



# A Residential Guide to Flood Prevention and Recovery



This comprehensive guide has been developed for residents to increase awareness about flooding. This guide includes what you need to know about flood risks and how to prepare in order to reduce the impacts of floods to your property.

This guide provides you with information on how to respond during a flood event and steps you can take to clean up should you be impacted by a flood, including measures to protect your health. There is also a valuable checklist at the end of the booklet to help guide you through the actions you can take to protect your home, yourself and your family in the future.

**If there is a potential for flooding or if a flood occurs, listen regularly to the radio or television or check online for the latest community information.**



## Dial 311

for Municipal Government Services

## Dial 911

for Emergencies

# Flood facts

- Floods are the most dangerous natural hazards in Ontario in terms of property damage, civil disruption and even death.
- A heavy rainfall can result in flooding, particularly when the ground is still frozen or already saturated from previous storms.
- Floods are typically caused by seasonal melting snow, ice jams, heavy spring rains and summer thunderstorms.

- Flash flooding is often caused by violent rain storms or breaking dams, and usually occur with little or no advance warning.
- All creeks experience flooding at one time or another. The potential for flood damage is high for houses and businesses constructed on low-lying, flood-prone lands.
- Over the past 60 years, average temperatures and average rainfalls in Canada have both increased. Together these have led to more extreme weather, such as severe storms and floods.

### Flooding Can Happen at Any Time of Year

**WINTER:** Ice jams can occur behind crossings and at bends in rivers, causing water levels to back up behind the jammed ice.

**SPRING:** Creeks and rivers can experience high flows in the spring as rainfall and melting snow add flows to the river.

**SUMMER:** Creeks can flood when intense, localized, downpours occur with summer thunderstorms.

**FALL:** Large wet weather systems, including tropical storms such as hurricane

remnants (like Hurricane Hazel in 1954), can last for several days. Prolonged and heavy precipitation, on top of already saturated soils, can cause rivers to rise.

### How Will I Know If Flooding Is Forecasted?

TRCA and CVC operate a Flood Forecasting and Warning Program. If flooding is possible or about to occur, TRCA and CVC issue flood messages to designated individuals within their designated municipalities, local agencies, school boards, the media, and members of the public. For more

information, about flood management at TRCA, see <https://trca.ca/conservation/flood-risk-management/>

For more information about flood forecasting and warning at CVC, see <https://cvc.ca/watershed-science/flood-warning-and-forecasting/>

### Real-time flood monitoring

TRCA and CVC maintain a network of river and rainfall gauges. You can get real-time gauging information at [trca.ca/floodmonitoring](http://trca.ca/floodmonitoring) or [cvc.ca](http://cvc.ca).

## Emergency contact information

**Dial 911 only in case of emergency**

### Municipalities

Dial 311 (and 905-874-2000 outside Brampton) and 905-615-4311 (outside Mississauga city limits) for updated information and questions, or visit [mississauga.ca](http://mississauga.ca), [brampton.ca](http://brampton.ca), [caledon.ca](http://caledon.ca). For the hearing impaired dial TTY at 905-896-5151. In Caledon dial 905-584-2272. If you are in danger or there is a threat to life and safety, call 911 immediately.

### Regional Government

**Region of Peel**  
905-791-7800

**Peel Public Health**  
905-799-7700

### Community Support

**Canadian Red Cross**  
Halton and Peel Regional Office  
905-890-1000

**Salvation Army Community Church**  
Mississauga  
905-279-7525

Brampton  
905-791-1085

**United Way**  
Peel Region  
905-602-3650

### Police

**Peel Regional Police Service for Mississauga and Brampton**  
905-453-3311

**Caledon OPP**  
905-584-2241

### Local Fire Departments

**Mississauga**  
905-615-3777

**Brampton**  
905-874-2700

**Caledon**  
905-584-2272 ext. 4303

### Utilities

**Alectra**  
1-833-253-2872

**Enbridge**  
1-866-763-5427 (emergency)  
1-877-362-7434 (general inquiries)

### Hydro One

1-800-434-1235 (emergency)  
1-800-664-9376 (general inquiries)

### Union Gas

1-877-969-0999 (emergency)  
1-888-774-3111 (non-emergency)

### Inside this booklet

- 4 Types of flooding & flooding prevention
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To report flooding from a watercourse to your local conservation authority:

Credit Valley Conservation  
After hours Flood Duty Officer  
1-800-215-8505

TRCA Floodline voicemail:  
416-661-6514

# Sewer System Types & Types of flooding

## Understanding your home's two different water drainage systems

Water (both stormwater and wastewater) is collected from your home and typically drains away through lateral connection pipes to the stormwater or wastewater systems on your street.

The **stormwater system** is designed to collect rain and melted snow (i.e. clear water) from streets and properties and direct this flow to a nearby pond, creek or lake.

The **wastewater system** is designed to collect water from toilets, sinks, showers, laundry facilities and basement floor drains and direct it to wastewater treatment facilities where it is thoroughly treated.

## Types of flooding

If you've experienced flooding, it's important to know what caused it so you know what steps to take to help prevent it from happening again. The main types of residential flooding are:

- Riverine Flooding** - Flooding as a result of creeks or rivers overflowing onto dry land (See page 8)
- House Drainage** - Flooding occurs when water is not draining away from your house toward roads and sewers. Instead, it ponds inside your property. For example, water ponds inside the washroom sink if the drain was clogged. If you don't shut off the tap, water will flood your house. See page 7 for more examples.
- Sewer backup** Flooding happens when sewers direct water towards your home instead of taking it away. It happens if

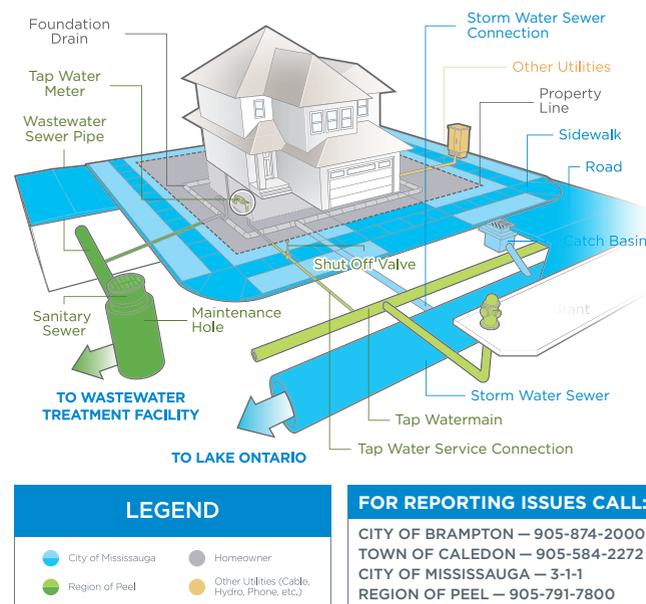
Continued on page 5.

## Who Owns What?

**Municipalities** are responsible for the stormwater system.

**Region of Peel** is responsible for the wastewater system.

**Homeowners** are responsible for the lateral pipe connections from their home to the property line and ensuring proper maintenance of water drainage around the home.

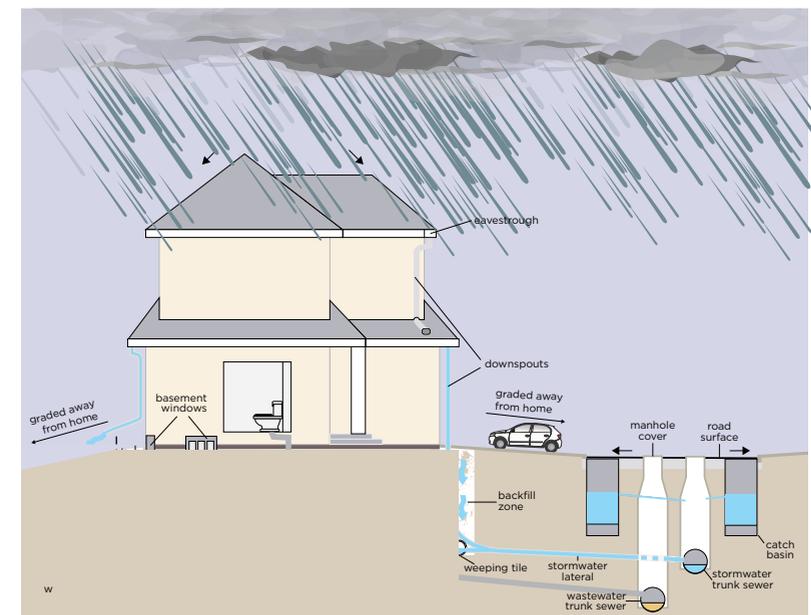


there is blockage in the sewers or the sewers are overwhelmed with too much flow (surcharged). It may happen to both stormwater and wastewater sewers. During flooding TAKE NOTE of: Where the water comes from (i.e. toilets, wall, window well, etc.) what color is the water (i.e. clear, greyish). If it smells (i.e. has odour, no odour). This information can help determine the type and cause of flooding.

## Common sources of basement flooding

- Stormwater or groundwater seeping into basement cracks or leaks in home foundation, basement walls, and/or around basement windows or doors
- Poor lot grading or drainage, or obstructions of drainage by gardens or landscaping
- Failure of foundation drain or weeping tile system
- Sump pump failure or power loss
- Overflowing eavestroughs and/or leaking or blocked downspouts
- Blocked wastewater or stormwater lateral connections from homes to pipes under roadways.
- Surcharged or blocked sanitary wastewater or stormwater pipes under street backing up into homes

## Typical Home drainage



## Glossary of Terms

**Wastewater lateral:** The pipe through which all the wastewater from a house (e.g. toilet, sink, shower, washing machine, floor drain) exits the home plumbing system and enters the municipal wastewater sewer.

**Stormwater lateral:** The pipe through which all the stormwater from the roof, downspouts and foundation drains exits home plumbing system and enters the municipal storm sewer.

**Downspout Disconnection:** The process of separating roof downspouts from the storm or sanitary sewer system and redirecting roof runoff onto pervious surfaces, like your lawn. The discharge point must not affect home foundations, neighbouring properties, sidewalks or driveways.

**Foundation Drain or Weeping tile:** A perforated piping system along the basement footing. It is designed to receive water that has seeped down the foundation walls and direct it away from the home.

**Sump pump:** A mechanical device installed in a sump pit to remove water collected by the foundation drain or weeping tile and pump it to the ground surface or drainage system.

**Sump pit:** A tank or pit in the basement floor that holds the sump pump and collects stormwater drainage from the weeping tile system.

Continued on page 6.

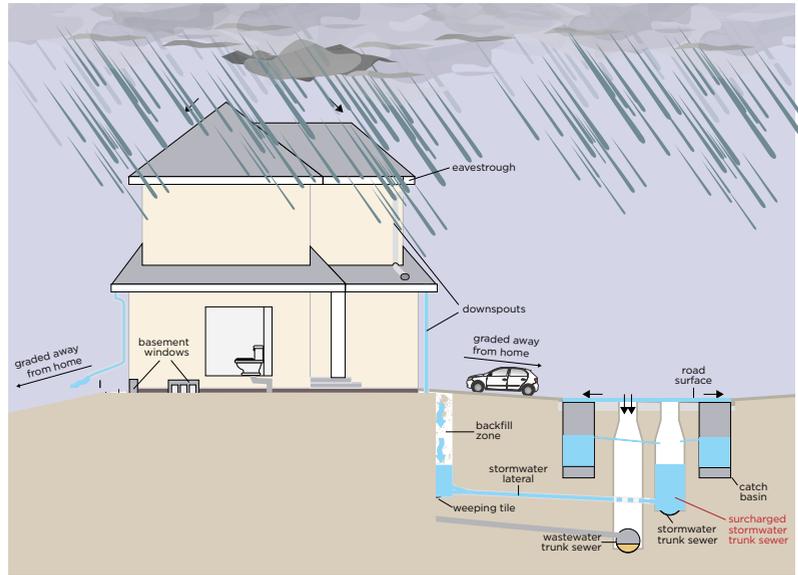
## How can basements flood?

Because your basement is below ground, it is most prone to various types of flooding.

### Sewer backup flooding

Stormwater sewer backups or surcharges can be caused by blockages or extreme rainfall events. This can cause the foundation weeping tiles to backup and water to seep into the basement. In severe cases, stormwater can build up on the road and backup towards the home. Similarly, wastewater sewer backup can be caused by blockages or extreme rainfall events. This can cause the wastewater lateral to backup and sewage to enter your basement through toilet or floor drain. Sometimes, a backwater preventer valve is recommended to avoid this scenario.

#### How a wastewater backup can occur



#### Reduce the risk:

- Consider a sanitary wastewater backflow preventer valve to reduce the risk of sewage backup into your basement.
- Disconnect roof downspouts to reduce flows to laterals and sewers under the roads.
- During flooding events, avoid stepping in ponding water (in your basement or on roads), if you can.
- During flooding events, do NOT open manhole covers if you notice water ponding on the street.

## Glossary of terms continued

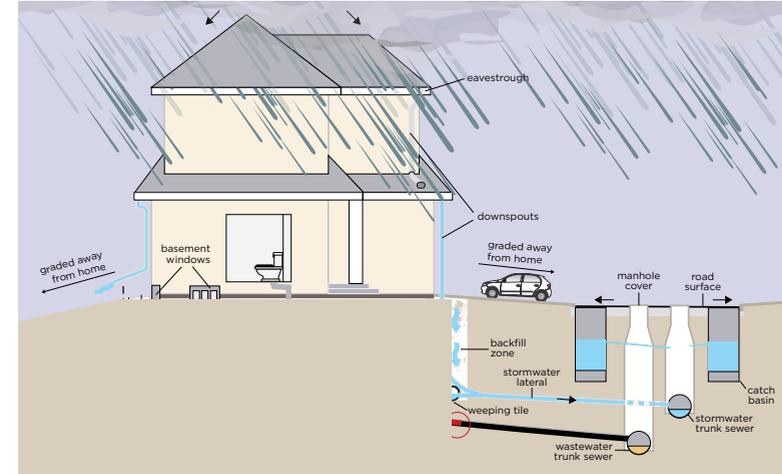
### Backwater Preventer Valve:

A mechanical device that prevents water from an overloaded sewer to back up into your home. The backwater prevention valve allows water to flow from your home during normal use. When properly maintained, it will close automatically if water backs up from the sewer main towards your home (reversal mode), protecting your basement from potential flooding. It is often installed on the wastewater lateral.

**Swale:** A grassy, ditch-like depression used to direct stormwater flows and absorb water.

## House drainage flooding

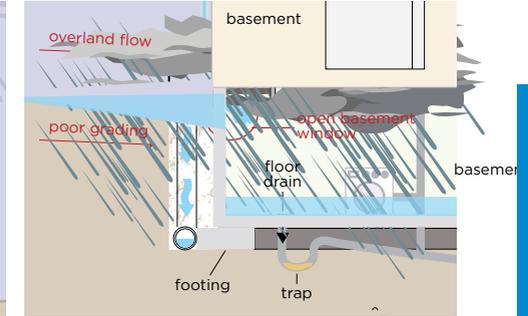
A blockage in the wastewater lateral can result in basement flooding. Most often the blockage is caused by tree roots. On occasion it can be due to solidified grease, paper or other items getting caught in the lateral. On rare occasions, a broken lateral can also cause a blockage. Blockage in stormwater lateral or foundation drain can hold groundwater around your basement walls and result in a wet basement.



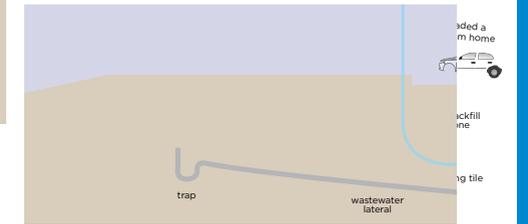
#### Reduce the risk

- Improve lot grading, making sure that the ground slopes away from your exterior walls.
- Maintain all original property swales to divert water away from your home.
- Disconnect your roof downspouts and divert the water at least 2 meters (6ft) away from your home to a vegetated, safe discharge point away from adjacent property lines, sidewalks, or building foundations.
- Have a drainage contractor visit your home to inspect your laterals (both stormwater and wastewater laterals) with a Closed Circuit TV (CCTV).
- Don't take long showers or wash dishes during rain storms.
- Move any important documents or keepsakes out of the basement and store them at a higher level to protect them from flood damage.
- If you live in an area that has a high flood risk, consider hiring a professional to raise the furnace, water heater and electric panel off the floor.

Foundation flooding can occur when heavy rainfall or significant melting snow is trapped around the foundation of your home and seeps in through cracks or window wells. If your roof downspouts are connected to your stormwater lateral connection underground, heavy rain can cause a back-up around your foundation that can increase the chance of flooding.



Poor Grading



Cracks in basement walls and floor

- Check for and reduce leaks in walls, floors and windows or foundation, and ensure windows and doors at ground level are weather protected and in good working order.
- Ensure that gardens next to your basement walls do not retain water next to the house.
- Clean leaves and other debris from eavestroughs and downspouts to ensure proper drainage.
- In winter, shovel ice and snow at least 2 meters (6ft) away from basement walls
- Never pour kitchen grease, fats or oils into your house drains because they may solidify in your plumbing system. Also, do not put objects down the toilet or drains that your plumbing system was never intended to handle.

## Riverine/Overland Flooding

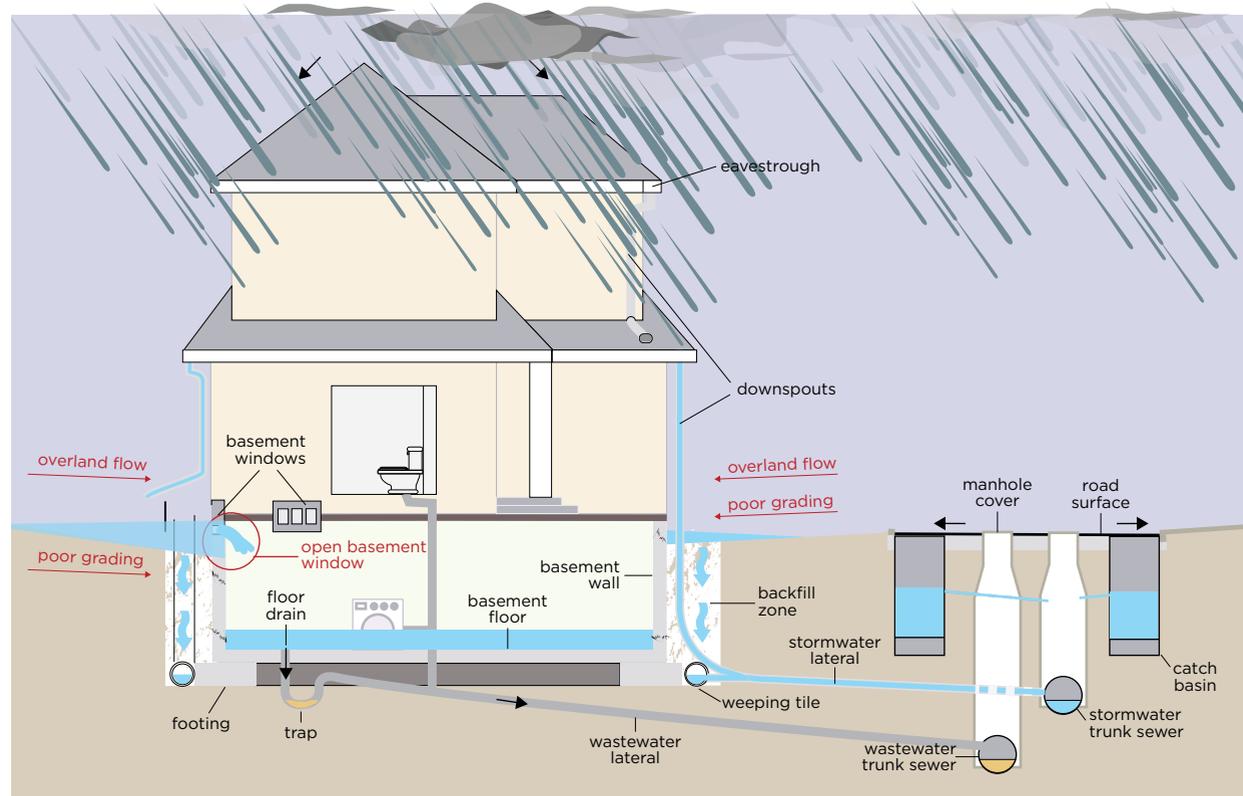
Historically, prior to the determination of regulatory flood plains by conservation authorities, some homes were built in areas along creeks and rivers which can be prone to flooding during extreme rainfall events.

During dry conditions or periods of light rain, water in creeks and rivers remains confined within the banks of the watercourse. During high flow conditions, caused by very heavy rain or rapid spring thaw, water may overtop the banks and swell in to the flood plain. During extreme events, homes located within these areas may be subject to overland flooding (see [TRCA.ca/flood](http://TRCA.ca/flood)).

During extreme conditions, overland flooding can also occur away from watercourses when the quantity of precipitation exceeds the capacity of the roadway and overflows onto private property.



Image courtesy of CVC



### Reduce the risk

- See if your property is within a flood plain (visit [trca.ca](http://trca.ca)).
- Contact your local conservation authority (Credit Valley Conservation, Toronto and Region Conservation Authority or Conservation Halton) to learn more about protecting your home from riverine flooding.

# General Preparation Before a flood

Emergency planning—Know the risks, make a plan, get a kit, reduce your flood risk.

**Are you prepared?** It's never too late. Emergencies can happen at any time and your best defence is to be prepared.

## 1 Know the risks

Like any city, municipalities in Peel are vulnerable to a variety of natural and human - caused hazards. Make sure you and your family members know what the hazards and risks are in the area you live. Even if you feel your community has a low risk of flooding, remember that anywhere it rains, it can flood. Just because you haven't experienced a flood in the past, doesn't mean you won't in the future. Floods occur because of a number of factors including rainfall, topography, flood-control measures, creek flow, old construction practices and new construction and development.

## 2 Make a plan

Make sure everyone in your family knows what to do before, during and after an emergency such as a flood. Review and discuss safety tips with your household to make sure everyone understands what to do during a flood. Hold a family meeting to discuss how you can best prepare for an emergency. Have a plan. If you live alone, develop a plan for yourself with links to neighbours and friends. Keep a copy of your plan in a safe place, such as your Family Emergency Go-Kit. Photocopy your plan and keep it in your car and/or at work.

## 3 Get a kit

Assemble a 72 hour Go-Kit to use during an evacuation of your home or community. Make sure everyone living in the home knows where to find the Go-Kit.

## 4 Reduce your flood risk.

Check for basement flood risk factors on Page 7 and correct those that apply to your home. The Region of Peel and your local municipality provide some programs to reduce the risk of flooding. Contact your local municipality or the Region of Peel for more information and to see if you're eligible. Do not hire a third party to do work on your home without confirming your eligibility for any rebates first.

*Continued on page 10.*



## Are you prepared?

### A few steps you can take inside your home to reduce flood damage

- Do not store your important valuables or documents in the basement. Keep them at a higher level, protected from flood damage.
- Keep basement floor drains clear of obstructions.
- Elevate the furnace, water heater and other large appliances, and your electrical panel in your home if you live in an area that is prone to flooding.

### Alerts Tracking

For public weather alerts, visit [weather.gc.ca/warnings/](http://weather.gc.ca/warnings/) or follow @ECAAlertON24 on Twitter.

Subscribe to local social media.

- @CityBrampton
- @citymississauga
- @YourCaledon
- @regionofpeel
- @TRCAFlood
- @CVC\_CA

and/or sign up to receive TRCA flood messages by email at [trca.ca/get-flood-messages](http://trca.ca/get-flood-messages)

**5 Keep well informed by following your local social media and listening to media announcements**

**6 Know the evacuation procedures.**

**7 Secure as many outdoor items as possible around your home**

**8 Keep drains, gutters and downspouts free of dead leaves and other debris.**

**9 Ensure sump pumps and backwater valves are working properly.**

### A 72 hour Go-Kit includes:

- Flashlight
- Battery-operated or crank radio
- Spare batteries (for flashlight and/or radio)
- First-aid kit
- Candles and matches/lighter
- Extra car keys and cash
- Important papers (copies of identification, insurance policies)
- Non-perishable food and bottled water (as much as your family can manage to carry)
- Items needed to open food (such as a manual can opener)
- Clothing and footwear
- Blankets or sleeping bags
- Toilet paper and other personal hygiene items
- Medication (especially prescription—72 hours worth at least)
- Eyewear (glasses/contacts)
- Whistle (to attract attention, if needed)
- Playing cards (or other quiet games/toys)
- Paper/pencils/pens
- Map of your community (for locating shelters)
- Phone charger



### To prepare for a flood, you may want to include some additional protective equipment in your Go-Kit including:

- protective clothing to fully cover skin
- hard hat
- gloves
- N95 Masks
- protective eyewear
- rubber boots (puncture-proof and waterproof are best)
- a copy of this guide

### If you know a flood is coming:

- Shut off electricity at the panel or fuse box **ONLY** if the area around the main power is dry
- Move toxic or hazardous materials away from the flood area to avoid pollution
- Secure any outdoor items or move them inside
- Turn off basement furnaces and outside gas valves
- Reduce home water use during heavy rainfall events.

**Always have your cell phone charged and in a location that makes it easy to grab if you must evacuate your home.**

## Be Pet Prepared

**Make sure your family emergency plan includes ALL your family members.**

### Pet Emergency Survival Kit Checklist

Prepare a pet emergency survival kit and keep it with your family kit. Be sure to check the expiry date of your contents twice a year.

- Food, water, bowls, manual can opener and spoon
- Up-to-date ID tags
- Current photo of you and your pet
- Emergency contact list of pet friendly hotels/motels outside your area, friends, relatives and your veterinarian
- Copies of medical records/vaccinations
- Information on feeding schedule, medical and/or behavioural problems
- Medications and first aid kit
- Familiar bedding, small toy and brush
- Leash, collar or harness and muzzle (dogs)
- Litter/pan and scooper (cats) or poop n' scoop bags (dogs)
- Carrier large enough to transport and house your pet
- Licence and microchip documentation

Emergency kit supplies vary for different kinds of animals. Please contact your veterinarian or visit [ontariospca.ca](http://ontariospca.ca) if you have any questions.



## Important Telephone Numbers

Report an injured or distressed animal /  
Report a lost or found pet  
**3-1-1**

### Mississauga Animal Services

905-896-5858  
or  
905-615-4311

### Brampton Animal Services

905-458-5800  
ext. 311

### Caledon Animal Services

905-584-2272  
ext. 4698

### Don't forget your pets.

For information, visit [mississauga.ca/animalservices](http://mississauga.ca/animalservices) or [ontariospca.ca](http://ontariospca.ca) [brampton.ca/animalservices](http://brampton.ca/animalservices)

**If it's too dangerous for you to stay, it's too dangerous for your pet to stay.**

## Insurance considerations

Water-related damage from a flood can be extensive and the subsequent repairs could be very expensive. Water risks can come from both inside and outside your home. According to the Insurance Bureau of Canada (IBC), increasingly severe weather means that basement flooding and water damage are becoming more common. IBC offers the following tips when considering your coverage.

- **Sudden and accidental bursting of plumbing pipes and appliances** is covered by all residential policies. However, damage may not be covered when freezing causes the escape of water.
- In general, **water entering a home from overland flooding is not covered**. Overland flooding usually occurs when bodies of water, such as creeks, dams and other watercourses, overflow onto dry land and cause damage. Overland flooding and seepage can't be covered by home insurance because it is only a risk for the small percentage of the population who live in a flood plain. Since the purpose of insurance is to spread risk among many policyholders, flood insurance for those at risk would be unaffordable.
- Water damage in a basement due to a sewer backup is only covered if specific **sewer backup coverage** has been purchased.
- In certain circumstances, homeowners who are unable to return home due to insurable damage are entitled to additional living expenses (**this coverage is generally not available if an evacuation becomes necessary as a result of overland flooding**).
- If you do experience flood damage, you will need to provide a list of lost or damaged items as part of your insurance claim. Review your insurance policy so you understand what items to list. If you had a household inventory or video before the disaster, retrieve it for the insurance adjuster.

## Take a household inventory or video so you can use it as part of your insurance claim.

## Talk to your insurance representative to make sure you have appropriate coverage, because basement flooding and water damage are becoming more common.

## Disaster Recovery Assistance for Ontarians

A program to help people affected by natural disasters get back on their feet. Check your eligibility at [ontario.ca/disasterassistance](http://ontario.ca/disasterassistance)

Home and business insurance policies regarding water damage in your home can differ among insurance companies, so be sure to talk to your insurance representative about your specific coverage details.

If you have concerns regarding the handling of your insurance claim, IBC is the National industry association representing Canada's private home, car and business insurers. They can provide assistance with answers to insurance questions. They can be contacted via the IBC Ontario Consumer Information Centres at:

**1-800-387-2880**  
Email: [gtaflood@ibc.ca](mailto:gtaflood@ibc.ca)  
or visit the IBC's website [ibc.ca](http://ibc.ca)

The Ombudsman is an independent office of the Legislature who investigates complaints from the public about Ontario Government services. If you would like to file a complaint with the Office of the Insurance Ombudsman please visit their website at [fscs.gov.on.ca](http://fscs.gov.on.ca)

## How to file a claim for water damage to your home

1. Contact your insurance representative to report the loss as quickly as possible and discuss insurance coverage available to you under your homeowner's insurance policy.
2. Your Insurance representative will assign an insurance adjuster to assist with damage clean up.
3. Take steps necessary to prevent further damage.
4. Prepare your notice of claim in writing, and ensure it contains the following information:
  - The name, mailing address, and telephone number of the person making the claim.

- The address where damage has occurred, the date and approximate time of the damage.
  - A description of what happened including a list of damaged items and photographs of the damage.
  - The name of any contractor involved or retained.
5. Submit all evidence in writing in a timely manner to your insurance representative who will commence coordination of any possible recovery.
  6. Gather any original purchase invoices or quotes for the damaged property and items.
  7. Request that any communications or denial of your claim from the insurer be made in writing with a full explanation as to the justification for the decision.
  8. Review your policy wording and endorsements with your insurance representative to verify exactly what the insurer has committed to covering.

# During a flood

## What to do during a flood

Flooding can sometimes happen quickly and may affect just a few or many homes. Monitor your local news for weather updates and special announcements from local officials. You can also check your local municipality's website and follow their social media.

## Reducing the risk of flood damage

If heavy rains are forecasted for your area and the potential for flooding exists, the following actions can help reduce property damage to your home:

- Clear drains, gutters and downspouts of dead leaves and other debris.
- Move furniture, electronics and items of sentimental value out of basements and lower levels of the home or raise them off the floor.
- To reduce the chances of rugs getting wet, roll them up and if possible, store them on higher floors.
- Ensure sump pumps and backwater valves are working properly. If a sump pump has a battery backup, ensure the batteries are fresh and replace the batteries as required.
- Make sure basement windows are closed.
- Ensure that generators, hoses and portable pumps are maintained and accessible should they be required.
- Always operate gas powered equipment in a well ventilated outdoor area.

## Potential hazards in flooding conditions

Flooding conditions can create hazardous situations both in and around your home. Here are some potential hazards to be aware of:

- Standing water may be electrically charged by indoor electrical systems and underground or downed power lines. Keep yourself, children and pets away from standing water and downed power lines.
- Floodwaters can move quickly and pose a risk of drowning. Protect your safety and do not drive or walk through floodwaters.
- Building structures can be affected and become unsafe. Leave your home if there are any signs of potential foundation and structural damage, including to porch roofs and overhangs.
- Floodwaters often erode roads and walkways. Roads may have weakened and could collapse under the weight of a car. Don't drive or walk through flood waters.
- Flood waters can contain sewage (may contain bacteria, viruses or parasites), chemicals and debris like broken glass. Avoid low-lying areas. Keep yourself, family and pets away from flood waters. Do not enter a flood area unless wearing appropriate personal protective equipment and clothing.

## Evacuation

Leave your home when asked to do so by Emergency Officials. Follow the route specified.

For your protection, you may decide it is necessary for you to evacuate your home or an area impacted by flooding. You may also be officially notified to evacuate. Pay attention to:

- a weather alert
- social media
- local media
- officials going door-to-door

If you expect you might need to evacuate during an emergency, keep phone lines open for use by emergency workers and monitor local radio, TV, and the Internet for emergency instructions and current information. Also be sure to follow instructions from officials and evacuate immediately if asked. Travel only on routes specified by officials—a shortcut could take you to a blocked or dangerous area. If you have time and can do so safely:

- Take your Go-Kit (refer to Before a Flood for more details), medications, and needed supplies with you in the event of an extended evacuation.
- If it is safe to do so, shut off water, gas and electricity in your home. If not, evacuate your home but do not go back inside until a utility company has confirmed it is safe.
- Check to see if your neighbours require assistance.

## Emergency Evacuation Centres

In some cases, an emergency evacuation centre may be set up to provide shelter and food to people affected by the flood. If so:

- If you are evacuated, register with the authorities at the evacuation or reception centre so you can be contacted and reunited with your family and loved ones.
- If you are going somewhere other than a designated evacuation centre (e.g. a friend's or relative's place), please register with the reception centre, notifying them of your whereabouts so that you can be contacted for accountability, future correspondence, and special instructions.

Keep up-to-date with the latest information:

[brampton.ca](http://brampton.ca)  
[mississauga.ca](http://mississauga.ca)  
[caledon.ca](http://caledon.ca)

 [@citymississauga](https://twitter.com/citymississauga)  
 [@citybrampton](https://twitter.com/citybrampton)  
 [@yourcaledon](https://twitter.com/yourcaledon)

Sign up for Municipal weather alerts. Get the latest forecasts and hazardous weather conditions at [weather.gc.ca](http://weather.gc.ca).

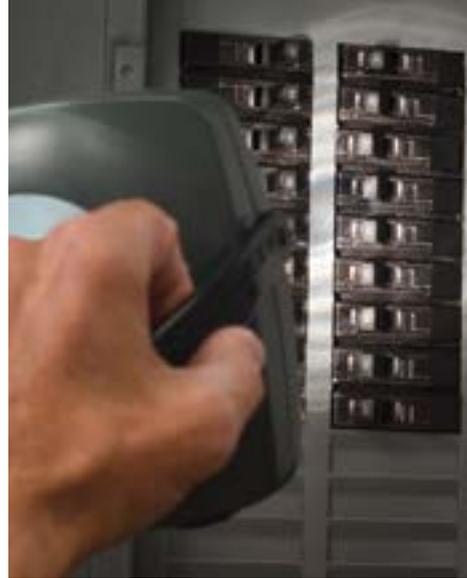


## If you remain in your home

Remember that flooding can affect your safety and possibly your health. Take precautions to prevent illness and injury before you enter any area that has been flooded.

### Helpful hints:

- Assume that everything touched by floodwaters is contaminated. Stay clear unless your skin is covered and you are wearing protective clothing such as coveralls, rubber boots, gloves and masks.
- Keep children and pets away from flooded areas and contaminated items.
- Before entering your home, check for foundation and structural damage and make sure all porch roofs and overhangs are supported. If you suspect any damage, leave your home until a professional such as a building inspector or structural engineer has confirmed it is safe to re-enter.
- If you notice any gas odours, evacuate your home and contact the gas company or fire department.
- Flood waters can contain sewage (may contain bacteria, viruses or parasites), chemicals and debris like broken glass. Keep yourself, family and pets away from flood waters. Do not enter a flood area unless wearing appropriate personal protective equipment and clothing.
- Only if it is safe to do so, turn off electricity in your home at the main breaker or fuse box.



# After a flood

## What to do first

- Report your flood to your municipality - see page 3 for phone numbers.
- Take pictures.
- Call your insurance company as soon as possible. Report any damage caused by the flooding. They will also advise you on how to proceed.
- Call in professionals such as a damage restoration company to have the area cleaned properly.
- Where possible, take measures to dry your home quickly to prevent further damage and mould growth. Use fans and dehumidifiers.

## Initial safety precautions

Flooding can affect your safety and your health. Take precautions to prevent illness and injury.

- If you had to evacuate your home, stay tuned to your local radio or television station or call your local municipality (see page 3 for phone numbers) if outside city limits to find out when it is safe to return home. You can also visit your municipality's website for updates.
- You will be notified if the municipal drinking water is unsafe to drink.
- Don't drive or walk through floodwaters.
- Stay away from downed powerlines.
- Assume that everything touched by floodwaters is contaminated.
- Keep children and pets away from flooded areas and contaminated items.
- When you do return home, go with someone else and carry a cell phone.

## Before re-entering your home after a flood

- Ensure local officials have given permission to enter.
- Check for foundation and structural damage. Check that all porch roofs and overhangs are supported.
- If you are unsure about the safety of your home, do not go inside. Contact a qualified home inspector or structural engineer for advice.
- Do not attempt to reconnect the electricity, natural gas, telephone or TV cable yourself. Call your service provider for assistance.
- If you have water contact or damage to your electrical system:
  - o If water in your basement has risen above the electrical outlets, baseboard heaters, furnace or electrical panel, DO

## How to locate flood damage restoration companies

**Institute of Inspection Cleaning and Restoration Certification**  
[iicrc.org](http://iicrc.org)

**Better Business Bureau Central Ontario**  
[bbb.org](http://bbb.org)

*Search for "fire and water damage" in the accredited business directory.*

**Yellow Pages Directory**

[yp.ca/business](http://yp.ca/business)

*Search for "flood damage" after you enter your municipality.*

**Ontario College of Trades**

[collegeoftrades.ca](http://collegeoftrades.ca)

*Find out the qualifications and standings of trade professionals who are members of the College.*

## Evacuation due to flooding

- If you need to leave your home because flooding is imminent and there is no floodwater in your basement:
  - o Move electrical appliances and devices out of your home or to an area in the house above the expected level of flood water. Do not attempt to use these products if they have been in contact with flood water.
  - o Watch out for downed powerlines in flood-affected areas. If you see one, stay back 10 metres or the length of a school bus and call 911 and your local electric utility to report it.

DO NOT enter the basement until the power has been disconnected by the local electric utility.

- o If your electrical system has been affected, your utility may not be able to restore power to your property until damage has been assessed and necessary repairs have been made.
- o Hire a Licensed Electrical Contractor to evaluate your home's electrical system to determine if it is safe to have the local electric utility restore power to your home.
- o The contractor will file for a permit with the Electrical Safety Authority (ESA) so there is a record of the work. When the contractor completes the work, the contractor will notify the ESA and the ESA inspector will confirm work has been done safely and power can be reconnected. The ESA will inform the utility that it is safe to reconnect and the utility will reconnect when it is safe to do so. Ask the contractor for a copy of the ESA Certificate of Inspection for your records and insurance.

## Clean up

### Before you clean up

Flood waters can contain sewage, chemicals and debris like broken glass. Wear clothing that covers your skin along with appropriate personal protective equipment including:

- hard hat
- protective eyewear
- gloves
- rubber boots (puncture-proof and waterproof are best)
- N95 or equivalent masks

**If it is safe to do so, turn off the electricity at the main breaker or fuse box using a dry piece of wood. If you cannot, do not enter the space and contact your hydro company for assistance.**

Do not use electrical appliances that are wet or may have been affected by flood water until a qualified electrician has inspected them.

Do not use anything requiring water in your home (e.g. toilets, showers, washing machine and sinks) until the flood water from your house has been removed.

Cleaning up a home that has experienced extensive water damage or has been flooded with sewage-contaminated waters may require a qualified flood damage restoration company. Refer to page 19 for information on how to locate one.

### First steps

Take measures to prevent further damage to your home and belongings:

- **Remove standing water.** Remove standing water with pumps or pails, a wet/dry vacuum and rags and/or towels. If you experience severe water levels in your basement, contact a professional damage restoration company to help drain the water slowly to prevent structural damage.
- **Make decisions about what to keep and what to throw away.** Remove as much as you can

out of the rooms that were flooded as quickly as possible to help prevent water damage and mould. Some belongings, especially those that are contaminated with sewage, or those that cannot be quickly dried and effectively cleaned, may not be salvageable.

- **Remove soaked and dirty building materials and debris,** including wet insulation and drywall.
- **Quickly and thoroughly dry and dehumidify your home.** Ventilating the area with outdoor air and fans will help. A dehumidifier will work to remove moisture from the home.



### For homes on private septic systems

Depending on the extent of flooding to your property, you should consider having your septic system inspected by a licensed contractor prior to reuse.

### For homes on private wells

Test for bacteria. Information regarding how to obtain water sample bottles and instructions for disinfecting are available from the Region of Peel at 905-791-7800. Caledon residents call toll free at 905-584-2216.

## Surface cleaning

- **Clean all surfaces and belongings.** Wipe or scrub away dirt and debris using a solution of unscented detergent and water.
- **Disinfect all surfaces and belongings.** Be sure they have already been thoroughly cleaned. Use a disinfectant such as household bleach and **carefully follow the directions for use on the product label.** Be sure to wear appropriate personal protective equipment and ventilate the area.

## What to do with household items

Items that have been contaminated by sewage or that have been wet for a long time and cannot be washed and disinfected should be discarded. Refer to page 21 for information on flood waste disposal.

**Carpets and upholstered furniture** that can be salvaged may need to be professionally cleaned and dried. If these items are sewage-soaked, they should be discarded.

**Wet drywall and insulation** should be removed to allow studding to dry.

**Washable clothes** can be salvaged.

**Salvage** books, photographs and papers by slow, careful drying.

## Appliances

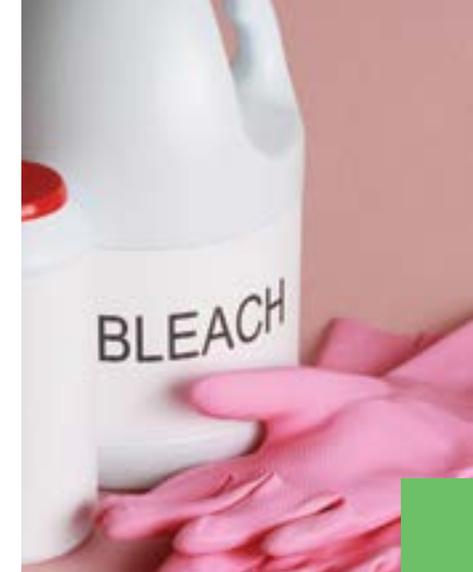
- A qualified service technician should verify the safety of any appliance that has been affected by flood water before it is used.
- Thoroughly clean and disinfect appliances that can be salvaged.
- Appliances that cannot be salvaged should be discarded.

## Medicines, cosmetics and other toiletries

Discard these items if they have been in contact with flood water. Visit [peelregion.ca/waste](http://peelregion.ca/waste) for proper disposal.

## Documentation

- Store all valuable papers that have been damaged in a freezer until they are needed. After your clean-up, 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 your insurance agent.



Check product labels before use.

## Food safety

The following foods should be considered unsafe and disposed of properly:

- Food in boxes, bags, paper and plastic wrap
- Food and drinks in bottles, plastic containers and jars, including home preserves (the area beneath the lid cannot be properly cleaned and disinfected)
- Fresh foods such as meats, fruits, vegetables, and eggs

Commercially canned food without dents, leaks and bulges are considered safe if properly cleaned and disinfected.

Thoroughly clean and then disinfect dishes, eating and cooking utensils and food contact surfaces. Use a disinfectant that is non-toxic and safe for food contact surfaces. Follow the directions for use on the product label.

Discard any eating utensils, cutting boards and other food contact surfaces that cannot be properly cleaned and disinfected.

**If you have been without power, food in your refrigerator and freezer may be at risk.** Follow these tips to reduce the risk of food-borne illness:

- Avoid opening the refrigerator and freezer doors. If the door is kept closed, refrigerators will normally keep foods cool for four hours. A full freezer without power will normally keep food frozen for approximately two days, and a half-full freezer will normally keep food frozen for one day.
- Add bags of ice or ice packs to help keep the food cooler for a longer period of time.
- Consider using coolers or ice chests with a supply of ice for food storage.
- Throw out perishable foods such as meat, fish, poultry, eggs and leftovers that have been at temperatures above 4°C (40°F) for more than two hours in your green bin.
- Throw out food items that have come into contact with raw meat juices in your green bin.



**Food Safety**  
If in doubt,  
throw it out.

**Do not consume food products prior to consulting with health authorities or family doctor. Contact Peel Public Health at 905-799-7700 for more information.**

**Frequently wash your hands with soap and clean water, especially after being in contact with flood water, sewage or items that have been contaminated by either.**

## Disposing of Items

- Visit [peelregion.ca/waste](https://www.peelregion.ca/waste) for information about what disposal methods are available for all your waste.
- Dispose of non-salvageable items and building materials by taking it to your nearest Community Recycling Centre (CRC).
- Bag items that are considered regular waste and place at the curb on your regularly scheduled waste collection day. Bags or containers of garbage are not to exceed 23 kg (50 lb).
- Flooring, including carpet and underpadding, must be bundled in maximum two-by-four foot lengths.
- Schedule collection of metal and appliances by dialing 311 or visit [peelregion.ca/waste](https://www.peelregion.ca/waste)
- Unsafe food must be put in your green bin.
- Contaminated boxes, cans, bottles and paper should be placed in a garbage bag at the curb. *Do not place these items in the Blue Box as they no longer meet recycling standards.*

### Items NOT accepted as regular waste and bulk waste

The following items are not collected at the curb. Please drop these items at your nearest CRC. Please visit [peelregion.ca/waste](https://www.peelregion.ca/waste) for locations and timing.

- Electronics
- Household hazardous waste, e.g. solvents, garden chemicals, home cleaning products
- Metal and appliances

## Mould

Mould can grow on wet surfaces in as little as 48 hours and any growth over time indicates a continuing moisture problem. If you begin to notice mould growth anywhere in your home after the flood, it is important to remove the source of moisture and clean the affected area.

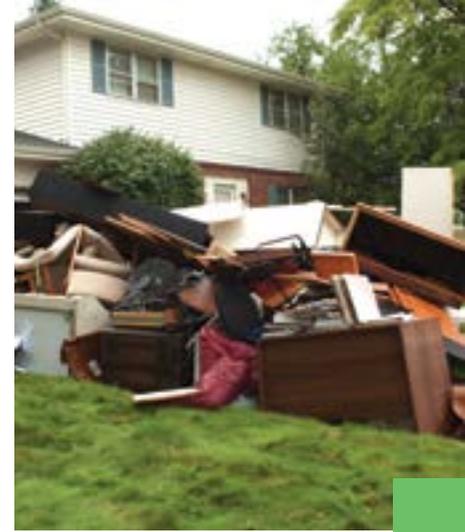
Exposure to mould does not always have negative health effects, but some individuals may be more sensitive or vulnerable to exposures

### Getting rid of mould

The size of the affected area will determine whether you should clean and remediate the area yourself or hire a professional:

**Yourself:** small areas no more than one square metre.

**Professional:** large areas greater than one square metre.



**When placing regular waste or bulk waste at your curbside, please ensure that collection crews have safe access and that parked cars are not blocking the waste material.**

**Check [peelregion.ca/waste](https://www.peelregion.ca/waste) for updates concerning flood waste disposal following major flood events.**

## Protect yourself and others when cleaning mould

- Wear a disposable particulate mask (for example, 3M 8210 or equivalent N95 mask), unvented safety goggles and household rubber gloves.
- Consider isolating the room to protect infants, pregnant women, the elderly or those with existing health problems such as respiratory disease or a weakened immune system.
- Use an exhaust fan blowing to the outside to help prevent contamination of other areas of the house, as well as to provide ventilation.

## Cleaning mould from building materials, furnishings and other items

### Washable surfaces, such as tile or glass

- Wipe or scrub surfaces using a damp cloth and a solution of water and unscented detergent. Check the product label for instructions.
- Sponge with a clean damp cloth.
- Dry quickly and thoroughly.
- Once dry, vacuum the cleaned surfaces as well as surrounding surfaces with a HEPA (high-efficiency particulate air) vacuum cleaner.

### Drywall

- Wipe the surface of the wall using a damp cloth and a solution of water and unscented detergent. Check the product label for instructions.
- Dry quickly and vacuum with a HEPA vacuum cleaner.
- If you are unable to wipe away the mould, it is best to replace the drywall.

### Carpets and upholstered furniture

If these materials were affected by flood water and mould is visible, they will likely need to be professionally cleaned or discarded.

**Any mouldy material or item that cannot be effectively cleaned should be sealed in plastic and disposed of.**

**Sponges used for cleaning mould should be discarded after use.**

*See Health Considerations for Mould on page 25.*



## How to locate a mould removal professional

### Yellow Pages Directory

[yp.ca](http://yp.ca)

Search “mould removal and control”.

Flood damage restoration companies may also have experience in mould removal.

**For more information on mould, how to prevent it and how to get rid of it visit [peelregion.ca](http://peelregion.ca) or dial 905-791-7800.**

## Replacing documents and money

Keep copies of important documents in a secure location **NOT** in your basement

**Birth, marriage and death certificates**

**Health card**

**Driver’s licence and vehicle registration**

1-800-267-8097

[ontario.ca/serviceontario](http://ontario.ca/serviceontario)

**Employment Insurance**

**Social Insurance (SIN) card**

**Canada Pension Plan papers**

**Old Age Security card**

[servicecanada.gc.ca](http://servicecanada.gc.ca)

**Insurance policies**

Your insurance agent

**Citizenship papers**

Citizenship and

Immigration Canada

1-888-242-2100

**Permanent Resident Card**

Citizenship and

Immigration Canada

**Passports**

Local passport office

[passport.gc.ca](http://passport.gc.ca)

**Income tax records**

Canada Revenue Agency

**Wills**

Your lawyer

**Medical records**

Your family doctor

**Land titles**

Provincial Land Titles office

**Animal permits/licences**

See page 11

**Bank books**

Your bank

**Money**

(partially or completely destroyed)

1-800-303-1282

[bankofcanada.ca](http://bankofcanada.ca)

**Canada Savings Bonds**

(partially or completely destroyed)

1-800-575-5151

**Credit cards**

Issuing companies

**Divorce papers**

Court office where the divorce was filed

**Stocks**

Issuing company or your lawyer

**Military discharge papers**

Library and Archives Canada

1-866-578-7777

**If your home is damaged by water, gather up any documents or items that can be salvaged and put them in a package to protect them from further damage; they may be useful for claim or reference purposes.**

**Visit [servicecanada.gc.ca](http://servicecanada.gc.ca) for useful information on replacing identification.**

*Adapted from One Step at a Time: A Guide to Disaster Recovery, Emergency Management British Columbia.*

# Health considerations

Stay safe while addressing a flood in your home. Below is some important health information, along with tips and considerations to keep in mind while you are managing clean up and repairs.

First and foremost, wear appropriate personal protective equipment, wash hands frequently with soap and clean water and protect open sores with waterproof coverings.

## Potential health risks

### Contaminated flood waters can pose a risk to your health

**Ingestion** of disease-causing bacteria, viruses and other germs found in sewage can cause gastrointestinal (GI) illness. Ingestion occurs from eating contaminated foods, drinking contaminated water or accidentally touching your mouth with contaminated hands. Vomiting and diarrhea are common symptoms of GI illness.

**Skin contact** with contaminated flood water can cause skin rashes and infection in open sores.

### Indoor air quality

During clean up and over time, indoor air quality can be affected, such as:

- Dust created during clean-up activities can become airborne. Close off the flooded areas during clean up and repair to prevent dust spreading to other rooms in the house. Also, keep rooms well ventilated while working.
- Use of cleaners and disinfectants can release vapours. Keep rooms well ventilated. Wear protective clothing such as gloves and masks and keep children away from the area when using these cleaning solutions.
- Mould can grow on wet building materials and belongings. Discard contaminated items and dry remaining items as quickly as possible (i.e. within 48 hours).

**If you are experiencing health effects or are injured, seek appropriate medical attention.**

## Mould

- Moulds are found both outdoors and in homes and buildings, and can grow on practically anything that collects dust and holds moisture.
- Excessive dampness and mould growth on building materials and belongings can pose potential health risks.
- Most types of mould are not a health concern for healthy individuals, but some individuals may experience respiratory symptoms such as asthma, sore throat and allergy-like symptoms.
- Indoor air testing for mould is generally not recommended as results can be difficult to interpret.

### Health effects related to mould depend on:

- the type of mould
- the amount of mould
- the production of certain substances by the mould
- the degree of exposure
- the health condition of the person exposed

### Some people who may be more at risk of having health effects when exposed to mould include:

- pregnant women
- infants
- the elderly
- those with existing health problems such as respiratory disease or a weakened immune system



## Coping after a crisis

You may experience strong feelings of stress immediately or weeks after a flood or significant weather-related event. Stress can change how you feel and act. Acknowledging how you feel can help you manage stress. It is normal to have feelings of anxiety, grief, sadness, helplessness and anger after a significant event. Everyone has different methods of coping, and it will take time before you start to feel better.

### Stress

Stress is a normal response to good and bad life events but can become a problem when it affects how you cope or manage in daily life.

#### Some tips to help cope:

- Talk about your feelings with family, friends, neighbours and co-workers.
- Set a schedule and follow a normal routine as much as possible. It will take time before your life returns to normal.
- Eat healthy meals.
- Try to get regular sleep.
- Exercise and stay active.
- Accept help from your community.
- Offer to help in your community.
- Establish a family emergency plan in case of future events.
- Be compassionate with yourself and others.

### Talking to children

It is important to be aware of your children's reactions in the aftermath of a significant event. Changes in their behaviour may indicate they are under significant stress. For example, young children might start thumb-sucking or bed-wetting, develop aches and pain, become clingy or fearful. Children might withdraw and try to be brave, when they really need your reassurance.

## Signs that stress may be becoming an issue:

- Strained relationships with family and friends
- Changes in appetite and sleep patterns
- Inability to concentrate on work or school
- Replaying the event in your mind
- Avoiding places that remind you of the event
- Increased alcohol or drug use — i.e. turning to unhelpful coping strategies
- Feelings of sadness lasting more than two weeks
- Excessive guilt
- Isolating yourself
- Thoughts of harming others or yourself including suicide

## After a community crisis situation, crisis and outreach programs often arrange emergency assistance services — listen to media resources to find out more.

## Talk about what has happened to help get yourself and your family back on track.

### Some suggestions when talking to children

- Encourage children to express themselves and ask questions. They may want to do this by drawing or playing instead of talking.
- Take their fears seriously. Reassure them and give them additional attention.
- Let children know they are not to blame when bad things happen.
- Admit to them that you also felt afraid and may still be experiencing some feelings of fear or anxiety, but that with time and possibly some outside help you will work it out together.
- Tell children what you know about the situation. Be honest but gentle. Talk to them about the disaster.
- Keep children with you whenever it is possible, even if it seems easier to look for housing or help on your own. At a time like this, it's important for the whole family to stay together.
- Expect regressive behaviour and be tolerant of it.
- Give them a real task to do, something that gets the family back on its feet and let them help in planning something to remember the loss.
- Watch for health problems and signs of stress, such as nightmares and depression, in you or your family. Seek help if you need it. Many organizations in your community can provide counselling and other supports.
- Model self-care and continue with regular routines (teeth brushing, bedtime stories) and chores (picking out their own clothes to wear, etc.). Get enough sleep and exercise.
- Avoid or minimize watching news reports of frightening events.

Adapted from *One Step at a Time*, the Canadian Red Cross Society.

## Where to go for help

### 24 Hour Crisis

Hospital emergency department

### Counselling/Therapy Services

#### One-Link

Telephone: 1-844-216-7411

Trillium Health Partners – Physician referral for patients to Mental Health Services at Trillium Health Partners can be made through completing the one-link referral form. one-link is a single point of access for referrals to ten addiction and mental health service providers funded by the Mississauga Halton Local Health Integration Network. More information can be found about one-Link at [one-Link.ca](http://one-Link.ca).

#### Family Services of Peel

905-270-2250

#### Associated Youth Services of Peel

Telephone (Toll Free): 1-800-762-8377

Telephone: 905-890-5222

#### United Way

905-602-3650

# Repairing your home

## Tips and considerations when you are repairing your home

- **Do not attempt to reconnect the electricity, natural gas, telephone or TV cable yourself. Contact your service provider to reconnect it for you.**
- A qualified service technician should verify the safety of any electrical system or appliance that has been affected by flood water before it is used.
- Contact your local heating repair company to inspect your furnace and chimney.
- Professional companies can help you with cleaning and repairing your home. If you are making an insurance claim, your insurance adjuster may help you find a contractor.
- Arrange for any necessary inspections and building permits. Your contractor may take care of these for you. If not, contact your local municipality to find out what steps you need to take.
- Consider installing basement flooding prevention devices such as a backwater valve or sump pump.



## Tips for hiring contractors

When repairing your home, be sure to work with a reputable contractor. Here are some helpful tips:

- Visit the Better Business Bureau at [bbb.org](http://bbb.org). Search “Contractor – Remodel and repair” after you enter your city and province.
- Get three quotes.
- Check references.
- Sign a written contract for the work.

# Flooding checklist

## Flooding prevention

- Disconnect roof downspouts and divert runoff at least 2 metres (6ft) away from your home and away from sidewalks, driveways and neighbouring properties.
- Ensure that sump pumps are working properly and have a backup power supply in case of power outage.
- Do not drain or flush grease, oil and other materials not meant for the plumbing system.
- Ensure weeping tile system is disconnected from the wastewater system.
- Improve your lot grading to make sure the ground slopes away from your home.
- Keep drains free of dead leaves and debris.

## When a flood happens

- Contact your municipality at 3-1-1 to report your flood.
- Call your insurance company as soon as possible.
- After the water has been safely removed, dry your home as quickly as possible to prevent mould growth.
- If damage is extensive, find a reputable restoration company and/or contractor to help with clean up and repair. Visit [bbb.org](http://bbb.org).

## Health and safety

- Seek help if you or your children experience strong feelings of stress following a flood or significant weather-related event.
- Wash hands frequently with soap and clean water.
- Wear protective clothing before cleaning contaminated areas.
- Clean contaminated surfaces first before disinfecting.
- Carefully follow directions on disinfectants before using.
- Have an exhaust fan to help dry areas quickly.
- Discard contaminated food items.
- Remove mould and potential sources of mould.

## Emergency preparedness

- Know where to get updated emergency information in your area.
- Create and understand your emergency plan (e.g. what to do and where to go).
- Assemble a 72-hour Go-Kit.
- Keep copies of important documentation and items of sentimental value out of the basement.

### Reference:

- A Guide to Flooding Prevention and Recovery, Halton
- City of Mississauga Flood Response Plan, May 2015
- Hazard Identification and Risk Assessment, Mississauga, 2015
- City of Mississauga, Stormwater web pages





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