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# If Ike was just a 2, how accurate is storm scale?

Hurricane center chief says storm scale has become outmoded

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Eric Kayne Chronicle

In this photo taken just after the storm, debris blocks Interstate 45. Ike was a Category 2 storm on the Saffir-Simpson scale.

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#### SAFFIR-SIMPSON SCALE

Here's a reminder of what the age-old Saffir-Simpson scale means.

- Category 1: Winds 74-95 mph. Damage primarily to unanchored mobile homes, trees, poorly constructed signs. Example: Hurricane Claudette, Port O'Connor, 2003.
Category 2: Winds 96-110 mph. Damage to roofs and windows. Example: Hurricane Ike, Galveston, 2008.
Category 3: Winds 111-130 mph. Some damage to structures and large trees blown down. Example: Hurricane Alicia, Galveston, 1983.
Category 4: Winds 131-155 mph. Damage to structures with complete roof failures and destruction of mobile homes. Example: Hurricane Carla, Port O'Connor, 1961.

AUSTIN — For this year's tropics season, the National Hurricane Center won't abandon the venerable Saffir-Simpson scale, which rates hurricanes on a familiar scale, from Category 1 to Category 5.

But the center's director says any single index cannot begin to capture the local impact of a hurricane, a fact Hurricane Ike — only a Category 2 storm on the Saffir-Simpson scale — made stark to residents of the upper Texas coast.

"If I could wave a wand and make it go away, I would," said Bill Read, at the National Hurricane Conference in Austin on Friday. "It made sense in the era it was conceived, four decades ago, and now it's ingrained in the culture."

Attendees at the hurricane center have buzzed about the Saffir-Simpson scale's inadequacies.

KHOU-TV's chief meteorologist Gene Norman said it needs to be modified to better account for surge.

Greg Bostwick, a meteorologist at KFDM-TV in Beaumont, said his viewers couldn't believe how "only" a Category 2 storm striking 90 miles away could flood one-third of Orange County.

Some hurricane scientists, such as Mark Powell of the National Oceanic and Atmospheric Administration's Hurricane Research Division, have been arguing in recent months to replace the Saffir-Simpson scale entirely.

Powell said the scale is especially deceptive when it comes to storm surges, and when you review the data there's simply no correlation between the category of a hurricane and the amount of land it inundates.

Developed in the late 1960s and early 1970s by civil engineer Herbert Saffir and Robert Simpson, then-director of the National Hurricane Center, the Saffir-Simpson scale is simple and has gained wide public acceptance.

#### Surge, rainfall

Based upon maximum sustained winds, the scale ranges from Category 1, the weakest hurricane classification, to the fearsome and rare Category 5, with winds greater than 155 mph.

But the scale fails to take a host of factors into account — such as physical size and rainfall potential — that are critical to determining whether a particular storm will have a large surge or cause inland flooding, like Houston experienced during Tropical Storm Allison in 2001.

"The scale provides a very concise way of expressing risk, and it influences people's decisions," Powell said.

But unfortunately, he added, it often doesn't do a good job of accurately expressing that risk.

#### Public familiarity

Yet because the public understands the scale, Read said his efforts to formally move away from Saffir-Simpson in the hurricane center's published warnings for 2009 were

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unsuccessful.

Read said his goal is, through increasing use of technology, to provide better information on the local impacts of a storm.

Instead of talking about a Category 2 storm surge, for example, he said the hurricane center wants to accurately predict the real storm surge .

"People may not really understand what a simple number means on the Saffir-Simpson scale, but they would understand what 10 feet means," Read said.

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