

Elevated Appliances and Improved Wall Construction: A Practical Guide for Flood Resilience

Flooding is one of the most common and costly natural disasters, especially in Louisiana. While structural modifications like elevating your home can provide significant protection, elevating essential machinery and appliances above the base flood elevation (BFE) is a practical, cost-effective step that reduces flood risk, minimizes damage and ensures faster recovery after a flood.

WHAT IS THE BASE FLOOD ELEVATION?

The base flood elevation is the height that floodwaters are expected to rise to during a flood that has a 1% chance of happening in any given year. The Federal Emergency Management Agency (FEMA) uses this measurement to help identify how likely it is that an area will experience flooding.

Most local building codes require that the first floor of a home be built to at least the BFE, but building higher than this minimum can reduce the risk of flooding.

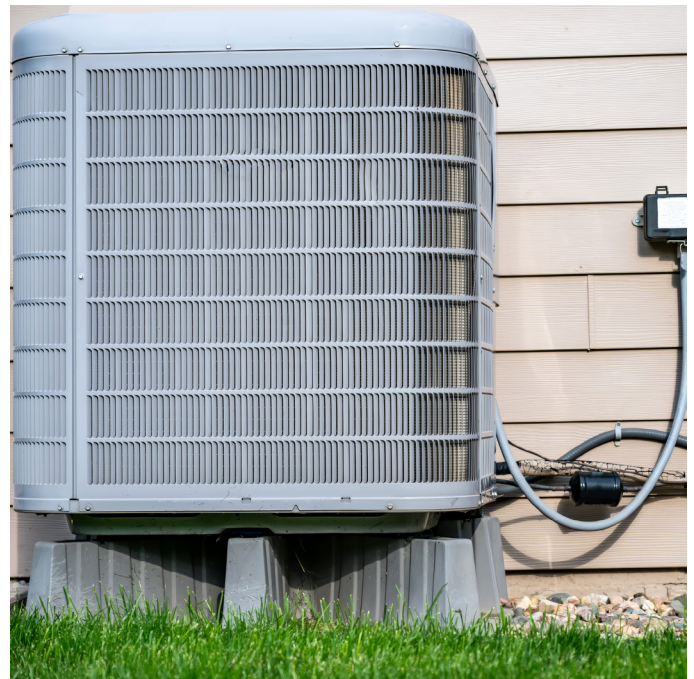
ELEVATING YOUR APPLIANCES

While elevating a home can be very costly, raising appliances and essential systems above the BFE can reduce damage during a flood and save money on potential replacements.

While you will likely need to hire an electrician or technician to make these changes, flood damage to these systems can result in costly repairs and lengthy disruptions. FEMA's National Flood Insurance Program (NFIP) also encourages risk-reduction measures, such as elevating critical systems. Policyholders may receive up to a 5% discount for elevating certain machinery and equipment above the first-floor level.

INSIDE THE HOME

- **Water heaters:** Often located in utility rooms, water heaters should be relocated or raised on platforms.
- **Washers and dryers:** Install these on elevated pedestals or move them to a higher floor.
- **Furnaces and boilers:** Ensure these are positioned above the BFE to prevent costly damage.



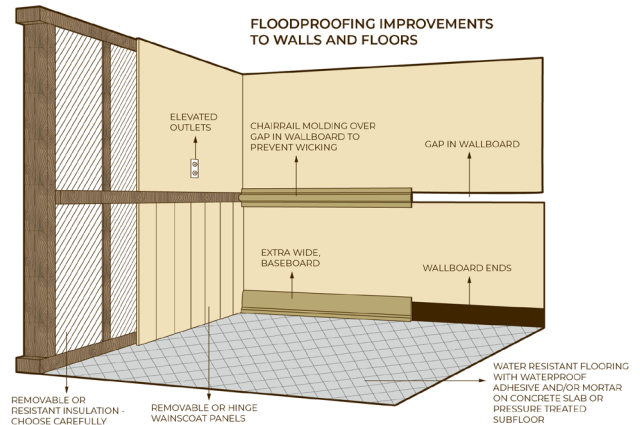
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LIMIT FLOOD DAMAGE: PREVENTING WICKING

Flood damage often extends beyond the areas directly touched by floodwater due to wicking, which is where water creeps upward through porous materials like wallboard and insulation. By implementing strategies to interrupt this wicking process, you can minimize damage and reduce repair costs after flooding.

To reduce damage, consider incorporating gaps into the wall construction.

- **Wallboard gaps:** Install a gap between the bottom of the wallboard and the floor. This prevents water from wicking up the wall and confines damage to the lower section of the wall. You can disguise this gap with decorative trim, such as a chair rail, or fill it with waterproof caulk or gasket material.
- **Insulation separation:** Use nonwicking, waterproof material to separate insulation in the lower wall insulation from insulation in the upper wall, minimizing the area affected by floodwater.



Graphic by Victoria Lopez

OUTSIDE THE HOME

- **HVAC systems:** Elevate outdoor condensers and compressors on platforms designed to withstand wind and flood.
- **Propane or fuel tanks:** Secure tanks to prevent movement during a flood and elevate them above the BFE.

If you elevate these outdoor systems, make sure you brace them with fasteners to withstand high speed winds and to make sure they stay secure during severe weather like hurricanes.

ELECTRICAL SYSTEMS

- **Electrical panels and circuit breakers:** Relocate these systems to a higher floor or elevate them above the BFE in their current location.
- **Outlets and wiring:** Install flood-resistant electrical outlets and run wiring above the BFE when possible.

In flood-prone areas, elevating essential appliances and systems above the base flood elevation is a practical and cost-effective strategy to reduce flood risk and minimize damage. By implementing these measures, homeowners can protect their property, reduce repair costs and ensure quicker recovery after a flood.

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