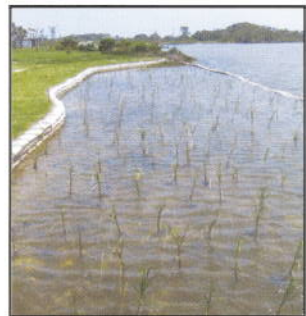


Local Landowners Continue to Initiate Smart Alternatives to Shoreline Protection

By Courtney Miller



In the mid-1990s, Bob Moore started a trend on his Eckert's Bayou property on West Galveston Island. While watching the erosive forces at work on his shoreline, Mr. Moore took the initiative to design a method of shoreline protection for his property that incorporates wetland and oyster reef restoration. His method effectively created valuable and aesthetically-pleasing habitat while protecting his property from erosion. Mr. Moore's wavebreak was, unlike traditional bulkheads or on-shore rip-rap structures, created offshore by stacking bags of Quickrete® in a brick-like pattern and leaving gaps in the outside barrier to allow for adequate ingress and egress of nutrient-rich water and living marine resources. He then planted smooth cordgrass (*Spartina alterniflora*) between the shoreline and the offshore wavebreak. The gaps in the wavebreak enabled the interior marsh to remain flushed and productive. Today, Mr. Moore's innovative wavebreak is an example of the initiative that more and more private landowners are taking to protect their shorelines while restoring valuable wetland habitat to the Galveston Bay system.

Since the 1940s, the Galveston Bay system has lost more than 20% of its marshes. Some areas, such as the bayside of Galveston Island, have been hit even harder with marsh

losses upwards of 80%. Primary reasons for the decline of marshes include erosion, subsidence, and alteration of hydrology. Installing bulkheads and rip-rap directly on shorelines has traditionally been used to help prevent shoreline erosion; however, these methods have not focused on restoring or enhancing the remaining wetlands.

Offshore wavebreak structures, whether constructed out of rock, shell, or quick-set concrete bags, do have the added benefit of wetlands restoration. These structures also cause the sediment-laden waves to drop their sediments landward of the wavebreak. In some places, this process has resulted in the accumulation of enough sediment to create water levels shallow enough to support emergent vegetation without the need for additional fill. Many of the wavebreak structures have become encrusted with oysters, producing additional habitat in the form of artificial reefs.

In an effort to spread Moore's way of thinking, the Galveston Bay Foundation and the U.S. Fish and Wildlife Service have developed a project that aims to assist local landowners in using this alternative method of shoreline protection on their properties by providing both technical and financial assistance. A guideline packet has been developed for landowners,

and additional technical assistance is always available from GBF or USFWS staff at every step of the process. Perhaps most helpful to landowners is the grant from USFWS that allows GBF to cover a significant portion of the landowners' expenses.

Mr. Moore's innovative project started a trend along his Eckert's Bayou neighborhood. By the end of 2002, four of his neighbors had signed up for the program! Today, their shorelines are stabilized and they enjoy a rich, productive marsh ecosystem right outside their back doors. Cumulatively, the four landowners who participated in the USFWS-GBF program have created over 8,000 square feet of wetlands and protected over 500 feet of shoreline. These numbers are about double, as at least three additional private landowners—one more on Eckert's Bayou, one on Dickinson Bayou, and one on Trinity Bay at Double Bayou—have started the process in 2004 and early 2005.

If you are interested in pursuing this type of shoreline protection project on your property or if you have any questions about the landowner assistance project, please contact the Galveston Bay Foundation at 281.332.3381 Ext. 210 or cmiller@galvbay.org.

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