


BestWire - 08/18/2004 05:13 pm

BestWire[®] Services

Preliminary Review of Charley's Damage Shows New Construction Codes Paying Off

 [Print this article](#)

TALLAHASSEE, Fla. August 18 (BestWire) — As wind experts pick through homes shattered by Hurricane Charley, they're finding that those built after new construction codes were put into place sustained less structural damage than older homes.

Among the biggest lessons Florida learned after Hurricane Andrew hit the state in 1992 was that houses hadn't been built to hold up to the intense winds a hurricane could bring. Not only were state construction codes below what they should have been, some builders weren't even following them, said Leslie Chapman-Henderson, president and chief executive officer of the Federal Alliance for Safe Homes.

Soon after Andrew, Florida improved its construction codes and tightened enforcement of them. The standard was statewide, but it was geared toward the wind risk in certain geographical areas, said Timothy Reinhold, vice president of engineering for the Institute of Business & Homes Safety. For example, because Miami-Dade County has a risk of getting hit by winds of 140 to 145 mph, it has the strictest standards. Other areas of the state with a lower risk of wind have lower standards.

Now that Hurricane Charley has struck with estimated winds nearly as strong as Andrew's, the results of the revised construction codes are "pretty dramatic," Reinhold said after touring the worst of the hurricane's destruction in Port Charlotte, Punta Gorda, Pine Island and Arcadia. The more recent homes built under the new codes may have lost clay tiles that caused damage to other homes, and their double doors may have failed, but very few had structural damage, he said.

Construction codes definitely reduced insured losses from this hurricane, he said. "Buildings on a whole stood up pretty well, particularly the newer ones," he said. Even mobile home parks built after the high-wind standards took effect in 1994 fared well through the storm, he said. But there is still a fairly small fraction of mobile homes built under the new standards, he said.

Among total housing in Florida, only about 2% to 4% is new construction, Chapman-Henderson said. "We still have a whole 96% to 98% of the housing stock to address," she said.

When Reinhold viewed coastal areas and compared damage among similar single-family homes, he found older homes with an entire end blown off near newer homes that remained intact with some broken windows. However, the home's orientation and alignment relative to the winds also impacts how it withstands a storm, he said.

Another factor was whether or not homes had been shuttered. And although it was obvious that some homes hadn't been shuttered very well, Reinhold said he didn't see a single broken sliding glass door.

One "weak link" he noticed among newer homes were pool cages, or screen enclosures that cover residents' pools. They crumpled and sometimes flew and damaged homes around them. Standards for the cages are just taking effect, which would beef up their safety in the event of another hurricane, Reinhold said.

In addition to the standard codes, homeowners also have choices to make their homes even safer, such as installing impact-resistant windows, Chapman-Henderson said. Based on initial reviews of the damage, homeowners who took advantage of new and improved building codes are benefiting, she said.

According to Chapman-Henderson, some of the new construction techniques used after Andrew to make homes safer include these:

— Using balloon-framed walls with a frame that extended from the ground up to the house's full height. Before Andrew, the construction of gable-end walls included a blunt wall that, when hit by high winds, would allow wind inside the house and lead to its collapse, Chapman-Henderson said. "We lost so many thousands of homes that way from Andrew," she said.

— Laying a secondary water barrier of rubberized duct tape, also called Peel & Seal tape, on a roof deck. The strips of tape cover up joints in the roof and keep water from raining into the house when roof shingles are lost during a storm. A homeowner "could be looking at a partial structural claim instead of the total loss of a home," she said.

— Choosing plywood instead of oriented strand board when building a roof. Plywood maintains its integrity after becoming wet, Chapman-Henderson said, while oriented strand board expands when wet and never shrinks back to its original size. As a result, it causes the nails that are holding it in place to pull out.

Depending on the safety standards used, a safer house will cost only about 0.5% to 3.5% more than a house without these features, Chapman-Henderson said.

The changes could help keep the market steady in the months and years after Hurricane Charley. "We're hopeful that it will be that way," Reinhold said. "It's a bit too early to tell how things will come out."

Hurricane Andrew, which hit the state on Aug. 24, 1992, killed 43 people and destroyed or damaged more than 86,000 homes, 10,500 mobile homes and more than 38,600 apartments and condominiums, ultimately adding up to about \$16 billion in insured losses (Best's Review, June 2002). About 10 insurers became insolvent after Andrew, and several national insurers exited or reduced their Florida-based business.

In the book "Andrew's Legacy: The Winds of Change," author Bill Bailey quoted a claims manager who said Dade County's failure to enforce building codes probably cost the industry 25% to 40% more in settlements than necessary. Because many homeowners had guaranteed replacement cost provisions in their policies, even though they were insured for less than their replacement costs, insurers faced repair estimates that were more than \$100,000 over the customer's policy limits, Bailey wrote.

As a result, homeowners faced huge increases in premiums. In one example, a condominium complex had a property with a \$33 million coverage limit and paid only \$33,000 a year for the policy. After Andrew, the insurance company failed and the owner was quoted \$320,000 a year by another company, Bailey wrote.

Some news reports have been highlighting Hurricane Charley's wrath on Captiva and Sanibel islands, which are connected by a bridge. Charley cut a swath through Captiva and split the island in two — this after the Great Hurricane of 1921 had already cut Captiva Island off from Sanibel, according to the Miami Herald. Another article in the St. Petersburg Times reported that some houses on Sanibel Island had little structural damage, noting that the island had strict building codes and expensive, large homes that were put together well.

Authorities wouldn't allow Reinhold onto Sanibel Island during the early week of Aug. 16, but he said the winds that swept across the island weren't as strong as the winds in other areas, such as Punta Gorda. "It was a very narrow, very tight storm," he said. It was too early to tell whether the building codes on the island kept the damage to a minimum or whether it was because the storm wasn't as strong in that area.

In fact, Reinhold thought estimates of Charley's intensity might be revised. Sustained wind speeds were estimated to be in the 140s, but may have actually been in the 120s or slightly lower, he said. Also, the original estimate that insured losses may be in the \$5 to \$7 billion range may also be revised down, based on the damage he saw and through conversations with adjusters, he said.

The industry also will have to wait longer to see how fortified homes — hurricane-proof homes built as models with property-loss reduction in mind, such as one built by State Farm — will fare in a hurricane such as Charley. "None of them went through the intense part of the storm," Reinhold said. "But I think they certainly would have done well because of what we saw under the new codes. They would have come through with absolute flying colors."

In 2003, the top five writers of homeowners multiperil in Florida, according to A.M. Best Co. state/line data and based on direct premiums written, were: State Farm Group, with a 23.7% market share; Allstate Insurance Group, with 11.5%; USAA Group, with 5.3%; Nationwide Group, with 5.1%; and HDI U.S. Group, with 4.3%.

(By Marie Suszynski, associate editor, BestWeek: Marie.Suszynski@ambest.com) BN-NJ-08-18-2004
1712 ET #

Additional Services

Article Reprints - Order a reprint or request permission to post the article on your intranet.

BestDay - Start your day with a roundup of the latest insurance news through our daily online news publication. BestDay compiles the top stories of the past 24 hours and summarizes them in one convenient spot.

Got News? - [Tell us about it](#)

Copyright © 2004 by A.M. Best Company, Inc. ALL RIGHTS RESERVED

No part of this report may be distributed in any electronic form or by any means, or stored in a database or retrieval system, without the prior written permission of the A.M. Best Company. Refer to our [terms of use](#) for additional details.