



# Houses Built Under FEMA Guidelines Suffer More Damage

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Houses that are built according to FEMA guidelines suffer more property damage during hurricanes than homes built prior to the guidelines, write Carolyn Dehring, professor at the University of Georgia Terry College of Business, and Martin Halek, senior lecturer at the University of Wisconsin's School of Business, for the Cato Institute.

The National Flood Insurance Program (NFIP) provides flood insurance to homeowners in communities participating in the program. Those communities are required to adopt the NFIP building code, which uses minimum building standards established by the Federal Emergency Management Agency (FEMA).

Dehring and Halek examined the effect of hurricanes on barrier island property in Lee County, Florida. Lee County joined NFIP in 1984, at which point new buildings became subject to the FEMA guidelines. In 2004, Hurricane Charley made landfall in Lee County. The authors examined 264 residential properties, 233 of which incurred damage as a result of the hurricane. The report looked specifically at "A-Zones" -- areas subject to rising flood waters.

The study found that buildings in the A-Zone constructed after the NFIP code was implemented were much more likely to sustain damage, and have a greater extent of damage, than other structures in the area built prior to the NFIP code. Of buildings that were damaged, buildings constructed post-NFIP incurred 57 percent more damages than similarly situated property.

Why was damage in the A-Zone worse? Of the properties analyzed, 63 saw a reduction in the minimum required elevation of between one and four feet. The data indicates that decreasing elevation by 1 foot increases damage by 1.267 percent.

NFIP has paid \$3.7 billion in losses in Florida alone since 1978.