

Assessing Structural Damage

- ◆ Look carefully for damage. Sometimes storm damage to a structure is not obvious.

Before you enter

- ◆ Turn off outside gas lines at the meter or tank.
- ◆ If you turn off the gas, a professional must turn it back on.
- ◆ Even if the power is out in your area, disconnect the fuses, main switch, or circuit breakers at your home, and disconnect all circuits.
- ◆ If water is present, call an electrician; do not try to turn off the power yourself.
- ◆ If the main disconnect is inside, contact the utility company for help.
- ◆ If no water is present, follow safe procedures to turn off the power or have a professional do it.
- ◆ Let the home air out to remove gas and odors.
- ◆ Do not turn the power back on until you know it is safe to do so.

Exterior

- ◆ Look for:
 - Bulges
 - Sways
 - Leaning walls
 - Leaning roof lines
 - Broken glass
 - Downed power lines
- ◆ Check that the structural bracing is secured as tightly as it was originally.
- ◆ If the doors or windows do not open as they did before the storm, the structure may have shifted. There may be damage to gas lines, water lines, and electrical circuits.
- ◆ **Wooden buildings:** Look for parts that are cracked. These can be hard to detect.
- ◆ **Brick buildings:** Check for cracks in the masonry, especially near the corners and under and around doors and windows. If you are not sure that the building is safe, or if you see any indication of structural damage,

call a building contractor, housing inspector, structural engineer, or architect to assess the building.

- ◆ Check for sewage and water line damage:
 - If the sewage lines may be damaged, call a plumber, and do not use the toilets.
 - If the water pipes are damaged, contact the water company, and do not use tap water.

Roof

- ◆ If possible, look at the roof from a distance. The ridge should be straight.
- ◆ If the ridge sags on an end or in the middle, the load-bearing walls have shifted.
- ◆ Look for missing or damaged shingles and loose nails.
- ◆ Check for potential leaks that could indicate structural separation. This is done more easily when it's sunny.

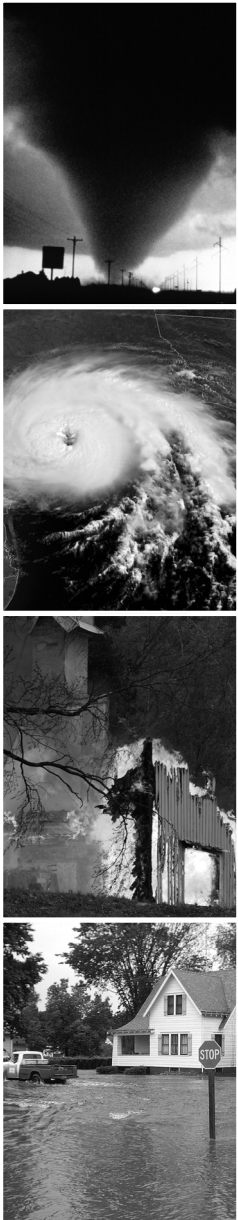
Foundation

- ◆ Check to see that the building has not shifted on its foundation.
- ◆ Make sure the foundation joints have not separated from the wall.
- ◆ If the house is on piers, look at each pier to make sure it is in place and level.
- ◆ For stone or concrete foundations, make sure the plate bolts are not loose.

Inside

- ◆ If you are sure the building is safe to enter and the utilities are off, enter cautiously.
- ◆ Do not use a flame as a light source.
- ◆ Do not smoke.
- ◆ **Check for gas leaks:**
 - If you smell gas or hear a blowing or hissing noise, open a window and quickly leave the building.
 - Check the outside main gas valve again and turn off the gas if you can. Call the gas company from a neighbor's home.

continued



Assessing Structural Damage continued

- If you turn off the gas, a professional must turn it back on.
- ◆ **Look for electrical system damage:**
 - Do not step in water or damp areas to get to the fuse box or circuit breaker; call an electrician for advice.
 - If you see sparks or broken or frayed wires, or if you smell hot insulation, check the main fuse box or circuit breaker again, and turn off the electricity.
- ◆ Unplug all appliances that have been flooded.
- ◆ Check for wet insulation. If the insulation in a wall or attic is wet, it must be replaced. It will not dry out because it is sealed within the structure.
- ◆ **In the attic, use a good light to help you:**
 - Inspect the roof bracing. Roofs often have truss systems made of 2x4s and metal fasteners. Examine the truss for cracks or breaks.
 - Check that the roof plywood is attached securely to the truss system and that the nails or staples have not separated from the truss.

- Look for sagging ceilings, wet insulation, and pockets of water that can cause ceilings or walls to fall.
- Check the framing for ridge separation, loose knee braces, and loose rafters where the rafters join the walls.

Walls

- ◆ Make sure the walls are vertical and straight. You can usually do this by eye or with a carpenter's level.

Options

- ◆ Sometimes a structure should be removed rather than rebuilt.
- ◆ If you decide to repair the structure, it may need additional bracing before repairs begin.
- ◆ Before beginning or contracting for repairs, check with a local building official or permit office. You may need a permit to repair damaged buildings.