



# COASTAL PROTECTION: RIVERLITE® USED IN MAN-MADE BERM ALONG LOUISIANA COAST

## QUICK FACTS:

### Project:

Biloxi Wildlife Management Area

### Location:

Louisiana Coast

### Notes:

Biloxi shoreline erosion rates have averaged approximately 8 to 9 feet per year. However, since 2004, largely due to hurricanes Katrina, Rita, and Gustav, erosion rates have exceeded 50 feet per year in some localized areas.

Source: Coastal Protection and Restoration Authority



**Oversized geotextile bags filled with Riverlite® are being used to protect the shoreline and restore marshes in the Biloxi Wildlife Management Area, a vital coastal ecosystem that protects the city of New Orleans, Louisiana. The Biloxi Marsh project is located along a 7-mile stretch of the southeastern shoreline of Lake Borgne and the Biloxi Wildlife Management Area.**

“The Biloxi Marsh project is a great example of the use of Riverlite® in geotextile bags to create a berm,” says Jeff Speck, Director of Technical Sales for Trinity Lightweight. “The first phase of this project was estimated to use about 30,000 cubic yards of Riverlite. When this phase was completed, we learned that project used less material than was expected because they had virtually no settlement.”

Marshes surrounding Lake Borgne have sustained significant land loss due to wave induced erosion, with approximately 15,640 acres lost between 1932 and 1990 along the 7-mile project reach. In recent years, some areas of the shoreline have receded up to 50 feet per year, greatly endangering the nearly 40,000-acre Biloxi Wildlife Management Area.

Minimizing shoreline retreat will help to protect a portion of the marshes in the Biloxi Wildlife Management Area, thus helping to save an ecosystem that also serves as a protective barrier for the City of New Orleans and surrounding area against surge and waves during tropical events. "Using these oversized bags containing Riverlite not only prevent further erosion, they also control the wave action so that siltation occurs to rebuild the marsh," notes Speck.

#### SHIPPED BY BARGE

The large geotextile bags are filled with Riverlite® at 234 Terminal located near Baton Rouge, LA. The filled bags are loaded onto barges and shipped to the job site for installation in St. Bernard Parish, Louisiana. These bags are being utilized in more irregular and deeper sections of the shoreline restoration project where all-rock breakwater is less suitable, primarily due to the extremely soft soils. For these areas a lightweight-aggregate core (LWAC) breakwater is being used.

The total estimated cost of this project was estimated at \$22 million. The agency overseeing the restoration, The Coastal Protection and Restoration Authority of Louisiana (CPRA), says the benefit at completion will be up to seven miles of shoreline protected and 300 acres of marsh restored. The marsh acts as a protective barrier for the City of New Orleans and the surrounding area against surge and waves dur-

ing tropical events.

"Biloxi Marsh demonstrates that the design is proven, the results are successful and it is proving to be more economical than anybody thought it would be," says Speck. "The reduction in the amount of settlement reduces the total volume of the material needed to fill the berm and that allows the money to go further."



Trinity Lightweight is the largest producer of rotary kiln expanded shale and clay lightweight aggregate in North America and is a leading supporter of research, independent testing and field studies to improve the manufacturing process and expand the beneficial uses of the product.

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