

Cleaning Your Flooded or Water-Damaged Home

This checklist provides basic information on how to clean or repair your flooded or water-damaged home. For details, get the publication "Repairing Your Flooded Home" by the American Red Cross and Federal Emergency Management Agency; contact your county office of the NDSU Extension Service or see Extension's Flood Information site at www.ag.ndsu.edu/disaster/flood.html.

Safety

- ◆ **Turn off electricity.** Stand on a dry spot or on a dry wooden block or plastic crate. Use a wooden stick or plastic pipe to pull the fuse box handle to off. Pull out the main fuses, and unscrew each circuit fuse. On a breaker box, use the stick to switch off the main breaker switch and each circuit breaker. If you have to step in water to get to your electric box, call an electrician or your power company. Even if the power company has turned off electricity to your area, make sure your house's power is disconnected so it won't come back on without warning.
- ◆ **Turn off gas.** If you suspect a leak or smell gas, leave your home immediately. Leave the door open. If the gas meter is outside, turn off the gas by using pliers or a wrench to turn the valve a quarter turn so the valve is perpendicular to the pipe.
- ◆ **Make sure water is safe.** Listen for announcements about the local water supply. Private water wells need to be tested and disinfected after floodwaters recede. Water that might be contaminated should be boiled at least 10 minutes.
- ◆ **Make sure food is safe.** Frozen or refrigerated foods warmed above 40 degrees for more than two hours may not be safe to eat. This includes meats, milk products, eggs, casseroles and other foods. Discard anything that is moldy or has an unusual odor or look. Partially thawed frozen foods that still have ice crystals can be safely refrozen. Most once-frozen foods that have thawed can be cooked and eaten immediately if they haven't been above 40 degrees more than two hours. These foods can be refrozen after cooking.
- ◆ **Stay healthy.** Wash hands with soap and water often. Make sure your tetanus immunization is current or get a tetanus booster before working in floodwater. Disinfect dishes, appliances and other materials that may have been contaminated by floodwater.
- ◆ **Take care of yourself and your family.** Accept support from family, friends and others. Talk about your feelings to release tension. Discuss the situation with children honestly and openly. Get proper nutrition and rest. Pace yourself, and take one step at a time. Don't be afraid to get help.

General Cleanup

- ◆ **Get organized.** Set priorities. Remove contaminated mud first. Next scrub with detergent, then wash with a disinfectant. Thoroughly clean and dry your house before trying to live in it and before making permanent repairs.
- ◆ **Remove water from the basement slowly.** If your basement is full or nearly full of water, pump out just 2 or 3 feet of water each day. If you drain the basement too quickly, the pressure outside the walls will be greater than the pressure inside the walls. That may make the walls and floor crack and collapse.
- ◆ **Remove contaminated mud.** Shovel out as much mud as possible, then use a garden sprayer or hose to wash away mud from hard surfaces. Start cleaning walls at the bottom or where damage is worst. Remember to hose out heating ducts, disconnecting the furnace first.

- ◆ **Clean and disinfect.** Scrub surfaces with hot water and a heavy-duty cleaner. Then disinfect with a solution of 1/4 cup chlorine bleach per gallon of water or a product that is labeled as a disinfectant to kill germs. Laundry bleaches should not be used on materials that will be damaged or might fade. Sanitize dishes, cooking utensils and food preparation areas before using them. Thoroughly disinfect areas where small children play. Don't mix cleaning products. A combination of chemicals can give off toxic fumes.
- ◆ **Dry ceilings and walls.** Flood-soaked wallboard should be removed and thrown away. Plaster and paneling can often be saved, but air must be circulated in the wall cavities to dry the studs and sills. The three kinds of insulation must be treated differently. Styrofoam might only need to be hosed off. Fiberglass batts should be thrown out if muddy but may be reused if dried thoroughly. Loose or blown-in cellulose should be replaced since it holds water for a long time and can lose its antifungal and fire retardant abilities.
- ◆ **Prevent mold growth.** Take furniture, rugs, bedding and clothing outside to dry as soon as possible. Open at least two windows to ventilate with outdoor air or use an air conditioner or dehumidifier to remove moisture. Use fans to circulate air in the house. Wear a two-strap protective mask to prevent breathing mold spores if mold exists.

Cleaning Carpet and Floors

- ◆ **Clean and dry carpets and rugs as quickly as possible.** If sewage-contaminated floodwater covered your carpeting, discard it for health safety reasons. To clean, drape carpets and rugs outdoors and hose them down. Work a disinfecting carpet cleaner into soiled spots with a broom. Dry the carpet and floor thoroughly before replacing the carpet. Padding is nearly impossible to clean so should be replaced. If the carpet can't be removed, dry it as quickly as possible using a wet/dry vacuum and dehumidifier. Use a fan to circulate air above the carpet, and if possible, lift the carpet and ventilate with fans underneath. Carpet needs to be dried within hours to prevent mold growth.
- ◆ **Remove hardwood floor boards to prevent buckling.** Remove a board every few feet to reduce buckling caused by swelling. Clean and dry wood before attempting repairs. With wood subflooring, the floor covering (vinyl, linoleum, carpet) must be removed so the subflooring can dry thoroughly which may take several months. Open windows and doors to expose the boards to as much air as possible.

Electrical Cleanup

- ◆ **Disconnect electrical equipment before cleaning.**
- ◆ **Make sure appliances are grounded to prevent electric shock.** Both the outlet and the appliance must be three-pronged to trip the circuit breaker or blow a fuse during an electrical fault.
- ◆ **Use an extension cord with a ground fault circuit interrupter** or install a GFCI in electrical circuits in damp environments.
- ◆ **Clean and dry electrical fixtures.** First, use a tester to make sure the power is off. Remove covers from switches and outlets that have been under water. If the fixture is filled with mud, remove the screws that hold the receptacle or switch in place. Pull receptacle, switch and wires out about 2 inches, but don't disconnect. Clean out mud and dirt. Leave open to dry.
- ◆ **Clean and dry motorized appliances.** Motors flooded with mud probably need to be cleaned by a professional. If you can't wait for a professional cleaning job on washing machines, dryers, furnaces, dishwashers and vacuum cleaners, unplug, disassemble and hose off thoroughly (with hot water, if possible). Then clean and disinfect them, but don't use detergents. To clean surfaces, use a heavy-duty cleaner and hot water, then a bleach solution. Refrigerators, freezers and ovens with foam insulation and sealed components may have little water damage, but since they hold food, they should be cleaned and disinfected.
- ◆ **Have electronics professionally cleaned.** Televisions, radios, computers and similar equipment may store electricity even when unplugged. Get a cost estimate to decide if the device is worth repairing.

Cleaning Valuable Items

- ◆ **Wash mud off before items dry, if possible.** Photographs, books and important papers can be frozen and cleaned later. Wash the mud off. Store the articles in plastic bags and put them in a frost-free freezer to protect from mildew and further damage until you have time to thaw and clean them.

Details

- ◆ **Call your insurance agent.** If your insurance covers the damage, your agent will tell you when an adjuster will contact you.
- ◆ **List damage and take photos or videotape as you clean.** You'll need complete records for insurance claims, applications for disaster assistance and income tax deductions.



Cleaning Flood-damaged Carpets and Rugs

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■ When to Discard, Clean or Call a Professional

When faced with flood-damaged carpeting and rugs, your options will depend on the source of flooding. If floodwater consisted of clean basement seepage or lawn runoff into a sub-basement, drying and cleaning is an easy decision. But if sewage-contaminated floodwater has covered your carpeting, you should discard it for health safety reasons. You can assume the water and the carpet contain infectious organisms. Washable throw rugs usually can be saved with proper cleaning.

■ General Rules

Wall-to-wall carpeting, most large area rugs and any rug with foam backing should be discarded if flooded with contaminated water. Except for valuable rugs, the time and expense of professional cleaning generally is not worth the effort or the health risk.

If you are determined to salvage carpeting soaked with contaminated water, consult a professional cleaning company that services carpets at its own cleaning and drying facilities. A steam-cleaning (hot-water extraction) method is preferable.

A wall-to-wall carpet soaked by clean rainwater can be salvaged. Have it professionally cleaned or clean it using the directions below.

Washable throw rugs usually can be cleaned adequately in a washing machine.

■ Cleaning Rain-soaked Carpets

If the carpet has been soaked for more than 24 hours, replace it. If the carpet has been wet for less than 24 hours, you may clean it or have professional cleaners come in to address the need. Check with your insurance company to be sure you respond in a manner that will be covered.

Cleaning basement carpeting indoors is not a good idea in summer because you are adding even more moisture to an already wet area. If the carpeting is installed with tack strips, you may be able to remove it, have it cleaned and reinstalled. Padding is nearly impossible to clean, so it should be replaced.

If you can't remove the carpeting, dry it as quickly as possible to minimize mold growth. If possible, use a wet/dry vacuum system and circulate the air with an air conditioner, fans and open windows to inhibit mold growth. A dehumidifier can help remove moisture from the air, but keep windows closed when using a dehumidifier.

When the carpet is thoroughly dry, vacuum the area. Shampoo and repeat the drying process. Keep in mind that most modern carpeting is made of nylon and should not be treated with bleach. When dry, vacuum again.

Reduce a musty smell with the following process:

1. Sprinkle baking soda over the carpet, working it in with a broom or sponge mop.
2. Leave the baking soda treatment on overnight.
3. Vacuum the baking soda out. Vacuum twice, moving back and forth in a different direction the second time.

Cleaning and Disinfecting Textiles After the Flood

Clothing and household textiles that are wet and soiled by floodwaters must be cared for immediately. Three steps will help clean many washable textiles.

1. Remove muddy residue by hosing down, rinsing, soaking or prewashing.

Use cold or cool water and laundry detergent to remove as much mud as possible. Avoid hot water since it may set stains.

Separate wet items to keep clothing colors from running together, and sort out clothing that must be drycleaned.

Washing machines that have been flooded should be cleaned, dried out and checked by an electrician. Then *disinfect the washer* by running 1 cup of chlorine bleach through a cycle with no fabrics.

If a washing machine is available, use the prewash or prerinse spin-out cycle that includes a short soak period. If your washer doesn't have an automatic prewash cycle, manually set the controls to agitate and then spin. Don't dry these prewashed textiles in a dryer; the heat may set stains.

If it's impossible to complete this prerinse step immediately, ring out as much excess moisture as possible, even with soil in the fabrics. Lay the items out to dry, but don't use a clothes dryer. The heat will set the mud and other stains, making them more difficult to remove. Dry clothes on outdoor lines or indoors at air or room temperature with fans at cross ventilation, air conditioning or dehumidifiers.

Leaving wet clothes and other fabrics piled in a heap provides the moist, warm and dark conditions perfect for mildew growth. Mildew is a growing organism that can permanently damage most textile fibers, especially natural fibers such as cotton, linen, rayon and wool.

2. Pretreat stains.

A prewash soil and stain remover works well on oil-based stains like animal fats, body oils, cooking oils, cosmetics and motor oils.

An enzyme presoak works well on protein stains like blood, body fluids, dairy products and grass.

3. Wash and disinfect textiles.

- Use *plenty of water* and small loads so clothes have room to agitate well.
- Use *hottest water safe* for fabrics.
- Use *slightly more laundry detergent* than recommended on the package. Liquid detergent dissolves quicker, but granular or heavy-duty liquid holds the dirt in suspension better.
- If clothing was contaminated with sewage, chemicals or other toxic materials, *use a disinfectant* in the wash. For colorfast or white textiles, add 1 cup chlorine bleach in the wash cycle. However, if there is a large amount of iron in soil deposits or in the water,

chlorine bleach can cause rust stains to appear on fabrics. For fabrics that cannot be washed with bleach, add 1 cup of pine oil disinfectant such as Pine-Sol or 1 cup of phenolic disinfectant such as Lysol to the wash.

- Wash the textiles as many times as needed before drying them. *Don't dry in the dryer until you're satisfied with the results* since the dryer can set stains, making them impossible to remove.
- High temperature drying will also help sanitize clothing, assuming it is clean after laundering. Another sanitation strategy is pressing with a hot iron. This may be helpful for some cotton clothes and bed linens.

Dryclean-only Clothes

Drycleanable clothes, if worth salvaging, should be sent to the drycleaner. Air or line dry, then take to the drycleaner to see if salvageable. The chemicals in the cleaning process and the high-temperature steam pressing will sanitize them.



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