



Island Sea Lab Prepares for Hurricanes

Full Mitigation Best Practice Story

Mobile County, Alabama

Dauphin Island, AL – After being repeatedly assaulted by hurricanes, the Dauphin Island Sea Lab decided to install hurricane shutters. Following Hurricane Ivan in 2004, the shutters were installed as a preventive measure against future hurricane damage. This proved to be a wise decision when three major storms made landfall on Dauphin Island within three months of each other in 2005.



The Sea Lab is located on 36 acres at the eastern end of Dauphin Island, a barrier island approximately three miles from the mainland and 40 miles south of Mobile, Alabama. The Sea Lab spans the island and is therefore surrounded by the Gulf of Mexico, the Mississippi Sound, and Mobile Bay. A bridge connects the island to the mainland.

When Hurricane Katrina made landfall on August 29, 2005, it caused extensive destruction on the island. Nearly 300 homes were destroyed, several businesses were lost, roofs were damaged, bridges were not passable, and power outages lasted for days. However, the sea lab was soon operational, with classes resuming when roads became passable and power was restored after two weeks.

Dauphin Island Sea Lab is a marine science institution with academic and research distinction. Its courses are part of the required curriculum for universities in Alabama that offer a marine science program. A total of 21 schools are members.

The lab installed permanent wind-resistant aluminum shutters on three essential buildings for protection. Although students are evacuated to another campus whenever a hurricane threatens the island, storm shutters are also installed on all dormitories. The shutters protect doors and windows from high winds and flying debris.

The Sea Lab was awarded FEMA Hazard Mitigation Grant Program (HMGP) funds for the hurricane shutters. Following a major disaster declaration, the HMGP funds up to 75 percent of the eligible costs of a project that will reduce or eliminate damages from future natural hazard events. The grant, which totaled \$169,998, was administered by the Alabama Emergency Management Agency.

Storm shutters are a cost effective way to provide buildings with wind and impact protection. Another hurricane mitigation technique used at the Sea Lab is the installation of ply board in windows that are not equipped with permanent shutters. The ply board is manually installed whenever there is the possibility of a storm. The campus also has backup generators in case of power failure.

"It is essential that the school continues to operate after storms. Therefore we make every effort to protect not only our facility but our faculty and students," said David England, Director of the Dauphin Island Sea Lab.

Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region IV**

State: **Alabama**

County: **Mobile County**

City/Community: **Dauphin Island**

Key Activity/Project Information

Sector: **Public**
Hazard Type: **Hurricane/Tropical Storm**
Activity/Project Type: **Retrofitting, Structural**
Structure Type: **Concrete, Reinforced**
Activity/Project Start Date: **03/2005**
Activity/Project End Date: **07/2005**
Funding Source: **Hazard Mitigation Grant Program (HMGP)**
Funding Recipient: **Critical Facility - School**
Application/Project Number: **9999**

Activity/Project Economic Analysis

Cost: **\$226,664.00 (Actual)**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **Unknown**
Value Tested By Disaster? **Yes**
Tested By Federal Disaster #: **No Federal Disaster specified**
Year First Tested: **2005**
Repetitive Loss Property? **No**

Reference URLs

Reference URL 1: **<http://www.fema.gov/government/grant/hmgp/index.shtm>**
Reference URL 2: **<http://ema.alabama.gov/>**

Main Points

- After being repeatedly assaulted by hurricanes, the Dauphin Island Sea Lab decided to install hurricane shutters as a preventive measure against future hurricane damage.
- The sea lab is a marine science institution with academic and research distinction.
- The sea lab was awarded HMGP funds for the hurricane shutters.
- Following Hurricane Katrina (2005), the sea lab was soon operational, with classes resuming when roads became passable and power was restored after two weeks.



Hurricane shutters protect a Sea Lab building.



Plyboard is placed on windows without hurricane shutters.