



Safety After The Storm

Commercial Food Equipment Safety



Commercial food equipment is designed with an emphasis on maintaining sanitary operation, typically employing a rugged design that facilitates cleaning when used in a fast-paced and demanding environment. Maintaining sanitary conditions in a commercial food establishment doesn't typically anticipate equipment wetting by non-potable water and additional soiling such as occurs during flooding conditions. Immersion in flood waters can create unique challenges for a facility looking to resume operations.

Local public health officials are usually aware of any commercial food facilities within their jurisdiction that have been subject to flooding due to storms or other events. Local health authorities usually require that such facilities be inspected prior to allowing them to reopen for business. During such inspections, the authority will inquire about the extent of damage suffered and what repairs/replacements of damaged equipment were made, and then inspect the equipment to ensure its cleanability and acceptable performance. Since local jurisdictions differ in their approaches to dealing with flooded and otherwise compromised equipment, consulting with them prior to engaging in extensive servicing is suggested.

Following examination of the equipment by a professional qualified to assess proper electrical, combustion, ventilation and mechanical safety and functionality, as appropriate, a physical evaluation of the equipment for sanitation purposes can be made, to determine whether it is practical to attempt to restore the equipment to service. Note that cleaning, sanitization and other food safety remediation measures taken to restore equipment to service does not always assure satisfactory performance of equipment, nor do they assure that odors will not develop in or around the equipment. The following are considerations in determining whether restoration of equipment to food service should proceed after basic safety has been confirmed:

- Commercial food equipment can generally be cleaned and sanitized if it is constructed of stainless steel or other nonabsorbent materials and if any thermal insulation used in its construction is of nonabsorbent, closed-cell polyurethane or styrofoam. Such insulation should be evaluated as to its need for and accessibility for cleaning. Any manufacturer instructions for such cleaning should be followed.
- Refrigeration, heating and other equipment that uses fiberglass insulation should be evaluated to determine if this insulation has been wetted with non-potable water or otherwise soiled and, if so, the insulation should be removed and replaced.

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- If a walk-in refrigerator or freezer has an insulated wall panel with surface openings or unsealed joints immersed in non-potable water, any panels should be replaced if they cannot be disassembled, cleaned and sanitized. Particular attention needs to be paid to removing the silt or other debris below or behind the panels if they are not adequately sealed at the wall and floor juncture.
- For products that are designed to maintain the proper holding and storage temperatures for potentially hazardous foods, monitor temperatures closely at multiple locations and at regular intervals to ensure that the equipment is performing appropriately. Products that cannot maintain proper temperatures should not be put into service.
- For equipment such as post-mix and beverage machines, ice machines, glass washers, dishwashers, storage and booster water heaters and other equipment with water connections and fittings that may have been immersed in non-potable water:
 - Water lines, faucet screens, water-line strainers and fixtures should be purged of any standing water.
 - All fixtures, equipment lines, valves and sinks should be cleaned and sanitized, or replaced as necessary.
- **Replace any equipment if it:**
 - Was damaged to the extent that it could not be serviced to meet requirements of the appropriate safety standards (UL, CSA or NSF);
 - Has rusted or otherwise deteriorating surfaces; or
 - Includes flood-damaged wood/particleboard or plastic laminate components, such as cabinets, counters, some types of walk-in refrigerators and freezers (enclosed framing), etc., where the wood cannot be professionally replaced to restore the product to its original structural and hygienic condition.
- **If the equipment can be restored to service:**
 - Thoroughly clean exposed surfaces with a detergent solution;
 - Rinse thoroughly with potable water;

- Sanitize with a 50-200 PPM chlorine solution; and
- Allow to thoroughly dry.

The cleaning and sanitizing process should emphasize those areas of equipment normally missed during routine cleaning of equipment, including interiors of shelving pilasters, channels, mechanical enclosures (follow proper safety procedures), and undersides of shelving, legs and interior areas of chases. Cleaning must be comprehensive, as any amount of silt or other detritus that remains will eventually dry up, turn to dust and act as a contaminant to food that is prepared on the surface of the equipment.



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UL has several field services available to assist owners of products that were or may have been damaged from a storm or resulting flood waters. To inquire about these services and what UL can provide for assistance, please contact the UL Field Service Customer Services group at the toll free number (877)-354-8577 and when prompted, press 2. For specific questions on product safety or specific questions on sanitation aspects, please contact the following:

- For UL client, owner or contractor inquiries for evaluation of refurbished products, contact UL Field Evaluation Services at (877) 854-3577, or e-mail at feldevaluations@ul.com.
- For specific inquiries on electrical evaluations, contact Chuck Mello at (360) 817-5578, chuck.mello@ul.com.
- For specific inquiries for sanitation evaluations, contact Jonathan Brania at (919) 549-1768, jonathan.brania@ul.com, or Gary Coleman at (919) 549-1732, gary.coleman@ul.com.

About UL

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