Flood Protection Guide for Canadian Homeowners

Don’t wait for the next flood—simple upgrades now can help prevent costly damages later

RBC®

Did you know?

The average cost of repairing a flooded basement is more than **$40,000**[1]

Flooding is Canada's most common natural disaster, with incidents up 300% since the 1960s[2]. As extreme weather intensifies, homes face growing risks of basement floods and structural damage. But there are things you can do as a homeowner to make your home more flood-resistant.

This guide outlines practical steps to safeguard your property. Small actions today can help prevent costly repairs tomorrow. With climate change increasing the frequency and severity of extreme weather, being prepared isn't optional–it's essential for your home's resilience and your peace of mind.

Start protecting your biggest investment now.

Know Your Flood Risk

Flooding can happen in different ways, depending on where you live, and every home is unique. Understanding your home's particular vulnerabilities will help you prioritize the right measures.

How Water Enters a Home

Floods often happen because a few things occur at once–heavy rain, melting snow, or sewer systems getting backed up. Homes in cities are especially at risk because concrete, pavement, and rooftops don't absorb water. Instead, the water charges across surfaces and into drains. If too much water arrives at once, those drains can't keep up, causing water to pool on streets, rush into yards, and sometimes enter homes.

While you may not be able to prevent flooding in your community, you can reduce the risk of water entering and damaging your home.

Learn about the risks specific to your community and region by seeing if your local government (municipal, provincial, or territorial) has flood maps and information on past flooding.

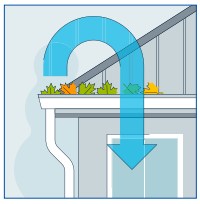
What You Can Do to Help Protect Your Home

The good news is that protecting your home does not have to be complicated or expensive. Simple seasonal tasks and cost-effective measures can make a significant difference, while more substantial upgrades offer added protection. In collaboration with the Intact Centre on Climate Adaptation at the University of Waterloo[3], we've outlined practical steps designed to help safeguard your property from flooding.

1

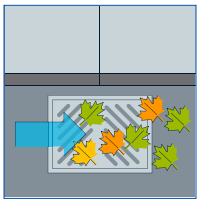
Maintain what you've got at least twice a year and complete simple upgrades

(do-it-yourself, less than $250)



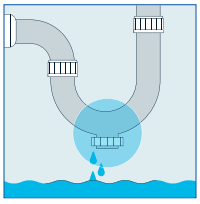
Clean out eavestroughs and gutters.

Flood protection starts from the top! Checking your eavestroughs and gutters for debris regularly is a first step in preventing damage. Gutter gunk builds up quickly and it can prevent the safe flow of rainwater. In the winter months, make sure you clear out the ice dams and icicles as well.



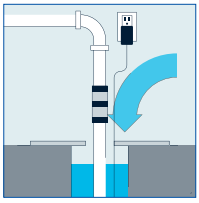
Remove debris from nearest storm drain, ditch, or culvert.

Safely clearing surface debris from nearby storm drains, ditches, or culverts can help reduce the risk of localized flooding. Use tools (not your hands), work from a safe location, and clear only visible blockages–never remove grates–then dispose of debris properly.



Check for leaks in plumbing, fixtures, and appliances.

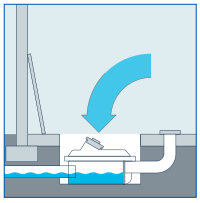
To spot a leak, look for visible signs of water damage such as water stains, mould, or wet spots. You can then inspect all the joints and valves to determine where the leak is coming from before proceeding to repair. If leaks are severe or hard to locate, consider hiring a plumber.



Test your sump pump (if you have one).

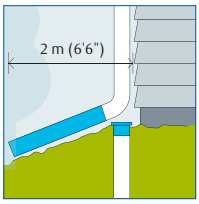
Sump-pumps get blocked and can fail if they are not routinely inspected and maintained. You can inspect the sump-pump by pouring water into the sump pit and seeing whether the pump starts automatically.

Sump-pumps need electricity and can stop working during a power failure. Consider using a back-up system, such as a back-up battery, to make sure the pump works when you need it. Talk to your plumber or electrician about options.[4]



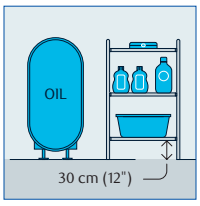
Clean out your backwater valve (if you have one).

A mainline backwater valve allows sewage to flow in only one direction–out of your house. Like other parts of your home, backwater valves require periodic maintenance to ensure proper performance. Most mainline backwater valves come with a see-through top so you can check to see if it is clogged with debris.[5]



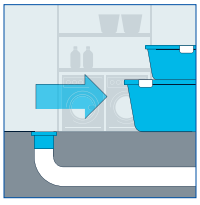
Direct water at least two meters away from your house.

Make sure that your downspouts and any pipes coming out of your sump pump are extended at least two metres away from your house to make sure the rainwater stays far from the foundation. Follow any municipal guidelines indicating where to redirect water.



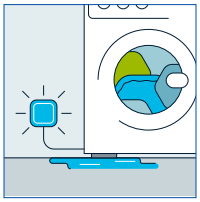
Store valuables & hazards safely.

Store valuables and hazardous materials in watertight containers and secure any fuel tanks. Store important documents at a higher level in your home and make copies of important documents or digitize them.



Remove obstructions to floor drain.

Floor drains are designed to remove excess water from floors. Look out for clogs caused by debris, grease, foreign objects, or mineral deposits.



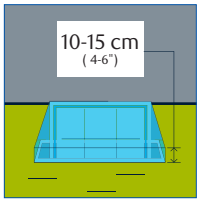
Install and maintain flood alarms.

Installing a flood alarm in your basement near plumbing, pipes or appliances provides early detection, giving you time to prevent damage. Make sure to check them regularly to ensure they're in working order.

2

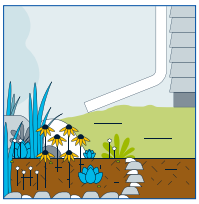
Complete more complex upgrades

(work with a contractor, more than $250)



Install window wells.

If your basement windows are close to the surface of the ground, install window wells and well covers that sit 10 to 15 centimetres above ground, where fire escape requirements permit. This can reduce the crevasses that allow water to enter.[6]

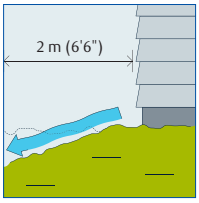


Plant a rain garden.

Install a rain garden to collect stormwater at least five metres from the foundation. A rain garden is a landscaped feature that replaces an area of your lawn to collect the stormwater (rain and melted snow) that runs off your grass, roof, and driveway.[7] They can be in many sizes and styles to complement your landscaping preferences.

Replace pavement with vegetation.

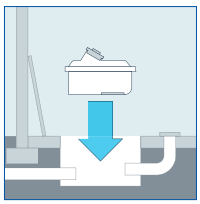
Replacing paving stones and asphalt or concrete surfaces with vegetation improves drainage to prevent flooding. Bonus: green spaces also help cool the air in the summer as dark surfaces, such as concrete, tend to absorb heat.



Correct grading for drainage.

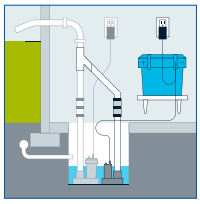
Landscape grading involves adjusting the slope and elevation of the land to direct water at least two metres away from the foundation, improving drainage and keeping water away from your home and foundation. The soil directly beside your foundation wall should be approximately 10 cm to 15 centimetres higher than the soil 1.5 metres away from the foundation.[8]

Be sure to check the grading again after heavy rains and adjust as needed.



Install a backwater valve.

Different types of backwater valves are installed in different ways. The most common variety is a mainline full-port backwater valve and is installed by cutting a hole in the foundation inside the home above the main sewer line to expose it and allow for the installation of the device.[9] This needs to be installed by a plumber according to municipal code and regulations.



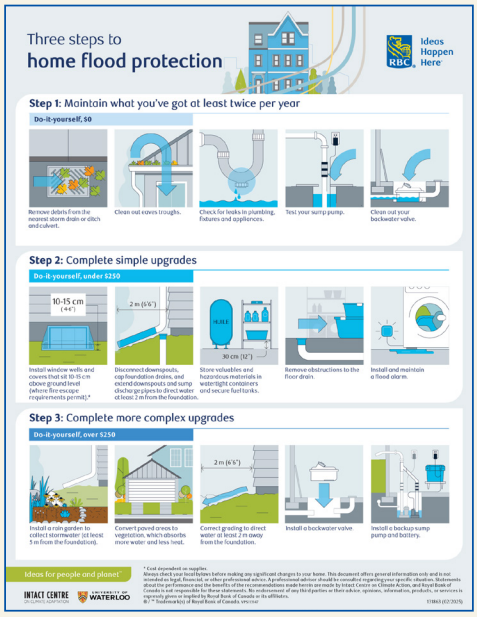
Install backup sump pump and power supply.

Think of sump pumps as a last line of defense — if your basement does start to leak, you can have some peace of mind knowing your sump pump is collecting rainwater and draining it away outdoors.

Once the pump is installed, you can invest in a sump pump alarm that warns you when water in your pump is reaching dangerous levels. You may also consider installing a back-up battery-powered sump pump or generator that will work in the event of a power outage.

Save or print this summary guide for quick reference:

Three steps to home flood protection



While home improvements can feel expensive, they can be well worth it in the long run. For every dollar invested in climate adaptation and preparedness, you can avoid $3 to $8 in potential losses[10] over the next decade.

Other things to consider

- Regularly check local weather forecasts or sign up for alerts through trusted sources like Environment Canada, weather apps such as WeatherCAN, or municipal websites. These platforms provide real-time information on rainfall, storms, and other weather events that could lead to flooding in your community.
- Make sure you are familiar with your municipal information on what to do in the event of a flood. Most municipalities, such as Vancouver, Winnipeg, Toronto, Montreal and Halifax, offer resources on their websites.
- In an emergency, you will need some basic supplies as you may need to get by without power or tap water. Be prepared to be self-sufficient for at least 72 hours with an emergency kit that includes basics such as bottled water (recommended average is four litres per person per day), nonperishable food (think of baby and pet food if applicable), flashlights, a radio, chargers and extra batteries.[11] Make a household emergency plan. Consider the specific needs of all members of your household, including older adults, children, pets, and anyone with special health needs.
- Learn how to turn off the utilities, such as electricity and gas, in your residence. It is important to protect yourself as well as your home systems and appliances. Electrical currents can travel through water and cause electric shock or electrocution. Gas lines can leak and cause subsequent fires.
- Check if your home insurance policy includes flood coverage and speak with an insurance professional about what type of optional flood insurance is right for you.

Endnotes

[1,2] The risk of floods - Canada.ca
Government of Canada (2022).
https://www.canada.ca/en/campaign/flood-ready/know-the-risks/risk-floods.html

[3] Climate-ready infographics
Intact Centre on Climate Adaptation (2025).
https://www.intactcentreclimateadaptation.ca/climate-ready-infographics/#Flooding

[4,5,6,8] Protect your home from basement flooding
The Institute for Catastrophic Loss Reduction (2011).
https://www.iclr.org/wp-content/uploads/PDFS/protect-your-home-from-basement-flooding.pdf

[7] A complete guide to building and maintaining a rain garden
Toronto and Region Conservation Authority (2018).
https://trca.ca/news/complete-guide-building-maintaining-rain-garden/

[9] Make an emergency plan - Canada.ca
Government of Canada (2025).
https://www.canada.ca/en/services/policing/emergencies/preparedness/get-prepared/make-plan.html

[10] Backflow prevention
City of Windsor (2024).
https://www.citywindsor.ca/residents/roads-sewers-sidewalks/sewers/Backflow-Prevention

[11] 2nd major flooding in 11 years a sign Toronto is not adapting quickly enough, say climate experts
CBC News (2024).
https://www.cbc.ca/news/canada/toronto/toronto-flood-adaptation-1.7265581