
Homeowners are at Risk: *Tips for Protecting Homes from Flooding* FEMA Regulations and Louisiana Building Codes in Plain English

What Owners Should Know About Protecting EXISTING HOMES from Flooding

Homeowners who live in flood prone areas should be aware of flood damage mitigation measures set by the Federal Government, the State, and their Parish or City. These measures are required for new homes. **However, these same measures can also be applied to protect existing homes and to enable owners to obtain the lowest available rates for flood insurance.** These measures are used for all buildings on a property, including homes, attached garages, out buildings, and enclosures beneath elevated homes.

Check with your community's building permit office for specific requirements for new construction, major repairs, and modifications to existing buildings. Most of the suggestions listed below, plus some additional requirements, will be required for new buildings. **The State of Louisiana now requires that new construction meets the flood and wind requirements of the International Residential Code.** See the next page for NEW HOMES.

What is your flood zone? Most flood zones are called "A Zones" – some flood zones at the shore are "V Zones." V Zones are where waves with high velocities occur and buildings need to be built to account for the forces of breaking waves. To find out your flood zone check your Elevation Certificate, call your homeowner's insurance agent, check online at <http://msc.fema.gov>, or stop by your local permit office. Be sure to find out the "Base Flood Elevation", too. The BFE is how high the water is expected to rise in the "100-year" flood (this flood has a 1 in 100 chance of happening every year – it does NOT mean it will happen only once every 100 years). After Katrina and Rita, we now know that floodwaters do rise higher than the BFE.

For existing buildings, consider taking the following steps to reduce your future flood damage and to get the best rates for flood insurance. Check with your insurance agent to find out your savings if you protect your home in this way. Areas below the BFE that are modified like this are called "enclosures" by FEMA and insurance agents.

- Change how you use enclosures that are flood-prone** – use them only for parking, storage or access to the elevated living areas. You'll get the best flood insurance rates if all habitable spaces are above the BFE (this is a requirement for new construction).
- Remove all materials in enclosures that can be damaged by water**, including gypsum board, wood flooring and paneling, insulation and other materials. Leave the enclosure unfinished or replace with water-resistant materials that can be easily dried out and cleaned.
- Move utilities and equipment such as heat pumps, furnaces, electric panels, plumbing fixtures, and appliances** out of flood-prone enclosures to higher floors. You may need to build a small addition to create space on the elevated floor.
- Enclosures in A Zones must have flood openings in the surrounding walls.** Openings allow floodwater to flow in and out so that water pressure doesn't damage the foundation. Flood openings must meet the following requirements:
 1. They must operate automatically and without human intervention.
 2. There must be at least two openings on different walls.
 3. The bottom of the openings must be no more than 12 inches above the adjacent ground level.
 4. Flood openings must be sized to provide relief from the pressure of rising and falling floodwaters. The proper size of the openings is determined in one of two ways:
 - a. The total net open area provided by the flood openings must be 1 square inch for each square foot of enclosed space (for example, if your enclosure is 25' x 30', you have 750 sq ft and your flood openings must have at least 750 sq in of permanently open area), or
 - b. Be certified by a professional to provide flood relief for a specific amount of enclosed area (you may need fewer certified openings).
- Enclosures in V Zones must have walls designed to break away** so that the forces of breaking waves and water are less likely to damage to the foundation that holds up the building. Designs for breakaway walls are to be certified by an architect or engineer. Flood openings are not required in VE Zones, but some homeowners use them to prevent premature failure of breakaway walls because Federal flood insurance does not pay to replace breakaway walls.

What Owners Should Know About Protecting NEW HOMES from Flooding

Homeowners who are building or rebuilding homes in flood prone areas should be aware of flood damage mitigation measures set by the Federal Government, the State, and their Parish or City. **These measures are required for new homes and all other buildings on a property, including attached garages and other out buildings.**

What is your flood zone? Most flood zones are called “A Zones” – some flood zones at the shore are “V Zones.” V Zones are where waves with high velocities occur and buildings need to be built to account for the forces of breaking waves. To find out your flood zone check your Elevation Certificate (if you’re rebuilding), call your homeowner’s insurance agent, check online at <http://msc.fema.gov>, or stop by your local permit office. Be sure to find out the “Base Flood Elevation”, too. The BFE is how high the water is expected to rise in the “100-year” flood (a flood with a 1 in 100 chance of happening every year – it does NOT mean it will happen only once every 100 years). After Katrina and Rita, we now know that floodwaters do rise higher than the BFE.

Check with your community’s building permit office for specific requirements for new construction. **The State of Louisiana now requires that new construction meet the flood and wind requirements of the International Residential Code, or “IRC”.** Some of the requirements are listed below. Before you finalize your plans, be sure you understand these requirements because some of your ideas may need to change.

- All habitable areas must be elevated so that the floor level is above the BFE.** Foundations should have perimeter walls (crawlspaces) or be pilings or columns. If earthen fill is to be used for a slab foundation in an A Zone, the fill must be designed, installed and compacted to carry the weight (and drainage around the fill must not adversely affect other properties). Fill is not allowed in V Zones.
- Areas under the elevated habitable floor can be enclosed.** These enclosures can be crawlspaces or full-height rooms, which must be used only for parking, storage or access to the elevated living areas.
- All materials below the BFE must be resistant to damage by floodwaters and easily dried out and cleaned.** Enclosures should be left unfinished or have materials such as treated lumber, closed-cell insulation, and concrete or tile floors.
- Utilities and equipment such as heat pumps, furnaces, electric panels, plumbing fixtures, and appliances must be elevated above the BFE.** Heat pumps and air conditioning compressors must be on elevated platforms. Floor levels must be high enough to keep ductwork above the BFE. Furnaces and hot water heaters can be on platforms inside garages or enclosures below the elevated floor. Appliances and plumbing fixtures are not allowed in enclosures.
- Enclosures in A Zones must have flood openings in the surrounding walls.** Openings allow floodwater to flow in and out so that water pressure doesn’t damage the foundation. Flood openings must meet the following requirements:
 1. They must operate automatically and without human intervention.
 2. There must be at least two openings on different walls.
 3. The bottom of the openings must be no more than 12 inches above the adjacent ground level.
 4. Flood openings must be sized to provide relief from the pressure of rising and falling floodwaters, and under Louisiana’s new IRC building code, flood openings must be 3 inches across. The proper total size of the openings is determined in one of two ways:
 - a. The total net open area provided by the flood openings must be 1 square inch for each square foot of enclosed space (for example, if your enclosure is 25’ x 30’, you have 750 sq ft and your flood openings must have at least 750 sq in of permanently open area), or
 - b. Be certified by a professional to provide flood relief for a specific amount of enclosed area (you may need fewer certified openings).
- Enclosures in V Zones must have walls designed to break away** so that the forces of breaking waves and water are less likely to damage to the foundation that holds up the building. Designs for breakaway walls are to be certified by an architect or engineer. Flood openings are not required in VE Zones, but some homeowners use them to prevent premature failure of breakaway walls because Federal flood insurance does not pay to replace breakaway walls.