



Introduction

After a flood, it's important to restore your home without delay. This protects your health and prevents further damage. Remove standing water or water-damaged materials right away. They can cause serious health issues because viruses, bacteria and mould thrive in such conditions. These organisms can cause diseases and trigger allergies. They may also continue to damage materials long after the flood is over.

Personal protective equipment (PPE)

Flood water can contain harmful things like raw sewage and chemicals that can make you sick. Anything that touches flood water can get dirty and become unsafe. To protect yourself while cleaning up after a flood, make sure to use personal protection equipment.

Appropriate personal protective equipment includes:

- Puncture-proof and waterproof boots: These are important, especially if there's still water in the house.
- Rubber gloves and sturdy work gloves: Use them when handling or throwing out items that are flood-damaged.
- Shovel or something similar: To dislodge or move any debris. Avoid using your hands to recover submerged items.
- Face masks: Wear a mask, like an N95 respirator mask, if there's mould, asbestos or lots of dust.
- First aid kit: Keep supplies handy to clean and cover any cuts or wounds before starting clean-up.

When you're done, clean yourself as well. Take a bath or shower with soap and warm water. Wash your hands and any exposed skin regularly, using soap and warm water, during cleaning activities. Be careful not to touch your skin with dirty gloves or items. Finally, wash your clothes after you're done cleaning.



Food

Flood waters can carry harmful microorganisms from raw sewage that can make food unsafe to eat. Only food sealed in metal cans is safe to consume after being in flood water. Throw out any damaged or bulging cans.

Here's how to clean and sanitize metal cans:

1. Wash cans with warm water and soap. Scrub the rims and caps with a firm brush.
2. Sanitize the cans using a mild bleach solution (mix one tablespoon of bleach with four litres of water).
3. Dry metal cans quickly to prevent rusting.

If any of the following types of food come into contact with flood waters, you should not eat them and should dispose of them:

- Meats, fresh fruits and vegetables
- Boxed foods
- Products in jars, including home preserves, and all bottled drinks (because the area under the seal of jars and bottles cannot be adequately disinfected).

Other items like medicines, cosmetics, and toiletries that were exposed to flood water should also be thrown away. If you are in doubt regarding contact with flood waters, the item should be disposed off.

- Floods can also cause power outages. Follow these tips to keep food safe: Discard the contents of your fridge if the power was off for more than 12 hours.
- Discard the contents of your freezer if the power was off for more than 48 hours.
- Discard food that was in contact with flood waters. When in doubt, throw it out.

For more information about food and drinking water safety during emergencies, visit www.canada.ca/en/health-canada/services/food-drinking-water-safe-emergency



Cleaning your house after a flood

Drying your house and belongings quickly is important to stop mould from growing. If the weather is good (low humidity and moderate temperature), open doors and windows and use fans to help dry things faster. If the weather is not suitable or drying is taking too long, use a dehumidifier.

Floors

Floors can get very dirty after a flood. Follow these steps to clean and sanitize them:

1. Move furniture and any removable floor coverings outside.
2. Remove wet carpets and underlay as soon as possible to prevent damage to the floor.
3. Wash the floor with warm water and soap.
4. After washing, sanitize the floor with a mild bleach solution (mix one tablespoon bleach with four litres of water).
5. Dry floors completely after sanitizing.

Clean and sanitize all floors in the house, even those above the flood water level. High humidity can cause mould to grow on upper floors too.

Carpets

- Remove and throw away carpets and underlay that were flooded. You might need to let them dry slightly to make them easier to move.
- If you want to save expensive carpets and area rugs, contact professional cleaners quickly to limit the damage.

Vinyl, linoleum and other sheet floor coverings

- Vinyl, linoleum and other floor coverings can trap dirt and water. If the wooden subfloor underneath is wet or dirt and water are trapped below, consider removing the flooring.
- Removing the flooring will help the wooden subfloor to dry faster. Leaving the flooring in place while the subfloor is wet can cause more damage.



Inside floor cavities

The space between the ceiling and the floor above (interstitial space) should be inspected to see if the cavities have become wet. After removing the flood water, do the following:

- Open the cavities to clean and dry them.
- Remove all debris, dirt, wet insulation and any other wet materials.
- Discard wet insulation, clean and then sanitize the surfaces.

If wooden beams or supports are soaked, they may take days or weeks to dry fully. Do not seal the cavity until the wooden structures are completely dry.

Walls

Before working on walls, make sure you know which ones are load-bearing. Consult a contractor for guidance on structural safety.

- Remove drywall that has been soaked or has absorbed water
- Clean any remaining drywall with warm water and soap, then sanitize with a mild bleach solution (mix one tablespoon bleach with four litres of water).
- Even walls above the flood water line should be cleaned and sanitized, as high humidity can cause mould to grow.

Inside wall cavities

- Open up wall cavities if they contain wet materials to allow for proper cleaning and drying
- Remove and throw away any wet insulation, then clean and sanitize the surfaces.
- If wooden supports are wet, they may take days or weeks to dry completely. Do not seal the cavity until all wooden parts are fully dry.
- Clean, sanitize and dry all cavities before starting your renovations.
- Consider using dehumidifiers to speed up the drying process.

Opening closed spaces quickly will reduce water damage and help materials dry faster.



Wet insulation

Fibrous insulation, like glass fibre, mineral wool and cellulose insulation materials, should be removed, even if it was not directly wet during the flood, because:

- It can collect contaminants, even without being soaked.
- Large amounts of contamination may remain in the material even after it is dry
- If these materials are wet for a long time, they can support the growth of mould and other microorganisms.
- These materials will lose their insulation capabilities even after they are dry.

Board insulation, such as Styrofoam and urethane, can also become saturated. Most insulation materials will continue to soak up water well above the high-water mark.

- Remove and replace all fibrous insulation above the high-water mark once the cavity is completely dry
- Remove and replace board-saturated insulation.

Ceilings

Ceilings above the high-water mark may be reasonably dry and undamaged, but they still require checking and cleaning. Moisture can be absorbed upward along walls and wet ceiling materials.

- Replace ceiling drywall or plaster that was submerged in flood water.
- Check ceiling materials above the high-water mark to ensure they are dry. If they are wet, replace them.
- Carefully clean salvaged materials using warm water and soap, then sanitize them with a mild bleach solution (mix one tablespoon of bleach with four litres of water).
- Dry surfaces quickly after sanitizing.



Electrical equipment, lights, fixtures and wiring

- Do not use flooded electrical equipment (such as outlets and switch boxes or fuse/breaker panels) until they have been inspected and approved by the electrical utility company or a licensed electrician. **They are not safe when they are wet and dirty!** Wet dirt is an excellent conductor of electricity and could either short out the power or leave some surfaces electrically “live” and dangerous to touch.

Electrical outlets and switch boxes

- Ensure the power is completely off before cleaning.
- Wash and rinse off electrical outlet and switch boxes.
- Make sure all electrical components are completely clean and dry before power is turned on again.

Lighting fixtures

- Turn off the power or disconnect and remove light fixtures before cleaning.
- Take apart ceiling fixtures and lamps to check for dirt and wetness.
- Clean and dry thoroughly before use.
- Expect some burnt-out bulbs and cracked or broken bulb glass. Good bulbs may shatter the first time they are turned on.

Appliances

Large appliances

- Do not use large appliances like washing machines and dryers that were submerged in flood waters. Dirt in motors and switches can cause serious damage and electrical shock.
- Contact a repair company to inspect and repair these appliances before using them.
- Repair the washer and dryer as soon as possible, as they can be used to clean and dry clothes that may have been affected by flood waters.

Small appliances

It may be best to replace flooded small appliances, as repairs can cost more than buying new ones. If you decide to save any small appliance:

- Get an estimate of the possible repair costs.
- Rinse and clean the appliance with warm water and detergent.
- Send it to a repair shop.



Furnaces and water heaters

- Do not use flooded furnaces or water heaters until they have been inspected and serviced by a trained repair person.
- Flood water and sewage can leave harmful microorganisms on surfaces inside your heating and ventilation (HVAC) systems, including ducts that were not directly submerged.

A trained repair person should:

- use plastic sheeting or vapour barriers to isolate sections of the HVAC system during cleaning;
- replace any flood-damaged materials, such as insulation and filters;
- vacuum, clean and sanitize all surfaces, including air ducts;
- make sure all components are dried quickly to prevent damage; and
- test the HVAC system to confirm it is working properly.

Plumbing

During a flood, water may well up through flood drains and sump holes, bringing materials into the house that should never be there. As the water subsides, indoor materials may be sucked or washed into drainage systems and partly block them or remain in place and decompose.

- Flush all plumbing lines in your house, including any water treatment devices.
- Carefully flush and disinfect floor drains and sump pits.
- Scrub away any greasy dirt and grime off surfaces.
- Check that floor drains are primed (water should stay in these drains) so that sewer gases cannot move up into the house when the drains dry out.
- If you do not have a flush line installed, be sure to check the drains regularly, pouring some water and chlorine bleach into them to keep them primed and disinfected.
- The footing drains around your foundation may have been overloaded with water and dirt during the flood. Have a trained plumber inspect and clean them, using special clean-out pipes or connections to the storm sewer.
- If they cannot be inspected, you may experience problems in the spring or very rainy periods, when they will not drain as well and may allow water to enter your basement. Keep stored materials away from basement walls and off basement floors to minimize future damage.



What to discard

Many materials cannot be reasonably cleaned and dried once they have been soaked with flood water. Remove and discard the following items in sealed plastic bags whenever possible:

- Inexpensive possessions that have been soaked.
- Particleboard (fibreboard) furniture.
- Inexpensive plush furniture. Furniture may be difficult or almost impossible to clean if it is upholstered or if sewage and other organic materials are involved.
- Magazines, books and non-valuable paper items.
- Mattresses and box springs.
- Fluffy bedding like duvets, comforters and pillows they can be washed and dried at high heat.
- Electrical equipment that was flooded.
- Old or worn-out clothing that is not worth salvaging.

What to save

Some items may be safe to salvage and repair, including:

- Surfaces that do not absorb water.
- Fabrics that can be laundered and bleached.
- Surfaces not affected by the flood water, such as items on upper floors of your home.

Items that might be worth saving

Furniture

- Antique furniture may be worth the expensive professional restoration.
- Contact professional furniture restorers quickly and follow their instructions precisely.
- Salvage good-quality wood furniture and particleboard furniture if they were only briefly exposed to flood water and show no swelling.
- Clean furniture with warm water and soap, then sanitize with a mild bleach solution (one tablespoon of bleach to four litres of water).
- Dry furniture quickly, but not in direct sunlight or heat. Open drawers to speed drying, but do not to fully disassemble them as they may become distorted.



Linens, bedding and clothing

Salvage flood-damaged fabrics that can be laundered. To clean flood damaged fabrics:

- Scrape off dirty areas, rinse well and wash in hot water. Dry in a hot dryer.
- Take non-washable fabrics like silk and wool to a professional cleaner.

Paper and paper goods

To salvage important papers, such as legal or financial documents:

- Blot away most of the water with blank paper or thin blotting materials.
- A light sprinkle of baking soda may help change surface chemistry and deter mould growth, but test first on an unimportant spot to ensure it does not affect the ink.
- Open books to the breeze and the sun to speed drying. Close and press them at night or more often if wrinkling starts to appear. Be cautious about drying books in full sun.
- Wrap and freeze wet paper goods carefully in freezer bags if you cannot begin drying them within a day. Before you freeze them, scrape of any dirt and blot dry with towel.
- Clean off the outside of the bags before freezing. Because of the high risk of contamination, never mix these bags with food bags. If a freezer can be used only for wet papers, it may be best to leave items unwrapped or lightly wrapped, as they will dry slightly during storage.
- Remove items a few at a time and carefully thaw and dry.
- Once dried, clean with warm water and soap. Then, sanitize using a mild bleach solution.

If mould damage has occurred or there is severe distortion, focus on saving the information, not the paper.

- Check with a lawyer to determine if any notarized copies of your documents are available.
- Check with local government offices to determine if birth records, passports, and other government certificate-type documents can be replaced.
- Certain large documents can be substantially preserved if pressed through hot rollers at a copy house that makes blueprints. This could be worthwhile for maps or other large documents that are worth keeping for sentimental or historical reasons.



References

- Alberta Health Services (n.d.). *Cleaning the house after a flood*. Alberta Health Services. www.alberta.ca/cleaning-home-after-flood
- Health Canada (2024). *Flood Cleanup: Keep in mind indoor air quality*. Health Canada. www.canada.ca/content/dam/canada/health-canada/migration/healthy-canadians/publications/healthy-living-vie-saine/flood-inondation/alt/flood-inondation-eng.pdf



For more information, contact Environmental Health Services.
Address: #2 Hospital Road, Whitehorse, Yukon Y1A 6A7
Email: environmental.health@yukon.ca
Phone: 867-667-8391

