

# Hurricane Irma is a test for Florida's building standards

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by [Randy Bright](#)

One of the news videos I clearly remember from the aftermath of Hurricane Harvey in Houston was that of two homes, neither of which had been flooded, but one was completely intact and just a few feet away, the other was completely demolished.

We are used to seeing images like that in Oklahoma after a tornado has occurred. The concentrated wind of a tornado is capable of surgically slicing through a neighborhood, destroying homes in its path, but leaving surrounding homes with little damage.

My thought about the two homes in Houston was that one had likely been built to withstand a hurricane and the other one had not.

At the moment that I write this article, Hurricane Irma is a category 4 after plowing through the Florida Keys and is about 65 miles southwest of Naples. The projected path is that it will continue to head north until it hits the Naples and Fort Myers areas, after which it will head up to make a direct hit on Tampa as a Category 3.

Irma is so large that it is anticipated that the entire state, except the Panhandle, will be under a hurricane warning and will experience hurricane force winds. Storm surges of 5-15 feet are projected for most of the coastlines of Florida.

Tampa has not experienced a major hurricane since 1921. At that time, it had not been hit by a major hurricane since 1848. Known as the Tampa Bay Hurricane of 1921, or as the 1921 Tarpon Springs Hurricane, it struck in late October as the fifth hurricane of the season. It peaked as a Category 4 with sustained winds of 140 mph. Unlike Irma, it swept up from the Yucatan Channel, traveled north through the Gulf of Mexico, then made landfall near Tarpon Springs. It then proceeded eastward across the state into the Atlantic.

Despite Florida's long history of hurricanes and tropical storms, it was not until Hurricane Andrew struck southern Florida in 1992 that state authorities determined that their building codes needed to be changed. Andrew was a Category 5 that first struck the Bahamas, then made its way through Homestead, Florida, and finally impacting Louisiana. Andrew, with its 165 mph winds, caused severe damage in southern Florida.

At that time, Florida did not have a uniform building code that addressed residential construction. After realizing that a good part of the destruction could have been avoided, Andrew made it clear that a code was needed to make homes more resistant to hurricane-force winds.

This, of course, has increased the cost of home construction. Ironically, legislators have been considering relaxing some of the code, something that is not so likely to happen in the wake of

Irma, especially if there are side-by-side examples of homes built or not built to code to exemplify the value of the code.

Those of you who have followed my column over the years will know that I am not a big fan of zoning codes, but building codes are another matter. Building codes are not politically charged like zoning codes are, and they are intended to keep occupants safe. In hurricane-prone areas like Florida, it is important to keep buildings intact not only to give people a safe place to weather a storm, but also to prevent parts and pieces from blowing free and becoming airborne missiles that can injure or kill.

Constructing buildings to meet the hurricane resistance prescribed in the code is more expensive, but is not that difficult to do once builders understand how to do it. It essentially means that, through the use or reinforcements, steel clips, metal straps, anchor bolts and framing techniques, every part of the building is anchored to the foundation. Most homes in Oklahoma have not been constructed like this, but several years ago I began specifying these techniques.

Building codes can do little about the floods that normally occur with hurricanes. Flooding can occur just about anywhere, so if you only constructed buildings where they would not flood, you would never build anything. However, it is relatively easy to identify areas that are likely to flood.

While I am not an advocate of telling someone that they are not going to be allowed to build in such an area, I do believe it should be made clear that relief from flood damage should never come at taxpayer expense. Personal or corporate responsibility will exert a great deal of influence on location decisions when there is no government safety net to cover bad or risky decisions.

Having several relatives that live in Florida, and being a licensed architect there, Irma has certainly captured my attention. Regardless of what the eventual impact of the storm will be, it will serve as a laboratory for the effectiveness of the building codes.



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