

## COASTAL AMERICA 2012 AWARDS PROGRAM NOMINATION FORM

Please circle the award type (only one) you are recommending this team for:

Partnership Award - Spirit Award - Special Recognition Award

**1. Full Name of Nominated Team:** Master Plan Delivery Team

**2. Nominator Contact Information:**

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**3. What is the lead Federal Agency (if any) for this project? (or lead organization for Special Recognition Awards):** Coastal Protection and Restoration Authority of Louisiana (CPRA)

**4. Please provide a brief abstract overview of the project you are nominating (1 page max.)** *Include a short abstract (200 words max) describing the project, including its objectives, scope and longevity. Also, please address how the project supports Coastal America's mission and goals. Questions to consider are: How does the project demonstrate the "value added" of a partnership effort? (i.e. how did the partners collaborate to accomplish what a single entity could not accomplish alone?) This section should also describe how (if at all) the partners have worked with the Coastal America Regional Implementation Team in the development of the project.*

The 2012 Coastal Master Plan aims to achieve five objectives that were developed to reflect the key issues affecting people along the Louisiana coast, which are: (1) reduce economic losses from flooding, (2) use natural processes, (3) provide coastal habitats, (4) sustain our cultural heritage, and (5) promote a working coast.

The master plan reflects an 24-month in depth technical analysis informed by an ongoing conversation with the citizens of Louisiana. CPRA assembled a highly skilled team to develop a rigorous and forward thinking plan. The process brought together nationally and internationally known experts, a wide array of stakeholders and governmental partners to serve on advisory boards, framework development team or focus groups. CPRA engaged the general public through ten community meetings, three public hearings attended by 1,350 people, and over a hundred presentations to community and civic groups.

The result of this unprecedented collaborative effort is an actionable 50 year, \$50 billion plan that will substantially increase flood protection for communities and move Louisiana towards a sustainable coast. Unanimously approved by the Louisiana Legislature, the Master Plan is a resource-constrained plan that utilized a science-based decision making process and incorporation of public input to help galvanize Louisiana and national partners around a common vision.

**5. Project Need and Resource Benefits/Outputs (2 pages max.)** *Provide a summary of the project background and the expected resource benefits. For restoration projects, describe any long-term monitoring/management program. For education and outreach projects, describe how the project supports the conservation goals of the partnering organizations. If appropriate, include a description of how the project supports existing Federal, State, and local conservation plans, projects and programs.*

Louisiana is in the midst of a land loss crisis that has claimed 1,880 square miles of land since the 1930s. Given the importance of so many of south Louisiana's assets—our waterways, natural resources, unique culture and wetlands—this land loss crisis is nothing short of a national emergency.

If we don't aggressively address this crisis, the problem intensifies. Our analysis confirmed that if we do nothing more than what has been done to date, we have the potential to lose an additional 1,750 square miles of land. This land loss will increase flooding risk with disastrous effects. Put simply: the status quo cannot be maintained, and we must take bold action now to save our coast. At the same time, our analysis demonstrated that we do have the opportunity, if we act now, to avert an otherwise bleak future.

Barrier islands, marshes, and swamps throughout our coast reduce incoming storm surge, helping to reduce flooding impacts. If we continue to lose these habitats, the vulnerability of communities and infrastructure will increase substantially. In addition, our flood protection systems will become more vulnerable as the land around them erodes. Our analysis shows if we do nothing more than we have done to date, our estimated damage from flooding will increase from an average of \$2.4 billion annually to an average of approximately \$23.4 billion annually coast wide

There have been many plans for our coast, but none have had the action oriented mission of the 2012 Coastal Master Plan. The plan presents a list of specific protection and restoration projects, as well as recommended investments we should make in future decades. The path forward we outline in the 2012 Coastal Master Plan will set the template for state and federal action in coming years.

The 2012 Coastal Master Plan has done something new for our state: offer a path forward based on the latest innovations in science. No planning process can claim to be completely objective, and we have been clear about the limitations of our process. We can say with confidence, however, that the projects presented in this document are the result of an unbiased analysis of the best information available to us. Eighty-five percent of the projects in this plan performed well under one or both future scenarios and they satisfied multiple stakeholder preferences. When we deviated from our science based results because of real world challenges or public input, we have thoroughly documented those decisions.

In the end we found that certain projects, such as levees and large diversions, had to be part of the solution we offered. We also found that it was necessary to use a variety of project types in targeted locations. Finally, we were able to put to rest certain long standing proposals, such as eliminating diversions, using only small diversions, or even relying solely on levees to secure our future. These ideas do not work and they are not reflected in this master plan. The plan does reflect the many promising projects available to help coastal residents and businesses thrive.

In the development of the 2012 Coastal Master Plan, the State funded and led the development of a system of linked models to predict the ability of hundreds of individual restoration and protection projects to build or

maintain land, reduce risk on assets, and impact ecosystem services. Decision criteria were also developed to capture project effects on other landscape uses and social variables. The State coordinated this effort with the development of a Planning Tool which provided a systematic method for evaluating an individual project's or group of projects' ability to meet the master plan objectives. Through this science-based decision-making process, the 2012 Coastal Master Plan identified 109 restoration and protection projects and a coastwide nonstructural program as the best use of the estimated \$50 billion investment over the next 50 years.

The risk reduction projects in the Master Plan can substantially reduce expected annual flood damages. The plan's investment in increased levels of protection could prevent \$100 to \$220 billion in direct asset damages to individuals, communities and industry by year 50. This savings figure does not account for reaction and recovery costs, which alone cost \$250 billion for the 2005 hurricanes, not counting the incalculable human costs. The Master Plan has the potential to reduce expected annual damages by up to \$18 billion.

The restoration projects in the master plan have the potential to build between 580 to 800 square miles of land over the next 50 years, depending on future coastal conditions. Although we are not able to prevent all the predicted land loss in the 50 year planning period, the master plan can change the trajectory of land loss, providing a positive net land change into the future. After 2032, the projects in the master plan could achieve no net loss and begin building more land than we are losing after 2042.

The Master Plan analysis used decision criteria and ecosystem services to predict effects to key resources and uses of the coast as identified in the plan objectives. The Master Plan analysis evaluated the future with and without action for nine decision criteria, which includes support for cultural heritage, distribution of risk across socio-economic groups, sustainability, support for navigation, support for oil and gas, protection of strategic assets, use of natural process, protection of historic properties, and operation and maintenance costs. Ecosystem services were evaluated to ensure that the Master Plan provided a wide array of commercial and recreational activities coastwide. The ecosystem services evaluated included alligator, crawfish, storm surge/waves, other coastal wildlife, freshwater fisheries, oysters, saltwater fisheries, shrimp, waterfowl, agriculture, carbon sequestration, freshwater availability, nature-based tourism and nutrient uptake. The analysis found that the master plan and Future without Action cause an array of complex increases and decreases in ecosystem services; however, the master plan does not cause drastic changes to any one specific species or service.

As projects are beginning to be implemented, an Adaptive Management Framework is being developed to monitor, report and modify the master plan as needed.

**6. Partnership functioning - Funding & Other Support (1 page max.)** *Provide an overview description of each of the partners involved in the project. Include a breakout of the financial and in-kind support provided by each of the individual partners along with a one sentence summary of each element's contribution(s).*

#### **Master Plan Delivery Team**

This team, comprised of CPRA staff along with consulting engineers and other advisors, was responsible for developing the Master Plan. The financial support for development of the Master Plan was provided by CPRA.

#### **Predictive Modeling Workgroups**

A series of linked models provided terabytes of data to the decision-making process. Over 60 state and national scientists and engineers worked closely with the Planning Team to develop and implement the modeling framework.

#### **Science and Engineering Board (SEB)**

This group, made up of experts with national and international experience, provided independent review of plan elements and recommended ways that we can improve our work. The SEB participated in five multi-day meetings, as well as 13 webinars. Individual board members worked intensively with the Planning Team on focused elements of the plan, providing guidance at every juncture of the process.

#### **Technical Advisory Committees (TAC)**

The TACs were three to four member groups of nationally known experts who were responsible for advising the state on how to conduct the analysis in the most technically sound manner. We had three committees, one that assisted us with our modeling analysis, one that advised us on the best use of our Planning Tool, and one that gave us advice about incorporating cultural heritage appropriately in the plan. Each of these committees has met many times with the team to provide in depth guidance and feedback

#### **Framework Development (FDT)**

The FDT consisted of 33 representatives from business and industry, federal, state, and local governments, nongovernmental organizations, and coastal institutions. The group advised the state on the Master Plan process and offered specific guidance on all of the major elements of the 2012 Coastal Master Plan. The time and effort of these representatives was voluntary and considered in-kind.

#### **Focus Groups**

Large-scale coastal protection and restoration will affect businesses and industry in south Louisiana. In order to integrate the perspectives of those in key business sectors, we created three focus groups: ports and navigation, fisheries and oil and gas. Leaders in each sector met multiple times to discuss the issues facing their industries and to explore productive options for the coast. The time and effort of these group members was voluntary and considered in-kind.

#### **Subsidence Advisory Panel**

To identify plausible ranges of future subsidence rates and assess spatial variation across the coast, a panel of technical experts was convened in September 2010. The product of this panel was a spatially explicit map that represented future ranges of subsidence rates.

#### **Marsh Collapse Advisory Panel**

In order to predict future land loss or gain in coastal Louisiana, it is necessary to try and predict the ability of a given marsh type to persist in response to sea level rise, subsidence and changing storm patterns. An expert panel was convened to determine primary drivers and thresholds behind the collapse of coastal wetlands.

***Please see Appendix 1 for a full listing of participants.***

**7. Team Partners:** List all partners and identify project/team leads with an asterisk (\*). Please provide all contact information using the format as shown in question 2 above.

**IMPORTANT: If approved; only team members identified in this form will be eligible to receive the Coastal America Award. Please ensure that you correctly identify ALL TEAM MEMBERS.**

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## Appendix 1:

### Master Plan Delivery Team

The 2012 Coastal Master Plan was developed by an interdisciplinary team from the CPRA, academia, and the private sector led by William “Kirk” Rhinehart.

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Tye Fitzgerald, CPRA	Joseph Wyble, Brown and Caldwell
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## **Acknowledgements**

We would like to thank the citizens, legislators, parish representatives, and stakeholder groups who met with us to share ideas about how to protect and restore coastal Louisiana. We would also like to offer our special thanks to the participants of the 2012 Coastal Master Plan Framework Development Team; the Fisheries, Oil and Gas, and Navigation Focus Groups; the Science and Engineering Board, the Technical Advisory Committees; the Predictive Modeling Workgroup Members; the Subsidence Advisory Panel; and the Marsh Collapse Advisory Panel who took time away from work and family to give us their perspective on coastal protection and restoration issues.

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