

POST-HURRICANE BUILDING SAFETY TIPS

PLUMBING

- Assume that a building's water distribution system has been internally contaminated by flood waters containing bacteria.
- Damaged or broken drainage and vent piping must be repaired or replaced to prevent sewer gases from entering the building.
- Damaged or broken water distribution piping must be repaired or replaced before the building's main water shut off valve is opened.
- Where piping extended into portions of buildings that are now missing or substantially damaged, those piping systems must cut off with the undamaged sections capped off to prevent entry of debris and contaminants.
- Repaired water distribution piping systems must be internally disinfected to make the system safe for human contact and drinking water.
- Hose connections must be equipped with atmospheric vacuum breakers to provide for basic backflow protection when hoses are used.

ELECTRICAL

- Never enter flood waters or flood damaged buildings before first disconnecting all electrical power to the building. The utility electrical meter at the service equipment should be removed as the safest and most reliable means of disconnecting power. Circuit breakers, main switches, etc. might not be reliable and should not be trusted as the means for power disconnection. In some buildings, there could be more than one electrical service.
- Portable generators can pose significant hazards from electrical shock and carbon monoxide poisoning. Combustion engine-driven generators must be operated **OUTDOORS ONLY** and well away from windows and doors in buildings. Generators must **NEVER** be operated indoors or in garages, regardless of how well it might seem to be ventilated. Fuel for generators must be properly stored to prevent a fire hazard.
- Avoid improper generator connections to building electrical systems that would allow the generator to "backfeed" power into the electrical service, building wiring and the electric utility service conductors that supply the building from overhead, ground level or underground utility transformers. A generator that is improperly connected to the building electrical service in any number of possible arrangements could re-energize the system and pose significant shock hazards to workers.

- The wet environment in buildings increases the hazards of electrical shock because wetted materials have increased current leakage and electrical components have compromised electrical insulation properties.
- Extension cords must be suitable for wet environments: must be of the grounding type, must be in good condition and must be supplied by GFCI (ground-fault circuit-interrupter) protected outlets or circuits. GFCI protection can be provided with GFCI circuit breakers, GFCI outlet devices and GFCI power cord assemblies.
- Properly sized extension cord with a wire gauge that is commensurate with the load served must be used to avoid fire and shock hazards.
- The majority of electrical system components cannot survive flooding and will have to be replaced. Submerged components such as circuit breakers, switches and most cable-type wiring methods must be replaced because of damage from water, contaminants, debris, corrosive chemicals, sea water and silt. Mold growth is also destructive to electrical components.
- Be aware of the potential for coming into contact with energized conductors and equipment that have been exposed because of wind damage and structural failures associated with flooding.
- Electric appliances such as refrigerators, water heaters, ovens, microwave ovens, television sets, furnaces, air handlers, dishwashers, clothes washers, clothes dryers, etc. will likely need to be replaced after being submerged in flood waters. An appliance might be able to be reconditioned by an expert, in some cases.
- Be aware of unusual circumstances that arise during and after natural disaster events such as home owners connecting their electrical system to the system in neighboring buildings, haphazardly constructed temporary services, temporary cords and wiring and the unsafe use and sharing of generators.

www.iccsafe.org



[Click here](#) for a link to additional hurricane tips provided by the Federal Emergency Management Agency.

The International Code Council (ICC) notes that for any work being undertaken be sure to consult the locally adopted codes. ICC further recommends that work being performed should be done by a licensed plumber or electrician and that it is imperative that the local building department be contacted to make sure the necessary permits, approvals and inspections are secured. [Click here](#) for ICC's free publicACCESS™ to the International Codes.