

May 2010

## DEPARTMENT OF CODES AND BUILDING SAFETY FLOOD RECOVERY INFORMATION



### GUIDELINES FOR PERMITS ASSOCIATED WITH THE REPAIR OF FLOOD DAMAGED HOMES AND BUILDINGS

The Department of Codes and Building Safety urges you to use extreme caution when re-entering any residence that has been submerged or water damaged during flooding. See our guidelines for Safety Precautions For Residents Returning To Flood Homes.

**A building permit is required prior to making repairs to flood damaged homes and buildings.**

**While building permits are not required for ordinary maintenance and repairs . . . the repair of a flood damaged home or building is far from 'ordinary'.**

While there are no permits required to do the "demolition" and "clean-up" associated with the project (the removal of drywall and damaged carpet, doors, etc.), a building permit is required prior to installation of the drywall and prior to repair of any electrical, plumbing, or mechanical (HVAC) system damage.

#### **How does a building permit benefit the Homeowner?**

In a word: **SAFETY**. A building permit and the inspections that accompany a permit protect you, your family and guests, and future owners. It protects your neighbor. It protects your contractor. It protects the city. Evidence of permits and inspections may be required in an insurance claim or property sale. All of this adds up to a protection of your property's value.



## Who can obtain Building Permits?

A property owner who presently occupies or intends to occupy a single-family residence or a licensed contractor may obtain a building permit to construct or repair a residence. A property owner or tenant of a commercial property can obtain a building permit to construct or repair a building for up to \$25,000, over that amount will require a licensed general contractor.

## Below are some guidelines to help understand the process for permitting repairs for flood damaged buildings or structures.

- You or your contractor will need to come to the Department of Codes Administration, 3<sup>rd</sup> Floor of the Metro Office Building, 800 Second Avenue, South to apply for the building permit. Permit Division 615 862-6517.
- At the time of application you must have the name of the property owner, proper street address and/or the tax map and parcel number to insure proper identification of the property.
- When you arrive at the Department of Codes Administration you will sign in to see a Zoning Examiner.
- The Zoning Examiner will enter the permit application information in the computer.
- Some applications may require approvals from other departments such as the Department of Water Services (for assistance with flood plain and stormwater issues and to ensure compliance with FEMA requirements). When this occurs the Zoning Examiners will act as your counselor, providing you with information and a check list that will aid you in obtaining these approvals.
- Once you have obtained all the required approvals, your last step is to visit the Customer Service person where you initially signed in. They will direct you to a permit clerk where you pay for and receive your building permit.
- The permit clerk will also include a checklist of the inspections you are required to have made during construction. At the appropriate stages of construction, request the proper inspections. An inspector will meet you on site and inspect the work. The inspector will either approve the work or explain the changes you need to make to attain approval. When you complete the work the inspectors will give you an approval. This indicates that the work inspected passed inspection. At the end of your project you should have a final approval for all of the phases of your project, these include but are not limited to Building, Mechanical, and Electrical.

## The repair and inspection sequence for flood damaged properties:

- Now that you have your building permit, the next step is to secure the services of a licensed electrical contractor and a licensed HVAC contractor to inspect electrical and HVAC equipment which may have been submerged in flood waters.
- Do not install drywall or cover the electrical or HVAC systems until the following has been completed.
- The licensed electrical and HVAC contractors will obtain electrical and HVAC permits associated with the repair and replacement of any submerged electrical, HVAC systems or any part thereof. The licensed contractors will complete their work and call Codes for inspections and approvals.
- After the Electrical and Mechanical work has been inspected, insulation must be installed in the exterior walls and floors to meet the requirements of the adopted energy codes. Walls must be insulated with R-13, and floors must be insulated with R-19.

- After installing insulation and before hanging the drywall, you will call the Codes Department's Building Inspection Division (862-6550) and request a "framing inspection". Upon receiving our approval of the framing inspection, you are then free to hang the drywall and complete the remainder of the repairs.



### **Special warning regarding homeowner repair permits:**

When a licensed contractor obtains a building permit, the contractor is totally responsible for the construction (including the work performed by subcontractors) to meet all codes. If the construction fails to comply with all codes, their permit bond can be used to repair the code violation.

When an owner obtains his or her own building permit, he or she becomes totally responsible for the code compliance of the construction project including subcontractors and not the contractor – even if a contractor is hired and the construction does not comply with all codes.

**If you have hired the services of a contractor, have the contractor obtain the building permit.**

## **HOMEOWNER GUIDELINES FOR ADDRESSING MOLD**

- Be aware that mold might be present if your house was flooded.
- Wet items such as furniture and rugs should be taken outside to dry out.
- Remove all drywall that has been submerged.
- Use fans and dehumidifiers to remove excess moisture from your home. Fans should be placed at a window or door to blow the air outwards rather than inwards, so not to spread the mold.
- To remove or prevent mold growth from hard surfaces use commercial products, soap and water, or a bleach solution of 1 cup of bleach in 1 gallon of water.

## **GUIDELINES FOR REPAIR OF ELECTRICAL SYSTEMS EXPOSED TO FLOOD WATER**

If your electrical system, or parts of your electrical system not rated for wet locations, have been flooded and your electricity has been cut off, to have NES to reconnect your power you must:

- Have a licensed electrical contractor come inspect your electrical system.
- If the electrical contractor finds your system is ok to re-energize, he will call for a service release permit, this will trigger us to send an inspector to meet the contractor at your residence/building. If the system passes inspection, we will notify NES to reconnect the power.
- If the main service is acceptable but a part of the distribution system is not acceptable (such as a circuit feeding lights or outlets), we will allow the electrical contractor to disconnect the unacceptable portion of the system and we will ask NES to reconnect the electrical service to the residence/building.

- The electrical contractor shall then obtain an electrical permit to repair the unacceptable part of the system.
- When repairs are completed the contractor will call for an inspection. If the remaining portion of the system passes inspection, then it may be connected to the energized part of the system by the contractor.

2. All parts of an electrical system (including all electrical devices, outlet, switches, equipment and some wiring) not rated for wet locations, which have been submerged in flood waters will have to be replaced by a licensed electrical contractor. Old fabric coated wiring, knob & tube type wiring or any other submerged wiring that is in poor physical condition must be replaced. However, if the romex wiring (NM cable) is modern plastic sheathed and in good shape, we will allow it to remain. Repair or reconditioning of electrical equipment should only be attempted when in direct consultation with and following instructions from the equipment manufacturer.

3. For more information on reenergizing flood damaged electrical systems see the guidebook "Evaluating Water Damaged Electrical Equipment" provided by the National Electrical Manufacturers Association (NEMA).  
[www.nema.org](http://www.nema.org)

**Electrical Information 615 862-6560**

## GUIDELINES FOR WATER HEATERS EXPOSED TO FLOOD WATERS

The Department of Codes and Building Safety urges you to use extreme caution when restarting any Water Heating Equipment that has been submerged or water damaged during flooding. Prior to re-starting any equipment you should have a licensed Plumbing or Mechanical contractor inspect the equipment. Generally the replacement of a residential 50-gallon water heater does not require a permit. It would require a permit if you were to replace the water heater and change the fuel type (example: going from electric to gas or from gas to electric).

**Whether a water heater uses gas, or electricity, if it was exposed to flood water, the unit must be replaced.**

AHRI has provided reasons why it is required to replace water heaters which have been exposed to flood waters.

- A new water heater is a relatively small investment, and replacing it is fairly easy to do. If the water heater was more than five years old, the chances are good that a new unit will be more efficient, which will save the homeowner money.
- In a gas unit, valves and controls can corrode and cause it to malfunction. In an electric unit, the thermostat and controls can corrode and cause malfunction.
- In both types, the insulation surrounding the unit will likely be contaminated and will be nearly impossible to disinfect. In addition, the insulation takes a great deal of time to dry and can lead to corrosion of the tank from the outside. Even if water heater components have been cleaned and the unit seems to operate properly, parts may corrode in the future and create a very hazardous condition.
- Both gas and electric water heaters have a pressure relief valve that can corrode and stick after being exposed to flood water. This is a very hazardous condition

The Air Conditioning, Heating, and Refrigeration Institute (AHRI) is the trade association which represents manufacturers of air conditioning, heating and commercial refrigeration equipment. For more information visit the following website  
<http://www.ahrinet.org>

**Plumbing Information 615 862-6570**

**Mechanical Information 615 862-6570**

## GUIDELINES FOR RE-STARTING WATER DAMAGED HEATING AND COOLING EQUIPMENT

The Department of Codes and Building Safety urges you to use extreme caution when restarting any Heating or Cooling Equipment that has been submerged or water damaged during flooding. Prior to re-starting any equipment you should have a licensed Mechanical contractor inspect the equipment and clean, repair, or replace as necessary prior to putting back in use.

Below are some guidelines to help determine if replacement is the better choice than repair.

### NOTICE:

**The repair or reconditioning of heating and cooling equipment should only be considered when in direct contact with the equipment manufacturer and following the instructions of the manufacturer.**

The Air Conditioning, Heating, and Refrigeration Institute (AHRI) has compiled a list of heating and cooling equipment for homeowners to consider replacing if flood damaged:

**Gas Furnaces and Boilers:** If there is any question whether flood water has reached a gas furnace or boiler, it should be checked by a qualified contractor. This equipment has gas valves and controls that are especially vulnerable to water damage from floods damage that might not be visible. Corrosion begins inside the valves and controls, and damage may not be apparent, even if the outside of the device is clean and dry. At a minimum, this damage can result in reliability problems and are potentially very hazardous. **Gas equipment and appliances which have been submerged in flood waters must be replaced for reliability and safety.**

**Electric Furnaces:** An electric furnace consists of electrically heated coils, a fan to provide air circulation across the coils, and controls that include safety relays. As with a gas furnace, an electric furnace is susceptible to corrosion and damage from flood water, creating potential reliability problems or safety hazards. If there is any question whether flood water has reached an electric furnace, homeowners should have it checked by a contractor.

**Propane Heating:** Use extreme caution where there is the potential for propane leaks and have propane equipment checked, re-paired and/or replaced by a contractor as quickly as possible after a flood. In every case, contractors must replace all valves and controls that have been in contact with flood water. The gas pressure regulator on a propane system should also be checked. This regulator contains a small vent hole to sense outside pressure. For effective gas pressure regulation, this hole must always remain unobstructed. During a flood, debris can easily plug the hole, causing dangerous malfunction or corrosion. **Propane equipment and appliances which have been submerged in flood waters must be replaced for reliability and safety.**

**Radiant Floor Heat:** With this type of heating system, electrically heated cables or tubing circulating a fluid are embedded underneath or within the flooring material. The cables warm the floor, which in turn warms the room by radiant heat. If the floor becomes wet from a flood, it can weaken and perhaps crack and may need replacement. Both electrical cables and tubing can be damaged due to a wet floor. Therefore, a qualified professional should be consulted to determine whether the system can continue to be used.

**Heat Pumps and Air Conditioning Systems:** Split air conditioning and heat pump systems have power and control wiring between the indoor and outdoor parts of the system, and piping through which refrigerant flows through the system. If flood water has repositioned either the indoor or outdoor units of a split system even by a small amount, there is a potential for refrigerant leaks. The system will then require major repair or full replacement. If the refrigerant system remains intact after the flood, the entire system should be cleaned, dried and disinfected. Homeowners should have a contractor check the indoor and outdoor units' electrical and refrigeration connections, including all control circuits. The decision to repair or replace should be made after consultation with a qualified professional on a case by case basis.

**Ductwork:** If a house under storm repair contains a central forced air system, attention should also be paid to the ductwork. A contractor will not try to salvage duct insulation that has been in contact with flood water, but will replace it because it is impossible to decontaminate. New duct insulation shall provide an R=8. The contractor also will clean, dry and disinfect the ductwork itself. A thorough job will require disassembling the duct-work, but the silver lining is that such repairs will allow the contractor to seal joints in the ductwork and improve insulation to reduce heat and cooling loss.

The Air Conditioning, Heating, and Refrigeration Institute (AHRI) is the trade association which represents manufacturers of air conditioning, heating and commercial refrigeration equipment. For more information visit the following website <http://www.ahrinet.org>

**Mechanical Information 615 862-6570**

**For volunteer assistance and access to helpful resources call Hands on Nashville 615 298-1108.**

**To apply for Federal Disaster Assistance call FEMA at 1-800-621-3362 or hearing impaired 1-800-462-7585.**

Important Codes Department Telephone Numbers:

Permit Division — 862-6517

Zoning Review—862-6510

Plans Review — 862-6540

Building Division — 862-6550

Electrical Division — 862-6560

Gas/Mechanical Division — 862-6570

Department of Codes and Building Safety  
800 2<sup>nd</sup> Avenue, South  
Nashville, TN 37210  
615 862-6500