



Disaster Survival House Brings Message of Preparedness to Community

Full Mitigation Best Practice Story

Broward County, Florida



Deerfield Beach, FL – In 1997, Deerfield Beach became the first community to participate in a FEMA mitigation grant program that encouraged the building of disaster-resistant communities. The City formed a partnership with State Farm Insurance Company to build a fortified house to bring the message of mitigation and disaster safety to local architects, builders, and residents.

State Farm funded construction of the house, which began in 1998. The house was opened to the public in 1999 and the insurance company donated the house to the community in 2004. Since then, Deerfield Beach transformed the house into an educational museum devoted to the science of hurricanes and the realities of mitigation and disaster preparedness.

“When State Farm had it, this was simply a safety demonstration house,” said Jim Mathie, Division Chief for Deerfield Beach’s Fire Rescue and Building Services. “It’s rated to withstand a Category 4 hurricane, and it sustained no damage during [Hurricane Wilma in 2005]. The house was intended to educate building inspectors and contractors on the many different safety features available.”

The more than 100 disaster-resistant features built into the house are demonstrated through cutaway displays, where visitors can view the construction and design techniques and materials that comprise the finished house. After the City took ownership, designers incorporated changes that enhanced the educational value by turning the entire house into an exhibit about hurricanes and aspects of disaster preparedness. Erik Salna, Hazard Mitigation Coordinator at the Disaster Survival House, explained that each room of the house addresses a specific topic. Not only has the house been reconfigured to demonstrate and display examples of mitigation and safety techniques, but it also offers a historical and educational overview of hurricanes and other disasters.

Visitors are greeted in the Welcome Room by artwork, photographs, and news articles that tell Florida’s hurricane history. An audio/visual presentation featuring surround sound and simulated lightning demonstrates the power and scope of storms that have struck Florida over the years.

The bathroom and laundry room demonstrate different fortification techniques, and display messages from the National Safety Council about in-house safety for families. Special attention is given to preventing flood damage and to fire prevention and safety. The bedroom has been converted into what Mr. Salna refers to as the “hurricane laboratory,” where displays explain the science of how, where, and why hurricanes form, and how developing storms are forecasted and tracked.

The wind demonstration area is located in a screened-in porch, where a wind tunnel provided by Florida International University’s Hurricane Research Center demonstrates wind effects on houses using scale models. The models are subjected to simulated hurricane force winds, and students and other visitors can evaluate the effects on different types of construction designs.

The garage area contains a display of various roofing materials designed for strength and damage-resistance, as well as an exhibit on properly reinforced garage doors. There is also a focus on lightning protection, with the reminder that Florida is the lightning capital as well as the hurricane capital of the United States. Finally, generator safety concerns and precautions are presented in this area.

Plans are underway to bring a new feature to the Disaster Survival House. Mr. Salna intends to introduce an Internet-powered, touch-screen kiosk system that will be placed in every room. Radio Frequency Identification software will allow visitors who register at the house to be provided with a personalized, interactive experience as they move from room to room. Upon completion of their tour, visitors will be presented with their own safety plan based on their individual responses to questions asked in each room.

As comprehensive as it is, Deerfield Beach's Disaster Survival House is only one example of the community's efforts to educate residents about disaster preparedness. A 50,000 square foot facility called Hurricane Warning is planned to be built near the Disaster Survival House, on land deeded to the City from the Florida Department of Transportation. Hurricane Warning will be a state-of-the-art educational facility as well as a training center for disaster agencies and emergency personnel from all over the world, and will include a fully interactive hurricane simulator that will make a visitor feel as if they were in the heart of a storm.

"It will look, taste, and smell like a museum," said Mr. Mathie. "But it's not going to be a museum. It's going to be a learning center, because we visualize that people will come and train in this facility under the guidance of the National Safety Council."

Deerfield Beach's Disaster Survival House is a unique and valuable tool for educating the public about hurricanes and other disasters. According to Salna, "It's here for the community, for education. I like to call this place an ambassador. We're bringing the message of preparedness, teaching the history of hurricanes, the science of hurricanes and how to fortify against them. The bottom line is, everybody needs to have a plan. Everybody needs to be prepared."

Activity/Project Location

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

FEMA Region: **Region IV**

State: **Florida**

County: **Broward County**

City/Community: **Deerfield Beach**

Key Activity/Project Information

Sector: **Public**

Hazard Type: **Flooding; Hurricane/Tropical Storm**

Activity/Project Type: **Building Codes; Education/Outreach/Public Awareness**

Structure Type: **Masonry, Reinforced**

Activity/Project Start Date: **01/1998**

Activity/Project End Date: **12/1999**

Funding Source: **Private funds**

Funding Recipient: **Local Government**

Funding Recipient Name: **City of Deerfield Beach**

Activity/Project Economic Analysis

Cost: **Amount Not Available**

Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster? **No**

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/plan/prevent/index.shtm>

Reference URL 2: <http://www.hurricanewarning.org/>

Main Points

- In 1997, Deerfield Beach became the first community to participate in a FEMA mitigation grant program that encouraged the building of disaster-resistant communities.
- The City formed a partnership with State Farm Insurance Company to build a fortified house to bring the message of mitigation and disaster safety to local architects, builders, and residents.
- The more than 100 disaster-resistant features built into the house are demonstrated through cutaway displays.
- The Disaster Survival House is a unique and valuable tool for educating the public about hurricanes and other disasters.



"Hurricane Laboratory."



Disaster Survival House, Deerfield Beach, FL.