**CPRA and The Water Institute Announce Recipients of Applied Research Grants
And Coastal Innovation Partnership Program Endorsements**

For the second consecutive year, the Coastal Protection and Restoration Authority (CPRA), in collaboration with The Water Institute of the Gulf, is announcing the results of two programs focused on fostering applied research and identifying innovations that will enable CPRA to more effectively protect and restore coastal Louisiana.

Grants for CPRA Applied Research Program Announced

Four research project proposals from the spring 2014 solicitation of the Coastal Protection and Restoration Authority's Applied Research Program have been selected and awarded funding. The CPRA Applied Research Program was established to provide Louisiana-based researchers with funds to conduct engineering and science research and tool development activities that will enable CPRA to more effectively protect and restore coastal resources. The program is managed by The Water Institute of the Gulf on behalf of CPRA.

The program was established in 2013, and this year's solicitation garnered over 25 submissions requesting a total of $1.7 million combined. With only $250,000 available for funding proposals this year, it was a highly competitive process, which attracted a number of qualified submissions.

The funded research projects for the 2014 solicitation are as follows:

Optimizing the design of shoreline protection to reduce marsh edge erosion based on integrated field observations and modeling.
Qin Jim Chen, Louisiana State University Department of Civil and Environmental Engineering – *Principal Investigator*.

This one-year study is a continuation of the study that was funded last year through the Applied Research Program. The long-term goal of this proposed study is to improve the planning, design and implementation of the Coastal Master Plan shoreline protection projects through applied research that integrates field observations, computer modeling and coastal engineering knowledge. This project will use 6 years of data collection and modeling to examine wave dissipation on Biloxi marshes. As one of the proposal reviewers noted, "The proposal is highly relevant to CPRA and their restoration activities. Overall, the proposal addresses a highly relevant topic to coastal Louisiana and the field observation and modeling work would contribute to our knowledge of the erosion process of marsh edge."

A comprehensive assessment of deltaic bald cypress-water tupelo forested wetland condition in Louisiana's coastal zone.
Richard Keim, Louisiana State University Agricultural Center – *Principal Investigator*.

This one-year project will use techniques of remote sensing (Landsat TM bands 3,4,5) to estimate forest condition in Barataria Bay using a method that has already been proven in Terrebonne and Ponchartrain basins. A reviewer said, "The study provides a baseline of forest condition to help assess the long-term effects of coastal restoration by the state of Louisiana. It is highly relevant information that could be used for additional characterization."

Quantifying Holocene sediment compaction and its spatial variability in the Mississippi Delta using a new method.
Zhixiong Shen, Tulane University Department of Earth and Environmental Sciences –
Principal Investigator.

This one-year study will quantify late Holocene sediment compaction rates and their spatial variability in the Mississippi Delta by collecting new field data to test the null hypothesis that compaction rates increase coastward in the Mississippi Delta. This project will use the stratigraphic boundary from river-mouth bar sand to overbank deposits to measure compaction rates along Bayou Lafourche from Thibodaux, Louisiana to the present day shoreline. A reviewer of this proposal said "By elucidating rates of compaction and faulting, the proposal provides information that can help CPRA. If better compaction rates are obtained in the future this could clarify processes that are impacting subsidence rates over the coast."

Characterization and Modeling of Sediment Settling, Consolidation, and Suspension to Optimize the Retention Rate of Sediment Diversions for Coastal Restoration.
Kenhui Xu, Louisiana State University Department of Oceanography and Coastal Studies –
Principal Investigator.

The overall objective of this one-year project is to study the magnitudes and rates of sediment settling and consolidation for fine-grained, cohesive river sediment, and the associated changes in bed erodibility. A reviewer stated "The ability to better characterize consolidation and re-suspension rates of fines is a very important issue."

"The applied research conducted through this program is foundational in our ability to create a sustainable coast," Kyle Graham, executive director of CPRA, said. "While our primary focus is on implementing projects today, we must continue to invest in applied research that will provide innovations and new solutions to the challenges we are facing."

"Linking knowledge to action is a founding principle of The Water Institute, and it is through programs like this that we are able to foster and integrate applied research across a number of disciplines," Chip Groat, president and CEO of The Water Institute, said. "We were impressed by the quality of proposals submitted and look forward to working with Louisiana's research community as part of this effort and other initiatives."

For more information on this program, visit www.thewaterinsitute.org/appliedresearch.

Endorsements from the Coastal Innovation Partnership Program

The Coastal Innovation Partnership Program has completed its second year of soliciting and evaluating cutting-edge technologies and other innovations that could be used by CPRA or other coastal entities to achieve the most efficient, cost effective and sustainable approaches to project implementation, monitoring and adaptive management.

The Water Institute, charged with managing the Coastal Innovation Partnership Program for CPRA, reviewed 25 preliminary applications, ranging in a wide variety of innovative technologies and practices. Nine of the 25 innovations submitted were determined to have a sufficient technology readiness level, and were recommended for the full application process. An independent panel of

nationally-recognized experts reviewed the final submissions. Each full application was evaluated based on the individual merits of each innovation to support, improve or enhance the restoration and protection goals of the 2012 Coastal Master Plan. The Expert Panel endorsed two of the final applications based on their technology readiness level and applicability to the 2012 Coastal Master Plan.

The Endorsed innovations for the 2014 solicitation are:

BioHaven® Floating Breakwaters
Martin Ecosystems, LLC

BioHaven® Floating Breakwaters act as a floating wetland and function in the upper part of the water column in which much of the wave energy is concentrated. The structures effectively reduce wave height and energy in the lee of the structure by reflecting wave energy and dissipating kinetic energy of incoming waves.

Geologic Framework Preservation Through Innovative Reef Building
Coastal Environments Inc.

ReefBlk™ vertical oyster reefs have reduced wave-induced shoreline erosion rates of highly organic marsh platforms in coastal Louisiana and elsewhere along the northern Gulf of Mexico. This innovation advances the use of ReefBlk™ vertical oyster reef one step further through the design of micro-ecosystems that will enhance wave attenuation and sediment-trapping performance, while also serving to create a naturally hardened shoreline through the use of cultch and natural oyster shell distribution within the near-shore, tidal zones and fringing marsh platform.

"The quality of submissions received in this second solicitation for CPRA's Coastal Innovation Partnership Program has been outstanding," Clint Willson, director of Engineering Design and Innovation, and Water Institute lead for the program, said. "There are tremendous opportunities for innovation in coastal Louisiana and this program provides a structured approach to vet potential innovations that can be utilized in efforts to protect and restore the coast."

For more information on the CPRA Innovation Partnership Program and future solicitations please go to www.thewaterinstitute.org/innovation.