



FEMA

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# Disaster News

## RIGHT TIME TO REBUILD SAFER, STRONGER

**LITTLE ROCK, Ark.** — Rebuilding in the aftermath of the early May storms is not only about recovering from disaster, it's also about reducing future risks caused by high winds or tornadoes.

“It's the right time for residents and business owners to use techniques to rebuild safer and stronger to reduce the risks of future disaster,” said State Coordinating Officer Richard Griffin of the Arkansas Department of Emergency Management (ADEM).

State and Federal Emergency Management Agency (FEMA) officials offer tips to rebuild a better, safer way. The roof is the part of the house that is most vulnerable to damage from high winds. “Make the right decision about the roof,” Griffin said.

“Always contact a local building official before undertaking rebuilding, renovating or retrofitting to be sure your plans meet local and state government requirements,” Griffin added. “Building codes typically do not require construction practices such as those described here, but a ‘code plus’ approach is well worth the effort.”

Experts say it should be a hip roof as opposed to a gable roof. With a gable roof, the wind hits harder on the corners. Studies have shown the wind slides over a hip roof. It's like a dome; there is nothing for wind to get its teeth into. Also, the less overhang for the roof, the better.

Whether with new construction or retrofitting an existing roof, build to ensure the connections between the roof and walls are strong enough to resist the "uplift" effect of high winds.

In such winds, the windows and doors often blow out first. Once the windows and doors are gone, the wind puts pressure on the roof from below and the wind also pulls on the top, so there is double pressure on the roof. When the roof lifts off it may collapse back down on the house.

What about the advice to “equalize the pressure” by opening windows and doors when there is a tornado?

“That's wrong,” said Federal Coordinating Officer Ken Riley of FEMA. “Don't open the doors and windows. It only gives the wind additional entry into the house.”

Shutters or plywood covers can protect windows from breaking when there is advance notice of a wind storm event. Wooden doors are simply not designed to withstand much of a wind load. Heavier metal doors with several bolts are much more wind resistant.

Garage doors are another vulnerable area. With a weak garage door, a severe wind blows in the door. Wind pressure then lifts the garage roof which is hinged to the house. The garage roof pulls off part of the house, lets the wind into the attic, puts pressure on the house roof, which may then lift off.

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“Retrofitting older garage doors helps increase a home's storm resistance but new garage doors are stronger and reinforced,” Riley said.

Building with 2-by-6 wall studs rather than the more common 2-by-4 timber is another way to make a structure more wind resistant.

Getting down to the foundation, many homes are built on concrete pads to which they are only slightly connected. Severe winds pull the walls right out of the foundation. To resist high winds, structures must be firmly connected to foundations. Bolts set deep into concrete foundations and topped with a washer and nut should be used to screw the structure to the foundation.

For personal safety, a safe room provides protection.

“It's very economical to construct a safe room while building or rebuilding,” said Riley.

More information is available at [www.fema.gov/plan/prevent/howto/index.shtm#5](http://www.fema.gov/plan/prevent/howto/index.shtm#5)

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*The Arkansas Department of Emergency Management (ADEM) is the state's homeland security and emergency management agency. The agency works to identify and lessen the effects of emergencies, disasters and threats to Arkansas by developing effective prevention, preparedness, mitigation, response and recovery actions for all disasters and emergencies.*

*FEMA coordinates the Federal government's role in preparing for, preventing, mitigating the effects of, responding to, and recovering from all domestic disasters, whether natural or man-made, including acts of terrorism.*

*SBA is the federal government's primary source of money for the long-term rebuilding of disaster-damaged private property. SBA helps homeowners, renters, businesses of all sizes, and private non-profit organizations fund repairs or rebuilding efforts, and cover the cost of replacing lost or disaster-damaged personal property. These disaster loans cover uninsured and uncompensated losses and do not duplicate benefits of other agencies or organizations.*

Editors: For more information on Arkansas disaster recovery, visit [www.fema.gov](http://www.fema.gov) or <http://www.adem.arkansas.gov/>.

*Disaster recovery assistance is available to any individual without regard to race, color, sex, religion, national origin, age, disability, English proficiency or economic status.*