

TROPICAL STORM ISIDORE AND HURRICANE LILI IMPACT: IMPLICATIONS FOR COASTAL RESTORATION

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ABSTRACT

The recognition of Louisiana's catastrophic coastal land loss crisis by the U.S. Congress led to the enactment of the Coastal Wetland Planning, Protection, and Restoration Act (CWPPRA) of 1990, which initiated the largest coastal restoration program in the Gulf of Mexico. Since 1998, CWPPRA has invested more than \$46.9 million for the restoration within the Isles Dernieres and the Timbalier Islands for storm protection and the preservation of estuarine and wetland areas landward of them. These barrier islands restoration projects range from a continuous riprap seawall backed by dredged material, detached breakwaters, constructed high dunes with narrow back barrier marshes, and constructed low dunes with wide back barrier marshes. The design templates of these restoration projects have not been tested by a major storm since construction. Three lessons to be learned from the 2002 hurricane season impacts and the five completed barrier island restoration projects include: 1) armored and restored beaches erode during extreme events, 2) backbarrier marshes form the storm resistant core of transgressive deltaic barrier islands, and 3) lower profile project design templates that allow restored barrier islands during extreme storm events to move faster from a swash regime through the collision regime into the inundation regime appear to be the most storm resistant.