



Three Island Homes Pass Hurricane Dolly's Test

Full Mitigation Best Practice Story

Cameron County, Texas

South Padre Island, TX – Richard Ehrlich, a South Padre Island building inspector and builder, knew all too well what Hurricane Dolly could do to the three housing units he had built on this trendy barrier island. He says Dolly was “like blasting your house with a car wash sprayer, for hours and hours.”



Hurricane Dolly came ashore on Padre Island July 23rd in 2008 as a Category 2 hurricane. Winds of 100 to 140 miles per hour lifted roofs, blasted through windows and garage doors, hurled debris, and drove horizontal rain. Most of South Padre Island’s buildings sustained wind and/or water damage, some quite severe.

It was a tough test for the three housing units Ehrlich had built on this island at the bottom of the Texas Gulf Coast. Walking through his houses after the storm, Ehrlich was relieved to find mostly cosmetic damage.

“I was real happy with those houses during Dolly,” Ehrlich said. “We felt quite safe in there. When I build, I’m always thinking, Where are we? On a barrier island, with wind, water, hurricanes....”

Ehrlich built his first island house 12 years ago. “I was a builder in Colorado and had just moved to Padre Island. I was real worried about hurricanes, so I built it as strong as I knew how at the time.” The house was first tested in what he describes as a straight-line wind shear in May of 2000.

“I lost some shingles and replaced the roof at that time,” Ehrlich said. He had secured the trusses above the code requirements and glued the sheathing down to the roof using PL-400 construction adhesive. “Normally [the roof’s] just nailed down. When you glue two pieces of wood together, it’s stronger than the wood. If you tried to pull them apart, the wood will actually separate before the glue gives way,” he added. His 12-year-old unit ended up holding well against the forces of Dolly.

It was in 2007 that Ehrlich decided to build a new house for himself and his wife – a 2-unit, 2-story townhouse next door to the first one he had built. By that time, he had become a building inspector, helping others build safe houses, and South Padre Island had adopted the 2006 International Building and Residential Codes. Ehrlich incorporated what he learned into building the new house. He included hazard-mitigation practices such as choosing a location on the island with a lower flood risk; elevating the structure; fortifying the concrete masonry unit (CMU) walls with steel rebar; adding fasteners to attach the roof to the walls; and using impact-resistant windows and doors.

Nonetheless, his home suffered some damage from Hurricane Dolly. Rain blew in through a light fixture and a crack in an exterior soffit. Water flooded the concrete kitchen floor but only required a mop to clean it up. “The wind blew so hard, it actually cracked a concrete fence post at the base,” he said. “It also blew 80 feet off my roof ridge cap, but the roof held.”

Ehrlich would categorize those damages as cosmetic. Structurally, the house held together well, and most of the wind and rain stayed where he wanted it – outside. Across the street, he said, another house, without some of the hazard-mitigation practices in place, suffered heavy damage. Ehrlich said it didn’t have impact-resistant doors and windows. The French doors blew open, and the wind and rain blew inside. Overall, the house suffered extensive damage.

Ehrlich works as a public official on South Padre Island, carrying out his personal commitment to help people build in more safe and secure ways. For him, Ehrlich sees hazard mitigation as good business.

“I think it’s just smart to take the time and trouble to build in ways that will hold up to the weather, especially here on the island. I believe I’ll get [the financial investment] back whenever I sell,” said Ehrlich. “When you get right down to it, it’s just a good investment.”

Activity/Project Location

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

FEMA Region: **Region VI**

State: **Texas**

County: **Cameron County**

City/Community: **South Padre Island**

Key Activity/Project Information

Sector: **Private**

Hazard Type: **Hurricane/Tropical Storm**

Activity/Project Type: **Building Codes**

Structure Type: **Concrete, Reinforced**

Activity/Project Start Date: **01/1996**

Activity/Project End Date: **01/2007**

Funding Source: **Homeowner**

Activity/Project Economic Analysis

Cost: **Amount Not Available**

Non FEMA Cost: **0**

Activity/Project Disaster Information

Mitigation Resulted From Federal
Disaster? **No**

Value Tested By Disaster? **Yes**

Tested By Federal Disaster #: **1780 , 07/24/2008**

Repetitive Loss Property? **Unknown**

Reference URLs

Reference URL 1: **<http://FLASH.org>**

Main Points

No Main Points were entered.

Main Points



Ehrlich's hurricane-tested home



Dolly blasted paint off of South Padre's water tower



Ehrlich braced his garage door against big winds



Dolly damaged many South Padre buildings, some severely