A LEGACY CONTINUES
ON THE
WATER’S EDGE

Southern Miss to Usher in a New Era of Marine Education

By Chris Snyder,
Director of the Marine Education Center

The new Marine Education Center will be located on a 100-acre wooded site on the edge of Davis Bayou in Jackson County.
The coastal town of Ocean Springs is home to The University of Southern Mississippi's Gulf Coast Research Laboratory. Better known as GCRL, the laboratory is the coastal research and marine academic unit of the University. The Marine Education Center (MEC) is one of four major units at Southern Miss’ GCRL. The MEC was formed in the mid-70s to provide information about the laboratory, its ongoing research, and the role its work plays in the daily lives of all Mississippians. The center also provided students and the public with a place to learn the value of coastal habitats and waterways. In 1984, the J. L. Scott Marine Education Center, a 32,000-square-foot outreach center, was built at Point Cadet in Biloxi and served as the center of marine education on the Mississippi Gulf Coast for the next 21 years.

On the morning of August 29, 2005, the J. L. Scott MEC was lost to the powerful winds and enormous storm surge of Hurricane Katrina. The destruction was all-encompassing with the loss of the facility, its exhibits, and the many creatures that were housed in the aquariums.

While the facility was a total loss, the MEC’s educational programs continued after moving across the Biloxi Bay to GCRL’s main site in Ocean Springs. Now, 10 years later, the Marine Education Center is undergoing a rebirth. A new facility is taking shape on Southern Miss’ Cedar Point Site in Ocean Springs.

This new education center will continue the legacy of providing coastal sciences education to the community in its new, nature-centered, sustainably designed education complex at the water’s edge. The new facility will be located on a 100-acre wooded site on the edge of Davis Bayou in Jackson County. This site has amazing natural features, such as a healthy salt marsh system, an intact maritime forest and easy access to the bayou and the Mississippi Sound. These resources are great teaching assets for the center’s students and visitors. They also make this a natural laboratory to demonstrate the ability to teach on this site while being good stewards of the environment.

The facility was designed to be a nationally recognized example of how to employ sustainable, green and effective coastal building techniques in harmony with the coastal environment in which it is located. The buildings will be the most effective exhibit, highlighting knowledge of coastal sciences and how this knowledge is translated into construction along the shores of the Gulf of Mexico. All involved set very high environmental standards for the facility and are confident these standards will be met. The buildings will become important educational tools--appropriate to the landscape, storm-resistant, and built with environmentally sustainable materials and systems.

To meet all environmental and sustainability goals, GCRL conducted an extensive RFQ and review process to identify and hire the architectural firm that would design the complex. The Lake Flato Architects, along with its local partner firm, Unabridged Architects, was selected for their expertise and experience in sustainable and green design. Lake Flato’s team
describes their architectural vision as, “architecture that is rooted to its place, responds to the natural environment, and merges with the landscape.” They define sustainable design as, “smart design that looks beyond the building and considers the larger context.” And they believe that, “Architecture should respond to its particular place and be a natural partner with the environment.” Led by these principles, Lake Flato has met and exceeded architectural expectations.

**SUSTAINABLE DESIGN IN PRACTICE**

The MEC has moved from the high-risk velocity zone of its original home to a safer, higher elevation site at Cedar Point, Ocean Springs, out of the direct wind field. It is designed to be as wind-resilient, flood-proof, energy-efficient and coastal hazard-resistant as any structure built in Mississippi in the post-Katrina period. The complex is designed to achieve the following standards:

- **ENERGY PERFORMANCE**: A minimum goal of 40% energy optimization beyond the current energy code is desired through use of energy-efficient measures and potential onsite energy generation. The building should maximize natural cooling opportunities with building orientation, natural ventilation, color selections, trees and other landscape solutions.

- **WATER USAGE**: No potable water shall be used for irrigation or sewage conveyance. No storm water shall leave the site. Treat 100% of wastewater to tertiary standards. Use 40% less water than baseline calculations.

- **MATERIALS AND RESOURCES**: Encourage use of materials that have a combination of the following qualities: regional, high-recycled content, salvaged and reused.

By engaging in sustainable design, GCRL will have higher performance buildings that will harmonize with, enhance and even restore the natural landscape; optimize energy efficiency; conserve materials and natural resources; and enhance indoor environment quality, while optimizing and safeguarding water.
COASTAL SCIENCE EDUCATION, FIELD EXPERIENCES AND STEWARDSHIP

The MEC’s education complex will consist of a series of buildings that will be connected by outdoor paths and walkways. The primary structures include an assembly hall, a visitor’s center and exhibit space, a waterfront teaching pavilion, six nature-based classrooms, a citizen science laboratory and administrative offices. The MEC will provide a range of coastal science programs that offer educational opportunities to students of all ages through classrooms, laboratories and outdoor and offshore field experiences. Students and visitors will be able to learn about the coastal environment through formal classroom instruction, laboratory experiments, guided walks and boating excursions of the bayou, rivers, and near-shore waterways. These field-based learning experiences that support science curricula and the natural site will provide extensive opportunities for outdoor environmental education and recreation.

The MEC’s programs will target a diverse audience, including undergraduate students through the Summer Field Program and undergraduate research opportunities; high school and middle school students with Coastal Sciences Camps, Coastal Sciences Career Camps and National Ocean Sciences Bowl; community members as either volunteers or participation in citizen science opportunities; and teachers through field-based professional development programs.

The programs provide science-based information to help community members be better stewards of the Gulf of Mexico. In conjunction with the new facility, these programs will increase visitors’ understanding of how coastal sciences and research enhance the quality of their lives, promote sustainability of coastal resources and how individuals can use this knowledge to make responsible decisions concerning coastal resources. These basic principles of science-based stewardship have been designed and incorporated into every aspect of the Marine Education Center.

Construction on the new $16.2 million facility began in July and is scheduled to last for 18-20 months. Upon its completion in the early spring of 2017, Southern Miss will usher in a new era of marine education along the Mississippi Gulf Coast.