

The information presented herein is for general reference purposes only. Federal, state or local laws may impose additional requirements based upon specific circumstances. Before any work is commenced, it is important that workers are appropriately trained and equipped with the tools, personal protective equipment and information necessary to perform their designated tasks.

Recommendations – Inspection & Clean Up Procedures for Water Damaged Buildings

- **Perform an initial building survey to identify and assess hazards/risks:** risk of structural collapse, risk of septic system collapse, trip and fall injury hazards, electrical shock hazards, fire and explosion hazards where natural gas or bottled gas are present, loose or broken gas piping and gas leak, toxic mold growth indoors, toxic sludge, materials containing waterborne bacteria such as the E. coli and Enterococci.
- **Stop the water entry-**protect possessions which have not yet gotten wet by moving them to dry areas.
- **Remove standing water-** help from the local fire department or other agencies who have special pumping equipment may be necessary.
- **Pump out flooded basements gradually-** If all the water is pumped rapidly, pressure from water-saturated soil on the outside could cause excessive pressure on basement walls..
- **Inspect the building thoroughly for structural damage and safe entry-** temporary structural reinforcement may be necessary to prevent building collapse before entering some buildings.
- **Remove sludge, mud, and dirt that has accumulated in the building-** often, after an area flood, public and private sewer backups leave various toxic materials in mud and sludge in and around building.
- **Inspect & repair flooded mechanical systems and electrical equipment** (electrical wiring, circuit breakers, fuses, air conditioners, heating boilers, furnaces, water heaters, chimneys, flues, ductwork).
- **Electrical Safety**

This is not a do-it-yourself project! There may be hidden electrical hazards. Floodwater contaminants can create serious fire hazards if electrical wiring and equipment have been submerged in water. Before beginning, have a qualified electrician check the house wiring, assess other damages and proceed with repair work.
- Do not flip a switch or plug in an appliance until an electrician tells you it is safe.
- Do not touch a circuit breaker or replace a fuse with wet hands or while standing on a wet surface. Use a dry plastic- or rubber-insulated tool to reset breakers and use only one hand.
- Do not allow power cord connections to become wet. Do not remove or bypass the ground pin on a three-prong plug.
- Use portable ground-fault circuit-interrupter (GFCI) to help prevent electrocutions and electrical shock if extension cords must be used.
- Discard electrical devices such as circuit breakers, fuses, GFCIs, receptacles, plugs and switches that have been submerged.
- When using a wet-dry vacuum cleaner or a pressure washer, be sure to follow the manufacturer's instructions to avoid electric shock.
- Portable generators emit carbon monoxide (CO), a poisonous gas that is colorless and odorless. Never use generators indoors or outdoors near open doors, windows or vents.
- Do not turn on damaged electrical appliances. Electrical parts can pose an electric shock hazard or overheat and cause a fire.

Replace or recondition:

Some items may be reconditioned, while others will need to be completely replaced. It is recommended that an electrician or electrical inspector guide the restoration or replacement of any electrical wiring or equipment. Corrosion and insulation damage can occur when water and silt get inside electrical devices and products. Therefore, be prepared to replace:

- Circuit breakers and fuses and electrical wiring systems ,light switches, thermostats, outlets, light fixtures, electric heaters and ceiling fans.
- Furnace burner and blower motors, ignition transformers, elements, and relays for furnaces and hot water tanks.
- Washing machines, dryers, furnaces, heat pumps, freezers, refrigerators, dehumidifiers, vacuums, power tools, exercise equipment and similar appliances.
- Electronic equipment, including computers and home entertainment systems.
- **Building dry out-**use dehumidifiers, fans and heaters to dry the exposed building areas and surfaces. Adding simple fans such as box fans or window fans set on floors indoors and pointed at wet surfaces will significantly speed the dry out process far beyond what an indoor dehumidifier can do if used alone.
- **Inspect upper building areas and dry or ventilate them-** a building attic over a flooded basement is likely to have an excessive moisture level so that area needs inspection and may need venting too. Ventilation may mean simply opening windows or use of fans.
- **Identify and remove areas with mold growth-**significant mold growth in flooded buildings is likely unless the flood event is small (for instance a burst pipe) and all of the critical steps are taken within 24-48 hours (a bit longer in freezing or very cold weather). Remove wet carpets, furniture, boxes and other items to be salvaged from the flooded area. Do not store these items outside to avoid further contamination.
 - * In rooms where floors were wet or flooded, remove no less than the bottom 12" of the floor trim and lower portions of walls and any wall insulation. Wet porous materials like drywall or plaster cannot effectively be cleaned and should be discarded.
 - * If mold is visible, remove drywall to no less than 12" above any visible mold. Inspect the wall cavity interior for visible mold.
 - * If walls were not wet from below, remove all visibly moldy drywall to 12" from the last visible mold. Remove drywall horizontally for at least one more wall-stud bay. Inspect the back side of the removed drywall and the cavity side for visible mold.
 - * Remove upper portions of wall coverings (drywall or paneling) higher than 12" if these areas are wet, or if water entered the wall cavity from above.
 - * Remove and discard ceilings that have been flooded from above, along with ceiling insulation, regardless of material (plaster, drywall, or ceiling tiles). Remove additional tiles to inspect for evidence of water overhead.
- **If mold is already visible or suspected, use "Containment" and "Negative air"** to avoid air movement of moldy or demolition dust and debris from the damaged (moldy) area to other building areas. "Containment" means that plastic barriers are set up and other steps are taken to isolate a moldy or dusty work area from the rest of a building. "Negative air" means using fans blowing outdoors from the work area and plastic barriers at the entry.
- **Clean moldy surfaces-**after rough demolition to remove wet and porous or visibly moldy materials, all remaining loose dirt and surface debris should be removed, and the remaining exposed surfaces such as wall studs and framing, masonry walls, floors, plywood sheathing, should be cleaned. Stains in wood do not have to be removed provided there is no remaining surface mold debris.
- **Disinfect mold-contaminated surfaces to kill septic or sewage contaminants accompanying floodwaters.** This should not serve as a substitute to removal of debris and the physical cleaning of dirty or moldy surfaces. Surface cleaning and disinfection can proceed before the building has been fully dried (less spreading of mold and pathogens by airborne dust), but this process cannot be reliably completed until the building has been dried. Cleaning workers must be careful to avoid contact with dirty water or cleaning fluids.
- **Disaster aid for flood damage-**check with your local and state officials, FEMA (Federal Emergency Management Association), and American Red Cross to determine if special disaster aid has been made available for people in your area.