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## INSURANCE

# State hurricane model hits Wilma losses within 2%

The estimate from the state's public hurricane computer model for Hurricane Wilma losses came very close to the actual residential losses.

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A state-financed public hurricane model used by the Office of Insurance Regulation to estimate storm losses came close to actual losses from Hurricane Wilma than many private hurricane models.

The computer model can help gauge hurricane damage and insured losses for state officials and consumers. Its estimate of losses from Hurricane Wilma -- \$7.04 billion -- was within 2 percent of the actual \$6.9 billion in residential losses from the storm.

Total insured losses from the storm are close to \$10 billion, including auto and commercial property damage.

Private models provided estimates ranging from \$2 billion to \$12 billion last October. Insurers often use these private models to estimate future losses and form the basis of their rate increase petitions to regulators.

"We were happy to see the [public model] was calibrated so closely" to actual losses, said David Foy, chief of staff for the state's Office of Insurance Regulation. The model's estimate was delivered to the state Legislature last November.

A hurricane model is a series of assumptions based on tens of thousands of pieces of data: wind speeds, housing stock, terrain, tree cover, value of insured property, storm-mitigation efforts, building codes, population density and so on. It takes a fair amount of science and computer power to mold all these variables into plausible scenarios and test their probabilities.

This public hurricane model, completed last summer by a team of researchers, meteorologists, actuaries and computer specialists led by Florida International University, estimates storm damage to residential property throughout the state and can assess risk and potential losses right down to a ZIP Code. The model, the first developed by a state, cost \$2.7 million to build.

For now, OIR is using the public model to test rate requests from insurers for homeowners policies.

Insurance regulators are asking lawmakers for money to expand the model to include data on commercial and residential buildings such as condo buildings and apartments. Foy said it will take two years to add the data and test the revised model, if OIR gets the funding.

There are several private hurricane models that insurance companies can use to test their own forecasts of damage based on their own past losses and future expectations.

But these models don't reveal the data or the assumptions used to crunch the numbers.

The insurance reform bill passed last year precludes insurance companies basing rate hike requests on private hurricane models unless they disclose the data used. Insurers have been unwilling to do that, said Foy.

Sam Miller with the Florida Insurance Council, an industry trade group, said the public model should be vetted by the Florida Commission on Hurricane Loss Projection Methodology, which is required to review the private models insurers use.