



---

# COUNTY OF ORANGE

## HEALTH CARE AGENCY

### ENVIRONMENTAL HEALTH

---

#### SAFETY ISSUES, CLEANING AND RESTORATION OF FLOOD DAMAGED RETAIL FOOD FACILITIES

Following a flood event, food facility operators may want to resume operation as quickly as possible. It is important that all food preparation and service is discontinued until the appropriate steps have been taken to protect the public's health. Contact Orange County Environmental Health before food preparation is resumed and any food is served to the public.

Disease transmission or illness may occur following contamination from a flood. Flooding can damage a building in many ways. Materials submerged in floodwater can decay, swell, and warp. Electrical equipment and components can corrode and may cause fires or electrical shock if not replaced after a flood. Wet surfaces encourage mold growth, which discolors surfaces, leads to odor problems, deteriorates building materials, and may cause allergic reactions in susceptible individuals. Floodwater may fracture water mains and sewer lines which may contribute to a variety of health concerns. In addition to the health hazards inherent in a flood damaged building, there are concerns regarding the contamination and adulteration of food, utensils, food preparation equipment, and food contact surfaces.

The following are recommended safety measures and cleaning methods:

- **Only enter the flooded building with caution and guidance of structural and electrical experts to ensure that it is safe.**
- Turn off the electricity from the circuit breaker if you can get to the electric box without going through standing water. Use a flashlight, if needed, instead of turning on lights.
- Check the facility for signs of any risks to personal safety.
- Shut off gas and propane tanks. Report gas leaks to your local gas company immediately.
- Contact your insurance company to inform of damages to your business and equipment. A camera can be very useful to assist in documenting the extent of the damage.
- Be sure the clean-up area is well-ventilated. A mask and latex gloves should be worn for protection when doing any clean-up or decontamination.
- Doors and windows should be opened as soon as possible to ventilate a flood-damaged building.
- Immediately clean the facility of mud and silt to remove any sewage and microorganisms that may have been deposited by the floodwater.
- Check all water, drain, and sewer lines for damage and make repairs if necessary. Also check floor sinks and drains for stoppage and clear them as necessary.
- Flush all water lines and equipment connected to the main water supply (e.g., drink dispensers, ice makers, faucets, etc.) for 5 minutes.
- Flush equipment drain lines over floor sinks. This must be done from the interior of the equipment.
- Replace all water filters attached to equipment connected to the main water supply.

*Due to the risk of adulteration and contamination of food, all foods that have come into contact with flood waters should be discarded. Contact this agency if you have any questions regarding which foods must be discarded.*

- Remove and discard all food and food containers that were immersed in flood water including:
  - Crown capped bottles and jars
  - Screw topped bottles and jars
  - Canned foods
  - Cork topped bottles and jars (e.g., wine bottles)
  - Food packaged in bags constructed from absorbent materials (e.g., paper, burlap, linen)
- Evaluate all food items which have been immersed in flood water:
  - Contact your insurance company and/or licensed food salvager for review and evaluation on possible recovery of costs.
- Clean and sanitize all affected surfaces with a diluted bleach solution of 2 oz. bleach in 5 gallons of potable water (100 ppm) and rinse with clear potable water. Surfaces that should be sanitized include:
  - Utensils/Silverware
  - Dishware
  - Food contact surfaces
  - Food preparation equipment
  - Floors
  - Floor sinks
  - Floor drains
  - Furniture

*Heating and cooling systems, refrigerators, water heaters, and other appliances in contact with flood-water can be extremely dangerous. For safety reasons alone, it is essential to restore heating and cooling systems and appliances to proper operating condition, through repair or replacement, before restoring power. All salvaged appliances should be cleaned, dried, and disinfected prior to re-use.*

- Electrical wiring in walls may suffer moisture damage. Most wiring is plastic coated and reasonably waterproof, minimizing the need for replacement after a flood.
- Ovens and ranges are often salvageable. Electricity must first be disconnected, the back cover removed, water saturated insulation discarded, and the interior surfaces cleaned and disinfected. Wet controls, the pilot orifice, and valves exposed to flood water must be replaced before turning on the stove.
- Any refrigerator or freezer submerged in floodwater should be replaced.
- A clothes washing machine and dryer should be clean, dry, and disinfected, and an electrician or appliance technician should check all electrical contacts and connections prior to reuse.
- Smaller appliances like microwave ovens should be unplugged and carefully examined to determine if salvage/repair or replacement is more appropriate. If deemed salvageable, they should be cleaned, dried, and disinfected inside and out, with the electrical parts components carefully inspected.
- A gas or electric water heater exposed to flood water should generally be replaced. If no water damage is observed, flush clean water through the water heater before re-use.

*Prior to resuming food service and opening for business, verify the following:*

- Provisions for hot and cold potable water are available.
- Provisions for hand washing are available.
- A properly functioning sewer system and toilets are available.
- Electricity and natural gas (if applicable) services are available.
- Refrigeration and/or freezer units are capable of maintaining food temperatures of 41°F or below.
- Hot food holding units are capable of maintaining food temperatures of 135°F or above.
- Damaged foods have been removed from sale.
- All food can be protected from contamination.
- Rodent and insect infestations do not exist.

*Notify the Environmental Health Division Food Protection Program before re-opening the establishment for business. Always assume that floodwater brings contaminants which may contain harmful bacteria and organics. There are health and safety concerns associated with flooding, and equipment and appliances contaminated by floodwater. Decisions about salvaging or replacing damaged equipment depend on the length of time and level of flooding in the building, and the amount of insurance coverage, and assistance from flood-relief programs.*

*For additional sanitation safety tips contact Orange County Environmental Health at (714) 433-6000.*