

What to do before, during and after a flood

Get prepared

Floods are the most frequent natural hazard in Canada and being prepared is your best line of defense to combat flooding. They can occur at any time and are most often caused by heavy rainfall, rapid melting of a thick snow pack, ice jams, or more rarely by the failure of a natural or man-made dam.

- A heavy [rainfall](#) can result in flooding, particularly when the ground is still frozen or already saturated from previous storms.
- Flash flooding (for which warning time is extremely limited) can be caused by hurricanes, violent storms or dams breaking.
- All Canadian rivers experience flooding at one time or another. The potential for flood damage is high where there is development on low-lying, flood-prone lands.

Step 1: Determine if your home is at risk to this hazard. Contact your municipal office to determine if you live in a flood-prone area. Talk to your neighbours and contact the Conservation Authority responsible for your area:

Lower Trent Conservation Authority

Phone: 613-394-3915

Mailing Address: 714 Murray Street, R.R. 1 Trenton, ON K8V-5P4

Website: <http://www.ltc.on.ca/>

Quinte Conservation Authority

Phone: 613-968-3434 or 613-354-3312

Mailing Address: 2061 Old Highway 2, R. R. 2, Belleville ON K8N-4Z2

Website: <http://quinteconservation.ca/site2/>

Public Safety Canada resources

Public Safety Canada has developed "Floods What to do" as part of their

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emergency preparedness campaign to assist Canadians in becoming resilient to emergency situations or potential disaster.

The Public Safety Canada publication "Floods What to do" may be ordered free of charge by calling 1-800-622-6232. You can also visit www.getprepared.gc.ca or pick up this publication at the Health Unit.

The information below has been provided through the Public Safety Canada publication "Floods What to do" as part of their Emergency Preparedness Get Prepared campaign at <http://www.getprepared.gc.ca/knw/ris/fld-eng.aspx>

Preparing for a flood

To reduce the likelihood of flood damage

- Put weather protection sealant around basement windows and the base of ground-level doors.
- Install drainage for downspouts a sufficient distance from your residence to ensure that water moves away from your home.
- Consider installing a sump pump and zero reverse flow valves in basement floor drains.
- Do not store your important documents in the basement. Keep them at a higher level, protected from flood damage.
- If you have a livestock farm, remember that livestock have a natural "move away instinct" to flash flood waters. When purchasing or designing your livestock operation, it is important to allow livestock a way to reach high ground in each pasture.

If a flood is forecast

- Turn off basement furnaces and the outside gas valve. Seek direction from your service provider.
- Take special precautions to safeguard electrical, natural gas or propane

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heating equipment.

- Consult your electricity or fuel supplier for instructions on how to proceed.
- In floods, in a rural farm setting, leaving animals unsheltered is preferable because flood waters that inundate a barn could trap animals inside, causing them to drown.
- If evacuation of animals is being considered, then evacuation procedures, places, and routes should be planned. Animal evacuation routes must not interfere with human evacuation routes. Alternate routes should be found in case the planned route is not accessible. Places where animals are to be taken should be decided in advance and arrangements made with the owners of these places to accept the animals.

If flooding is imminent

- Move furniture, electrical appliances and other belongings to floors above ground level.
- Remove toxic substances such as pesticides and insecticides from the flood area to prevent pollution.
- Remove toilet bowls and plug basement sewer drains and toilet connections.
- Disconnect eavestroughs if they are connected to the house sewer.
- In some cases, homes may be protected with sandbags or polyethylene barriers. This approach requires specific instructions from your local emergency officials.

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- Do NOT attempt to shut off electricity if any water is present. Water and live electrical wires can be lethal. Leave your home immediately and do not return until authorities indicate it is safe to do so.

During a flood

- Keep your radio on to find out what areas are affected, what roads are safe, where to go and what to do if the local emergency team asks you to leave your home.
- Keep your [emergency kit](#) close at hand, in a portable container such as a duffel bag, back pack, or suitcase.

If you need to evacuate

If you are evacuated, register with the emergency reception centre so that you can be contacted and reunited with your family if separated.

- Vacate your home when you are advised to do so by local emergency authorities. Ignoring such a warning could jeopardize the safety of your family or those who might eventually have to come to your rescue.
- Take your [emergency kit](#) with you.
- Follow the routes specified by officials. Don't take shortcuts. They could lead you to a blocked or dangerous area.
- Make arrangements for pets.
- Time permitting, leave a note informing others when you left and where you went. If you have a mailbox, leave the note there.

Never cross a flooded area

- If you are on foot, fast water could sweep you away.
- If you are in a car, do not drive through floodwaters or underpasses. The water may be deeper than it looks and your car could get stuck or swept away by fast water.

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- Avoid crossing bridges if the water is high and flowing quickly.
- If you are caught in fast-rising waters and your car stalls, leave it and save yourself and your passengers.

After a flood

Restore your home to good order as soon as possible to protect your health and prevent further damage to the house and its contents. The Canada Mortgage and Housing Corporation has prepared a [checklist](#) to help organize your cleanup. It is available by calling 1-800-668-2642 (outside Canada call 1-613-748-2000).

Re-entering your home

- Do not return home until authorities have advised that it is safe to do so.
- If the main power was not turned off at the pole prior to flooding, do not re-enter your home until a qualified electrician has determined it is safe to do so.
- Use extreme caution when returning to your home after a flood.
- Appliances that may have been flooded pose a risk of shock or fire when turned on. Do not use any appliances, heating, or sewage systems until electrical components have been thoroughly cleaned, dried, and inspected by a qualified electrician.
- The main electrical panel must be cleaned, dried, and tested by a qualified electrician to ensure that it is safe.
- Depending on where you live, your municipal or the provincial inspection authority is responsible for the permitting process required before your electric utility can reconnect power to your home.

Ensure building safety

- Make sure the building is structurally safe.

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- Look for buckled walls or floors.
- Watch for holes in the floor, broken glass and other potentially dangerous debris.

Drinking water

- Drink bottled water or water from a proven safe source until you have tested your tap water. Contact the Health Unit for further direction, 613-966-5500.
- Floodwater can be heavily contaminated with sewage and other pollutants. It can cause sickness and infections.

Documentation

- Store all valuable papers that have been damaged in a freezer until they are needed (After your cleanup, consult your lawyer to determine whether flood-damaged documents, or just the information in them, must be retained).
- Record details of flood damage by photograph or video, if possible.
- Register the amount of damage to your home with both your insurance agent and local municipality immediately.

Cleanup

Maintain good hygiene during flood cleanup. Minimize contact with flood-water or anything that may have been in contact with it. Keep children away from contaminated areas during cleanup operations.

Recommended flood cleanup equipment

- gloves
- masks and other protective gear
- pails, mops and squeegees
- plastic garbage bags

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- unscented detergent
- large containers for soaking bedding, clothing and linens, and clotheslines to hang them to dry

Additional equipment

- Depending on your situation, you may need to rent additional equipment such as extension cords, submersible pumps, wet/dry shop vacuums, a carbon monoxide sensor and dehumidifiers, fans or heaters.
- When using the equipment, keep extension cords out of the water.

Flood water

- Remove water from your flooded home slowly. Drain it in stages – about one third of the volume daily – because if the ground is still saturated and water is removed too quickly, the walls or the floor could buckle.
- Use pumps or pails to remove standing water, then a wet/dry shop vacuum to mop up the rest.
- For instructions on how to disinfect and restore wells and cisterns, contact the Health Unit at 613-966-5500, provincial health authorities or [emergency management organizations](#)

Heating and appliances

- Do not heat your home to more than 4°C (about 40°F) until all of the water is removed.
- If you use pumps or heaters powered by gasoline, kerosene or propane, buy and install a carbon monoxide sensor. Combustion devices can produce large amounts of lethal carbon monoxide if they're not tuned-up or are improperly ventilated.

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- Do not use flooded appliances, electrical outlets, switch boxes or fuse or breaker panels until they have been checked by your local utility.
- Whether you use a wood, gas or electrical heating system, have it thoroughly inspected by a qualified technician before using it again.
- Flooded forced-air heating ducts and cold air return ducts should be either cleaned or replaced.
- Replace filters and insulation inside furnaces, water heaters, refrigerators and freezers if they have been wet. However, it is often cheaper to replace this equipment.

Dirt and debris

- Remove all soaked and dirty materials as well as debris.
- Break out walls and remove drywall, wood paneling and insulation at least 50 centimeters (20 inches) above the high-water line.
- Hose down any dirt sticking to walls and solid wood furniture then rinse several times.
- Wash and wipe down all surfaces and structures with unscented detergent and water. Rinse.

Floor drains

- Flush floor drains and sump pumps with detergent and water. Scrub them to remove greasy dirt and grime.
- Clean or replace footing drains outside the foundation when they are clogged. Consult a professional for advice or service.

Structures

- Ventilate or dehumidify the house until it is completely dry.
- Rinse and then clean all floors as quickly as possible.
- Replace flooring that has been deeply penetrated by flood water or

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sewage.

- Clean all interior wall and floor cavities with a solution of water and unscented detergent.

Carpets and furniture

- Carpets must be dried within the first two days. For large areas, consider hiring a qualified professional to do the job. Carpets soaked with sewage must be discarded immediately.
- Remove residual mud and soil from furniture, appliances, etc.
- If items are just damp, let the mud dry and then brush it off.
- To test if material is dry, tape clear food wrap to the surface of the item. If the covered section turns darker than the surrounding material, it is still damp. Dry until this no longer occurs.
- For upholstered furniture you should consult a professional to see what can be salvaged. In the meantime, remove cushions and dry separately. Do not remove upholstery. Raise furniture on blocks and place fans underneath.
- Wooden furniture: Remove drawers and open doors. Do not dry quickly or splitting may occur.

Mould

- Mould can lead to serious health problems.
- You may need to have your home professionally cleaned for it to be covered by insurance. Check with your insurance company.
- If you are cleaning up in a room where mould is present, wear a face mask and disposable gloves.
- To minimize mould growth, move items to a cool, dry area within 48 hours and set up fans.

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- Alternatively, textiles, furs, paper and books can be frozen until they are treated.
- Wet mould will smear if wiped. Let it dry and then brush it off outdoors.
- You can also kill mould spores by lightly misting the item with isopropanol (rubbing alcohol).

Food and medicine

- All undamaged canned goods must be thoroughly washed and disinfected.
- Dispose of all medicines, cosmetics and other toiletries that have been exposed to flood water.
- Dispose of any of the following food items if they have been exposed to flood water:
 - contents of freezer or refrigerator, including all meats and all fresh fruit and vegetables
 - all boxed foods
 - all bottled drinks and products in jars, including home preserves (since the area under the seal of jars and bottles cannot be properly disinfected)
 - cans with large dents or that reveal seepage

What to discard

All insulation materials, particleboard furniture, mattresses, box springs, stuffed toys, pillows, padding, cushions and furniture coverings that have been exposed to flood water.

What is salvageable

- Frames of high quality furniture can often be saved. However, they must first be cleaned, disinfected and rinsed, then dried by ventilation,

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away from direct sunlight or heat. Drying too quickly can cause warping and cracking.

- Clothes can be cleaned. Scrape heavy dirt from washable clothes. Rinse and wash them several times with detergent and dry quickly.

Before moving back in

Once flood waters have receded, you must not live in your house until:

- The regular water supply has been inspected and officially declared safe for use.
- Every flood-contaminated room has been thoroughly cleaned, disinfected and surface-dried.
- All contaminated dishes and utensils have been thoroughly washed in water proven safe and disinfected.
 - An acceptable disinfecting bleach solution may be made by adding 1 oz (30 ml) of unscented 5.25% bleach to 3 gallons (13 litres) of hot water. Immerse dishes for a minimum of 45 seconds and allow to air dry.
- Adequate toilet facilities are available.

Development documents:

1. Public Safety Canada publication "Floods What to do"
<http://www.getprepared.gc.ca/knw/ris/fld-eng.aspx>.
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2. Canadian Housing Information Centre Canada Mortgage and Housing Corporation, 1-800-668-2642, www.cmhc-schl.gc.ca.