



Mississippi Emergency Management Agency

Cleaning Mold, Mildew, and Bacteria

Mold, mildew, and bacteria are common following floods and other water damage. If unchecked they can lead to sanitation and health problems. The walls, floors, closets, shelves, contents—every flooded part of your house—should be thoroughly washed and disinfected.

In most cases, household cleaning products will do the job if you use them correctly. Check the label on the products to see how much to use. Some products shouldn't be used on certain materials; the label will tell you that. Apply cleaner and give it time to work before you mop or sponge it up. Follow directions and all safety precautions on the container. After cleaning a room or item, go over it again with a disinfectant to kill the germs and smell left by the floodwaters. Always wear rubber gloves.

Cleaning tips: Tackle one room at a time. A two bucket approach is most efficient: use one bucket for rinse water and the other for the cleaner. Rinse out your sponge, mop, or cleaning cloth in the rinse bucket. Wring it as dry as possible and keep it rolled up tightly as you put it in the cleaner bucket. Let it unroll to absorb the cleaner. Using two buckets keeps most of the dirty rinse water out of your cleaning solution. Replace the rinse water frequently.

Walls: Start cleaning a wall at the bottom or where the worst damage was. If you did not have to remove the sheetrock or plaster, you may find that the sheetrock or plaster won't come clean and you will want to replace it rather than clean it. If you have removed the sheetrock or plaster, wash the studs and sills and disinfect them. Remove all sheetrock at least 12" above the high water mark.

Furniture: Wood alcohol or turpentine applied with a cotton ball may remove white mildew spots on wood. Cream wood restores and lanolin will help restore good wooden furniture.

Upholstered furniture soaks up contaminants from floodwaters and should be

cleaned only by a professional. This is also true of carpets and bedding. Unless the piece is an antique or very valuable, upholstered furniture soaked by floodwaters should probably be thrown out.

Clothing and Linens: Even if your washing machine did not get wet, do not use it until you know that the water is safe enough to drink and that your sewer line works. Before you wash clothes in the washing machine, run the machine through one full cycle. Be sure to use hot water and a disinfectant or sanitizer. Take clothes and linens outdoors and shake out dried mud or dirt before you wash them. To prevent a drain clog, hose off muddy items to remove all dirt before you put them in the washer. Check the labels on clothes and linens, and wash them in detergent and warm water if possible. Adding chlorine bleach to the wash cycle will remove most mildew and will sanitize the clothing, but bleach fades some fabrics and damages other fabrics. You can buy other sanitizers, such as pine oil cleaners, at the grocery store to sanitize fabrics that cannot be bleached.

If the label says "Dry Clean Only," shake out loose dirt and take the item to a professional cleaner. If you want to clean leather yourself, wash the mud off and dry the leather slowly away from heat or sunlight.

Appliances: There is an unexpected danger of shock with some electrical appliances such as TV sets and radios. Certain internal parts store electricity even when the appliance is unplugged. Check the back for a warning label. Appliances with such labels will need professional cleaning.

You will need appliances such as a washing machine, dryer, dishwasher, and vacuum cleaner to help clean your house and its contents. The motors or heating elements can usually be cleaned. If you cannot wait for a professional cleaning job, unplug, disassemble, and hose off the appliances thoroughly (with hot water, if possible). Then clean and disinfect them, but do not use detergents.

Clean and disinfect dishwashers, washing machines, and dryers only with water that has been declared safe for drinking. Make sure the sewer line is working before you start a dishwasher or washing machine.

You can speed up the drying process for motors and parts by using a blow dryer or a moisture displacement spray. Moisture displacement sprays, such as electronics parts cleaners or WD-40 lubricating and penetrating oil can also stop rust and corrosion until the appliance can be disassembled and cleaned. One word of caution: The spray is flammable. Read and follow label instructions and precautions.

Moving parts such as motors and pulleys will need oil or grease. Contacts and electrical switches can be cleaned with moisture displacement spray or an aerosol contact cleaner available at electronics or auto parts stores. Allow a motor to run for 30 minutes with no load before using it.

Watch for stripped or damaged insulation around wires. Be sure all appliances are properly grounded. Appliances that must be grounded have a round third prong or a grounding wire on their plug.

Refrigerators, freezers and ovens are more complicated. They may have foam insulation and sealed components that suffered little water damage. But these appliances hold food, and so they should be cleaned, disinfected and checked by a professional or replaced.

Kitchen items: Throw out soft plastic and porous items that probably absorbed whatever the floodwaters carried in. Floodwaters are contaminated, so you may want to wash dishes by hand in a disinfectant. Air dry the disinfected dishes; do not use a dish towel. The dishwasher should also be used only after you know your water is safe to drink and your sewer line works. Clean and disinfect it first. Then use a hot setting to wash your pots, pans, dishes, and utensils. **(If you have an energy saving setting, do not use it.)**

Food: Throw out any food that has been touched by floodwaters. Even food in tin cans should be discarded, if the cans got wet during the flood because there is no way to be absolutely certain the food inside is safe. Do not keep food in bottles or jars with bottle caps or **screw on lids—they do not keep out floodwaters.** The U.S. Department of

Agriculture operates a food safety hotline. Professional home economists can answer your questions about whether to keep or discard food. To reach the food safety hotline call **1-800-535-4555** between 10:00 am and 4:00 pm, Eastern Time, Monday through Friday.

For additional information, see **"Repairing Your Flooded Home"** which is available at <http://www.fema.gov/rebuild/recover/resources.shtm>. The Mississippi Department of Health at 1-866-458-4948 or www.HealthyMS.com, the Environmental Protection Agency at 1-800-438-4318 or www.epa.gov/iaq/molds and Centers for Disease Control and Prevention at 1-800-311-3435 or www.cdc.gov/health/mold.html.

Cleaners

- 1st choice: Non-sudsing household cleaners
- 2nd choice: Laundry soap or detergent

Disinfectants

- 1st choice: Commercial disinfectants or sanitizers, such as the quaternary, phenolic, or pine oil based ones. **(Check labels for the contents).**
- 2nd choice: ¼ cup (2 ounces) of laundry bleach for 1 gallon of water.

Mildew Removers

- 1st choice: Commercial mildew removers or mildewicides
- 2nd choice: Washing soda or tri-sodium phosphate (available at grocery or paint stores). Use 5 tablespoons per gallon of water. **See below on using bleach.**

Bleach

Liquid chlorine bleach, such as Clorox or Purex bleach, can do a variety of flood clean up jobs. Make sure that 5.25% sodium hypochlorite is the only active ingredient. Bleach that has a scent added to improve its smell is available. Scented bleach is fine for cleanup jobs, but don't use it to treat drinking water. Don't use dry bleach or any bleach that does not contain chlorine. Be careful of fumes and wear rubber gloves. Read the safety instructions on the label. **Do not mix bleach with other household chemical products, especially ammonia or toilet bowl cleaner; the chemical reaction can create a poisonous gas.** Do not use bleach on aluminum or linoleum.

Cleaning Supplies checklist

- | | |
|--------------------------------|-----------------|
| Brooms, mops, brushes, sponges | |
| Buckets, hose | Cleaner |
| Rubber gloves | Lubricating oil |
| Rags | Trash bags |
| Disinfectants | Hair dryer |