review period. We are also concerned that once the Final Plan is approved by the Louisiana State Legislature, the State will be reluctant to make substantive changes to the plan without reauthorization by the legislature.

Establishing a Goal

The four stated objectives and key assumptions described in Chapter 1 and Chapter 2 offer a solid base for the development of the Draft Master Plan. We understand that the objectives and assumptions will guide the process, however an end goal needs to be identified. The goal of a "sustainable coast" is exactly as it's stated within the plan, a "conceptual vision", and does not offer any definition or quantifiable elements that would allow the plan to be reviewed and modified for effectiveness in reaching the set goals. What is a sustainable coast? Is it at a point where accretion rates are equal or greater than subsidence rates? Is it when the delta is growing

instead of collapsing? Is it when the habitats reach a historical delineation along the coast? Is it when a Category 5 storm hits the Louisiana coast with reduced or minimal damage to critical assets, infrastructure and wetlands? Is it when protection in coastal Louisiana will reduce the need for mass evacuations when faced with an approaching storm? The Draft Master Plan needs firmly established and measurable goals. Ultimately, those goals should include a return to the historical wetland habitat delineations along the coast since the turn of the century. If the ecosystem fails, the flood protection benefits it supplies will also fail, and increase the stress on engineered flood protection measures.

In connection with the habitat goals, hydrology is one of the main driving forces in reestablishing a healthy and sustainable coast. Humans have altered hydrology for centuries for our own personnel gain. A sustainable coast must balance human needs with environmental concerns. Restoring hydrology is an ambitious and complex task. We need to strive to restore the natural hydrology and emulate natural processes. In addition, intact natural hydrologic processes must be considered when planning hurricane protection. The Coalition strongly supports the use of the current levee system and “footprint levees” which would consist mainly of back levees bordering the developed areas and leaving the natural areas of the coast hydrologically connected and functioning as basins. One of the main goals of the planning and implementation of this Draft Master Plan should be to preserve the natural hydrological connections and restore historical functions of areas with altered hydrology.

Multiple Lines of Defense

The Coalition supports the Multiple Lines of Defense strategy but would like to emphasize the importance of wetlands as a buffer to flood protection structures as a key line of defense. In addition, the role of barrier islands as the first hurdle within the lines of defense is underappreciated within the Draft Master Plan. It is imperative that Chandeleur Island be protected as a line of defense. It is unacceptable to rely on another agency with limited expertise in flood protection and restoration to complete such an important project. Without the Chandeleur Islands, two lines of defense are lost (the barrier island and the sound) and the Biloxi Marsh would be even more exposed to the influences of the Gulf of Mexico, including wave action and salinity regime. This will lead to an increase of deterioration of the Biloxi Marsh and is not a sustainable option.

Levee Protection

As mentioned in the Executive Summary and then again on page 23, one of the assumptions states that a “healthy landscape is essential to achieving both a sustainable ecosystem and reliable flood protection.” A healthy landscape is not a landscape riddled with long, linear levees and flood control structures. The sole reliance on these structures for protection is neither natural nor healthy and inhibits the natural processes that historically allowed for the sustainability of the coast. The Draft Master Plan needs to acknowledge that the levee system proposed is unnatural and will lead to further degradation in many areas. We need to look at a flood protection system that does not impound our disappearing wetlands. Levees should be built to protect critical assets and should not disconnect wetlands from the natural processes and hydrology of the region. Our experience, specifically with the taming of the Mississippi River, demonstrates that a heavy reliance of levees leads to a rapid deterioration and collapse of the ecosystem. Levee alignments, such as the Gulf Intracoastal Waterway (GIWW) alignment and

the Morganza to the Gulf alignment, will both provide false security and substandard protection while causing wide-range deterioration of wetlands.

The use of “leaky levees” is conceptual and untested. The Draft Master Plan appears to rely upon this concept as a way to construct levees without altering hydrology. There is a grave concern among the independent science community that this concept will be unsuccessful. It is not feasible to assume that disconnected wetlands will remain a healthy part of the ecosystem. Any potentially beneficial effects will be isolated to the close vicinity of the structure. Currently, we have neither the time nor money to effectively investigate the complexities of the leaky levee concept. Hurricane protection needs to happen now. We can not wait 10 years for hurricane protection while we examine the use of leaky levees. It is the Coalition’s position that leaky levees, specifically levees that are planned to bisect basins, such as the Gulf Intracoastal Waterway (GIWW) alignment, would cause further degradation of the ecosystem. The Coalition believes the concept of leaky levees should not be relied upon as a current technology and any proposed levee alignments should rely on the best known science and engineering. In addition, all planning for levee placement should include scientists specialized in the proper functioning of an estuary, including but not limited to hydrologists, geologists, biologists and wetland scientists.

When evaluating alternatives for levee alignments, the cost considerations should not only compare construction and maintenance concerns, but also include the cost to the environment and the potential costs to repair environmental damage in the future. The Coalition strongly supports the strengthening of the current levee system, with possible inclusion of interior levees, controlled overtopping and compartmentalization for additional flood protection, and providing Category 5 storm protection. Any new levee placement should be at the upland/wetland interface and should encompass minimal acreage of wetlands. Since much of the coast is developed along old distributary ridges, traditional back levee locations along the ridges are, in general, a preferred location for hurricane protection levees. Levees located along old distributaries are located closest to the assets that need protection. These “footprint levees” would allow natural areas to stay connected and continue functioning as an estuary, while providing storm surge protection to most communities. In addition, although the length of levee required may be longer, the soils are better suited, thus the construction and maintenance costs are reduced. In addition, these levees would provide a more reliable level of protection for the present and into the future. All wetlands included on the landward side of the levees should be prohibited from induced or secondary development.

There is also the question of who will be responsible for operation and maintenance of these levees and the water control structures. Will it be the Corps of Engineers? The State? Or the Parishes? Historically, levees in Louisiana with water control structures have failed and due to cost constraints have been left non-functioning. We need to ensure that this will not occur with the leaky levees, which could result a solid line of levees with no water exchange. This possibility needs to be addressed within the State Master Plan.

Additional Flood Protection

The Draft Master Plans's description of protection is mainly concerned with storm surge. However, Louisiana has historically experienced flooding from large rain events, including heavy precipitation during hurricanes. The use of extensive levee systems will further impact drainage issues in many of our communities. Heavy rain events can also overload a freshwater diversion system and cause back flooding. Wetland areas on the landward side of the levee system should be prohibited from development and utilized for their storm water storage capabilities. In addition, wetlands outside of the levee system can also be utilized for storm water storage and assimilation which is also beneficial to the health of the wetlands.

Modeling

Within the planning and implementation of these projects, the State needs to better address the issues of sea level rise and water quality. Modeling needs to collectively include all of these variables and should be conducted from the initiation of the project, rather than step by step.

We understand that the Saffir-Simpson scale is based solely on wind speeds and is not an adequate scale for future storms that could impact the coast of Louisiana. However, when producing a level of protection that the public needs to comprehend, the State should use their modeling capabilities and attach storm surge levels to the scale that is very familiar and understood by the general public. As described on page 27 of the plan, the levels of storm surge protection as 1% and .2% do not give the local governments, planners, insurers or the general public a straightforward idea of how protected their communities and homes will be in the next Category 3, Category 4, or Category 5 storm. A public education component needs to be added to the plan so that the general public understands their risk and can use this knowledge in their decision making process related to their homes and businesses.

Management of the Plan

The Coalition is pleased that the State is committing to using an adaptive management strategy. Given the ever-changing nature of our coast and eustatic sea level, it is imperative that the State be able to modify and adapt the Master Plan and any planned projects for the benefit of hurricane protection and restoration. The Coalition is concerned on the processes that will be instilled to function under this title of adaptive management and its effectiveness. Clarification of the adaptive management strategy needs to be included in the plan. In addition, information on prioritization and implementation needs to be identified thoroughly in the Draft Master Plan, not only the Annual Plan.

There is no clear indication which state agency/agencies will be responsible for implementation and oversight of the restoration and flood protection projects. When multiple agencies are involved, there should be a process to identify the collaborative effort or the lead agency. With multiple projects in multiple planning units vying for funding, potentially being managed by different agencies, there needs to be a concise method for prioritizing projects. Operation and maintenance responsibilities have also not been defined.

The Coalition would also like to recommend that the State address emergency situations will be handled under the plan. For example, two breaks have occurred in the Schooner Bayou levee system and are causing damage within the Mermentau Basin. Since no assets are in direct threat, the breaks remain open until the state and federal governments can analyze the situation, acquire permits, etc. All the while, more and more saltwater destruction is occurring. There needs to be an emergency plan for such situations that will allow the State to act just as quickly as they would if there were communities in danger.

Numerous federal, state and local regulations, including the National Environmental Policy Act (NEPA), the Clean Water Act (CWA) and the Endangered Species Act (ESA) will need to be adhered to for the Draft Master Plan. There is concern that the Programmatic Environmental Impact Statement (PEIS) being acquired by the USACE will only cover the flood protection aspects of the Draft Master Plan, and additional work will need to be completed to finalize any restoration projects. The State needs to identify the procedure that will be used to remain in compliance with all local, state and federal regulations on such a complex plan.

The role of the Draft Master Plan within the U.S. Army Corps of Engineers (USACE) Louisiana Coastal Protection and Restoration (LaCPR) Report is still unclear.

Smart Growth

We also strongly support the recommendation for smart growth. The Draft Master Plan articulates well the causes of land loss, as well as the implications of this loss in the future. We need to emphasize the actions that led to our current situation and increased vulnerability and that the ill-conceived and unregulated methods of development that has happened for years is unacceptable. The plan discusses smart growth as an issue for local governments to address. Not only does the State need to take a more active role in assisting local governments with resources, management and enforcement of zoning laws, but the State needs to take the initiative and abide by its own plan. The State has authority over the Coastal Zone and any developments within wet areas. It is contradictory to the Draft Master Plan that the State continues to issue Coastal Use Permits for non-sustainable projects. In addition, the Coalition would like to encourage the State to take jurisdiction of all projects within the coastal zone, including those deemed as fastlands.

We understand that the Draft Master Plan faced numerous challenges from its inception and tradeoffs and tough decisions were made along the way. We concede that due to time and cost constraints, some high risk communities with a lower level of protection when compared to larger communities. There needs to be a slow withdrawal from some of the areas where the risk is too high. As a culture, we have moved away from the building techniques used by our ancestors and it has cost us dearly. We strongly support the inclusion of a formal recommendation to assist local governments with the management and enforcement of the stringent building codes within the coastal zone, whether protected by levees or not, to reduce the risk to these assets. Evidence of the effectiveness of building codes can be witnessed within Florida, where properties built after Hurricane Andrew and the utilization of strict building codes fared well compared to their counterparts in the 2004 and 2005 hurricane seasons.

Comments concerning project specifics are attached.

It is time that we start having a positive impact on our environment for future generations.

Sincerely,

A handwritten signature in blue ink, appearing to read 'MAF', is centered on a light-colored rectangular background.

Mark A. Ford, Ph.D.
Executive Director

Project Specifics on the Draft Integrated Ecosystem Restoration and Hurricane Protection: Louisiana's Comprehensive Master Plan for a Sustainable Coast

Submitted by the Coalition to Restore Coastal Louisiana

Historical Ridges

More coordination of projects is needed to ensure that the restoration of ridges does not interfere with the effectiveness of planned projects, as well as the further deterioration of coastal habitats. For instance, the restoration of the Bayou L'Ours ridge, in collaboration with other planned projects in Planning Unit 2, may isolate the wetlands west of the ridge from the influences of the estuary. Another concern is the Bayou Grande Chenier ridge which may impact the effectiveness of the planned large diversion at West Pointe a la Hache. In general, the Coalition supports the restoration of historical ridges, especially the Bayou LaLoutre Ridge, which will have tremendous positive impacts on storm surge reduction, limiting salt water impacts and allowing for the restoration of the associated ecosystems.

Shorelines

Shoreline stabilization is a necessary strategy in the fight against erosion, however the use of armoring and ripwrap are not natural features in our landscape and do not lead to a sustainable coastline. Shoreline protection should be considered in areas of high erosion rates, unlike the shoreline project planned at the Maurepas Landbridge, and not in areas where the potential biological impact can be too severe, such as areas of marsh along the Lake Pontchartrain northshore. In general, the Coalition supports the use of shoreline protection measures to reduce or eliminate the high rates of shoreline erosion.

Land Sustaining Diversions/Land Building Diversions

Over the long term, diversions, or river reintroductions, though a structure at the river or pipelines will provide benefits for keeping the wetland ecosystems healthy. It is evident from the damage sustained to the wetlands south of the Caernavon Diversion, that the processes to build healthy and durable wetlands require an extended period of time. Older, established wetlands, such as the Biloxi Marsh, were able to sustain the brunt of Hurricane Katrina more effectively. It is imperative that we realize the effectiveness of these young wetland areas for storm protection for the near term. In the long-term, the diversions and wetland areas will create sustainability and flood protection.

The Coalition recommends that the size of the diversion structures be planned and built with a larger capacity than what may be anticipated. As we can learn from Davis Pond and Caernavon, all planning and documentation should be completed for oversized diversions due to the uncertainties of the future, such as sea level rise, potential droughts or impacts from large-scale hurricanes.

In addition, the use of one of the Mississippi Delta Management diversion near the bird-foot as a continuous source of sediment for beach nourishment of our fragile barrier island chains and

would allow the natural processes of longshore sediment migration and overwash to occur and lead to increased sustainability of our first line of defense.

The Coalition supports the operation of all diversions for optimal impact, including maximum flow in the spring and other river high water flow events.

MRGO

We strongly support complete closure of the Mississippi River Gulf Outlet (MRGO) at Bayou LaLoutre as a top priority.

It was noted that the project description in Appendix A (D 1-15), which states that shallow-draft navigation interests will be considered, does not correlate to the closure statement on page 41. The Coalition strongly encourages the State to recommend full closure with an earthen plug at Bayou LaLoutre and restoration of the historic ridge. Bankline stabilization is no longer necessary, however we support the additional constriction of the channel for restoration and storm surge protection. The Coalition supports the restoration of the Central Wetlands with the potential to restore this area to its historical habitat of cypress swamp. In addition, the Coalition supports restoration of the Golden Triangle, however this project could be impacted by one of the proposed alignments for the Lake Pontchartrain Barrier Plan. We encourage that the levee alignment does not impound the Golden Triangle which will lead to further wetland loss.

Evacuation Routes

The Coalition supports elevating the evacuation routes and recommends that the new roadways have the highest possible level of protection for the safety of those who live in coastal communities. Restoring hydrology should be a top priority when evaluating these roadways and every attempt should be made to preserve hydrologic function. For older roadways, such as Highway 90, which impedes water flow and causes impoundments, the improvements to the roadway will also allow for improvements to the altered hydrology of the watershed.

Barataria Basin

The Coalition feels that the restoration and protection projects planned to impact the Barataria Basin are inadequate, vague and centered on the proposed GIWW alignment for the Donaldsonville to the Gulf project. The basin is one of the most productive estuary systems in the state, as well as experiencing some of the highest rates of land loss. The economic and environmental consequences for mismanagement of this basin are astronomical. As stated before, the Coalition strongly opposes the GIWW alignment, and all additional levee projects based on that alignment. The Coalition also opposes managing the upper basin as a water management area. The lack of detailed information on the Watershed Management Plan for Upper Barataria Basin leaves it questionable on numerous levels, including feasibility. Prior to selecting an alternative that impacts approximately 1,100 square miles of wetlands, the State needs to analyze all the impacts, including economic and environmental.

It is generally accepted knowledge that the great rate of land loss in Louisiana is to a large extent due to man's separation of the river from its floodplain. This idea was further supported in a March 23, 2007 article in Science. The authors stated that "the river is now almost completely leveed, preventing over bank flooding and crevasse formation, so most of its discharge is into the

deep Gulf of Mexico.” In this knowledge is also the acceptance that returning the ecosystem to its natural form and function, to the best of our abilities, is key to reducing land loss, restoring wetlands and providing effective storm protection. It is deplorable that the levee alignments, such as the GIWW alignment, which will severely alter the natural processes of the Barataria Basin and put another “human stamp” on our sensitive coast, are even being considered.

Reference: J.W. Day et al., *Science* 315, 1679 (2007).

Southwestern Louisiana

Restoration and protection plans for Southwestern Louisiana is a major component is the stabilization of the entire coast. Although this area is not experiencing the intense rates of land loss as Southeast Louisiana, and in fact the Atchafalaya Delta is growing, this area is still in grave danger within the next 100 years. As Hurricane Rita demonstrated, this area is vulnerable to storm surge for great distances and the intrusion of saltwater has serious impacts on not only the environment, but the cultural and economical stability of the area.

The long, linear levee system stretching across the state is beneficial in being located in a more upland habitat, for the most part, and allowing for protection of important assets, communities and farmlands. Problems with these levee alignments include the reliance on the leaky levee concept, cost constraints and the plan to manage watershed without any foresight into how this is going to be accomplished.

Shoreline protection of the numerous lakes and bayous is very important to this area to prevent further saltwater intrusion. In addition, stabilization of the gulf shoreline is also of great importance. Both of these issues appear to be addressed in the Plan with multiple projects.

Freshwater resources are an integral part of the restoration plan for the Chenier Plain. Saltwater intrusion into our freshwater wetlands will start to cause a change in habitat type and eventual degradation of the coastline. In addition, the high salinity is causing grave problems with our agricultural farmers in the region. Numerous diversions and conveyances of freshwater are being proposed from the Atchafalaya River, the GIWW, Sabine River, Red River and others. The Atchafalaya River has limited water and sediment resources, so we need to be sure the water and sediment budgets are sufficient to achieve the goals of the plan. The Coalition supports the re-authorization of Old River Dam to allow additional water and sediment to flow down the Atchafalaya River.

We would like to caution that there is limited space within the water budget of many of these areas and the addition of freshwater could overload the system and cause back flooding. In general, the Coalition is in support of the freshwater management to control saltwater intrusion, however the Plan needs to be more holistic on how they plan to manage the water resources, while avoiding back flooding throughout Southwest Louisiana. The use of pipelines to transfer sediments can produce the same beneficial impacts to sinking wetlands, while limiting the influx of freshwater and using small diversions to sustain the ecosystem.

Coastal Forests

On page 81, the Draft Master Plan states that “Louisiana has had best management practices for coastal forests since 2000.” This statement is misleading, as Louisiana has not had BMPs for coastal forests since 2000. The State’s BMP manual does not specifically address our coastal forests and the issues they are facing. The Coalition supports the inclusion of stronger recommendations to preserve our coastal forests and the inclusion of the recommendations made to the Governor by the Advisory Panel on Coastal Forests and Use, of which the Coalition participated.

Additional Projects

Additional projects and issues that need to be addressed in the Draft Master Plan include:

- The Plan has almost no emphasis on restoration of structural reefs, which often means oyster reefs. Shellfish, in particular, are recognized to have tremendous benefits throughout the estuary including providing shoreline protection of marshes. Once the hydrology is restored, oyster reefs can be re-built within a few years and provide highly sustainable benefits. Structural reefs should be targeted for specific historic sites or along submerged remnants of distributary ridges. Artificial near shore barriers, such as those near Holly Beach, offer tremendous wave reduction and shoreline retreat benefits.
- Numerous canals and navigations channels that traverse our precious coast have been abandoned. Even though most of them have not been dredged for years, they still contribute to the deterioration of the adjacent wetlands and are a conduit for storm surge to impact our coastal communities. These abandoned canals and channels should be surveyed and plugged both for the restoration value and storm surge protection.
- There is concern that the floatant marsh in Northern Terrebonne will be impacted by the extremely high levels of nutrients in the Mississippi River through the planned diversions. There is also concern that the high loading levels could cause eutrophication within the wetlands and lead to further degradation. The Coalition recommends that the State include a plan to target and educate other states within the Mississippi River watershed to reduce nutrient loads to more manageable levels. We cannot fix all of our problems on our own.
- Global warming and sea level rise could have a negative impact on our efforts to protect our coastline. Louisiana should strive towards a carbon neutral economy and promote development that minimizes the production of greenhouse gases.