

# Disaster Information Series



## Determining Structural Damage and Preparing for Repairs After a Storm

Now that calm has returned after the storm, it's time to assess the damage and begin repairs. A number of factors should be considered, and the following information may be helpful.

### Damage to Structures

Hurricane damage to structures in many cases is obvious. However, it's the damage that is not clearly seen that may cause problems.

Look for wood structural members that are cracked, and remember that these can be hard to detect. Structural bracing may not be secured as tightly as originally.

If doors or windows do not open as they did before the storm, this may indicate that the structure has shifted. In case of severe shifting, water lines, gas lines and electrical circuits may have been damaged.

If wetness occurred because of leaking roofs, look for wet electrical circuits, wet insulation and other water damage to the interior of the structure. Once insulation becomes wet in a wall or attic, it must be replaced. Wall insulation that is sealed within the structure will not dry out.

Structures that use a roof truss system should be carefully inspected. In many cases, truss systems are constructed of 2 X 4s and metal fasteners. Any

crack or break in the truss will greatly affect the strength of the truss system.

### Checking your Home for Structural Damage

Winds and water may cause structural damage to homes and buildings. Here are some steps homeowners can take to determine whether structural damage has occurred.

Check roofs. The roof is a very good indicator of the presence of structural damage. Look at the ridge of the roof, and assess whether it is straight. This can be viewed from a distance better than close up. If the ridge sags either on the end or in the middle, the load-bearing walls have shifted.

Check the walls to verify that they are vertical and straight. This normally can be done by eye or with a carpenter's level.

Also check where the structure meets the foundation. If the house is on piers, look at the individual piers and see that they remain in place and level. Whether it is on a slab or on piers, check to see that the building has not shifted on its foundation. Flooded wooden floors, if they do not buckle, will sometimes push walls outward at the base.

It also is advisable to check for cracks in masonry exteriors of the building. Look near the corners of the structures and under and around doors and windows of the facility for masonry cracks.

If any of these indicators of structural damage are observed, it is advisable to call a building contractor, architect or engineer. A professional needs to further assess the building for its safety and determine the required repairs. These indicators also should be pointed out to the insurance adjusters.

### Options - Restoration or Removal

Damaged structures can range from homes to equipment storage buildings to barns and other outbuildings. Care and consideration should be given to their restoration. Appropriate measures vary with the type, age and condition of the structure. Often, the structure should be removed rather than rebuilt.

In some communities repair of damaged buildings may require a building permit. Even in communities without general permitting, permits may be required in special flood hazard areas. Check with your local building official or permit office before beginning or contracting for repairs.

The structural integrity of the building should be assessed, and if the decision is made to repair, additional bracing may be required before repairs begin. The American Red Cross publication "Against the Wind" details simple methods of strengthening buildings to withstand high winds.

There are also a number of ways to repair homes so they will be less susceptible to flood damage. These include elevation of utility systems and appliances, as well as the use of flood-resistant materials at levels in the structure which are likely to flood. There are flood resistant materials for flooring, walls, wall coverings and insulation. There are also materials for sealing the building itself, when floodwaters do not exceed 30 inches.

For more information, contact your local Cooperative Extension Service office, listed under local government in the telephone directory.

### Disaster Safety Facts

1. More injuries occur in the recovery process than during the disaster.
2. Electrical safety is important after a disaster.
3. Slippery surfaces cause falls and injuries.
4. Be sure the water is safe before you drink it.
5. Snakes and vermin are often prevalent after floods and hurricanes.
6. Gas leaks can cause explosions after disasters.
7. Stress levels are often high after disasters. Learn how to deal with stress.
8. Consider all foods that have been in contact with flood water as contaminated.

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Authors: Dr. Fred E. (Gene) Baker, Division Leader, Environmental Programs  
Pat Skinner, Extension Associate, Environmental Programs

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Louisiana State University Agricultural Center, H. Rouse Caffey, Chancellor  
Louisiana Cooperative Extension Service, Jack L. Bagent, Vice Chancellor and Director

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