



BASEMENT FLOODING:

Together we can reduce the risk in your neighbourhood

There are many potential causes of basement flooding, especially during heavy rain storms or during snow melt, including:

- ▶ A leak in your home's foundation, basement walls, or basement windows or door.
- ▶ Poor lot drainage.
- ▶ Failure of the weeping tile system (foundation drains).
- ▶ Overflowing eavestroughs.
- ▶ Leaking/plugged downspouts.
- ▶ A blocked connection between your home and the main sewer in the street.
- ▶ A back-up of wastewater in the sewer system (or a combination of wastewater and rainwater from the sanitary sewer system).
- ▶ Failure of a sump pump used to pump weeping tile water.
- ▶ Overloaded sewer forces wastewater back through the sewer pipes where it escapes through floor drains or any other low lying plumbing fixtures in the basement.



There are two types of sewers in Durham Region

- ▶ **Sanitary sewer:** The sanitary sewer, which conveys wastewater (sewage) is connected to your home's plumbing fixtures (toilets, sinks, laundry, etc.) and flows through a series of pipes to a sewage treatment plant. The Region of Durham is responsible for the sanitary sewer system.
- ▶ **Storm sewer:** The storm sewer collects stormwater from catchbasins (street drains), eavestroughs and weeping tiles (in many areas of the city), and conveys these flows into nearby streams or Lake Ontario. Storm sewer on local roads are the responsibilities of the local municipalities while storm sewers on Regional roads are the responsibility of the Region.



Homeowners are part of the solution

One of the major factors contributing to the basement flooding is the lack of overland flow routes for storm drainage during extreme storms. A lack of proper controls on private property, such as downspout disconnection and proper lot grading are also contributing factors.

In 2009, the Institute for Catastrophic Loss Reduction released a Handbook for Reducing Basement Flooding. This handbook provides information on how you can reduce your chances and your neighbours' chances of having basement flooding. There are a number of flood reduction options in this handbook, including:

- ▶ Talk to your municipal government about basement flooding.
- ▶ Inform your municipal government about basement flooding that you've experienced.
- ▶ Hire a licensed plumber to conduct a detailed plumbing investigation on your home.
- ▶ Check your insurance policy, or talk to your insurance broker or insurance provider about basement flood coverage.
- ▶ Avoid pouring fats, oils and grease down household drains.
- ▶ Keep storm sewer grates clear.
- ▶ Seal cracks in foundation walls and basement floor.
- ▶ Reduce home water use during heavy rainfall events.
- ▶ Maintain eavestroughs and downspouts.
- ▶ Disconnect downspouts from the public sewer system wherever possible and add extension and splash pads.
- ▶ Ensure your weeping tiles, sump-pits and sump-pumps are in proper working order.
- ▶ Install and maintain an approved backwater valve.
- ▶ Maintain sewer laterals.
- ▶ Consider overland flood entry-points (where does the water go on your property?).
- ▶ Consider your lot grading, any backfilling and swales.
- ▶ Be aware of special considerations for reverse sloped driveways.
- ▶ Consider use of window wells and window well covers.
- ▶ Avoid storing items directly on the basement floor.
- ▶ Avoid remodelling or finishing basements.

The full handbook can be found under "Helpful Information" on the Basement Flooding Home Page.
(Source: ICLR, 2009)

IF FLOODING HAPPENS

If you experience flooding, please call the Region of Durham depot in your area.

- Ajax / Pickering Depot: 905-683-1471
- Oshawa/Whitby Depot: 905-655-3344
- Orono Depot: 905-983-5116
- Scugog Depot: 905-985-7170
- Sunderland Depot: 705-357-3140

Staff will inspect the problem, assess the flooding and attempt to determine the source(s). We will advise you of the possible course of action you should take.

- Call your insurance company as soon as possible and report property damage caused by the flooding.

Remember to:

- Take photos of damage.
- Keep receipts from emergency repair work or clean-ups done to prevent or reduce further damage.
- If the flooding is a result of a blocked drain pipe, leaking foundation walls or poor lot drainage on your property, you are responsible for repairs and any subsequent damage caused by flooding for your insurance claim. The Region will make all repairs to regional pipes.
- Frequently, sewers or drains are blocked by tree roots. The Region will help clear the blockage if the tree is on Region property. Call the depot in your area for more information.
- You may submit a claim in writing with your name, telephone number, home address, date, location and details of incident and send it to:
Risk Management Division, Finance Department
The Regional Municipality of Durham
605 Rossland Rd. E
Whitby, ON L1N 6A3
905-668-7711 ext. 2264.

Your claim will be forwarded to the Region's insurance adjustors for evaluation. A letter of acknowledgement will be sent to you.

DID YOU KNOW?

A sanitary sewer pipe is designed to transport wastewater from sanitary fixtures and floor drains from inside your home to the Region of Durham's Wastewater Treatment Plant. Excessive stormwater that ends up at the wastewater treatment plant is unnecessarily treated along with sanitary flow.

DID YOU KNOW?

A 200 millimetre (eight inch) diameter main line sanitary sewer will provide adequate capacity for 450 homes. Only 12 illegal sump pump connections to this pipe will cause system surcharge during wet weather events resulting in potential basement flooding. (Source: Town of Fort Erie)
Do your part; call us if you think you have an illegal connection.



TIP #1

Improve your lot grading. Make sure the ground slopes away from the exterior walls of your home or business. Check for leaks in walls, floors, windows or foundations and repair them.

TIP #2

Disconnect the weeping tile system of your home or business (if cross-connected) and install a sump pit with an automatic pump that discharges to the surface. Make sure your weeping tile drainage gets to the storm sewer system or to the ditch, not the sanitary sewer system.

TIP #3

Clean your eavestroughs and downspouts. Extend downspouts away from your basement walls. Disconnect all downspouts from the weeping tile and have a certified plumber check your flood-proofing devices (sump pump, backwater valve) regularly. Make sure your disconnected downspouts are draining properly, ideally 1.8 metres (six feet) from your basement walls.



TIP #4

Install backwater valve on basement plumbing fixtures to reduce the risk of sewage entering your basement through fixtures or drains. Don't know what these devices are? Call us or a certified plumber for more information.

CLEANING UP

Put your health and safety first when cleaning up your flooded basement. Exposure to contaminants carried by flood water or sewer back-ups into basements can be dangerous. Homeowners may be exposed to waterborne diseases, including diarrhea illnesses, corrosive cleaning agents and irritants found in leftover sludge from a flooded basement. Electrical accidents may occur because of contact with water and electricity. It is important to clean up your home quickly to avoid mould.

- ▶ Dress appropriately - wear overalls, gloves, protective eyeglasses, rubber boots and a mask.
- ▶ Open windows to let fresh air in.
- ▶ Turn off the power at the box or ask your utility for help.
- ▶ Stay away from electrical equipment, keep extension cords out of the water and do not attempt to change any fuses if standing in water or on damp ground.
- ▶ Work from the top down, removing any materials that have been deeply soaked.
- ▶ Minor debris can be put out for regular garbage pick-up.
- ▶ Scrub furniture affected by flood water with soap and clean water and place it outside in sunny area to dry (weather permitting) or steam clean. Furniture, dry wall, flooring and any other items contaminated with sewage will likely have to be discarded.
- ▶ Clean and deodorize carpets within two days, or have them professionally cleaned; especially if it is a larger area.
- ▶ Disinfect walls and floors using a chlorine bleach and water solution (one part bleach to 10 parts water). Make sure the area is thoroughly aired-out and dry before reoccupying it. Ensure that there is proper ventilation at all times. Fans may also help with the drying process. **(Note: Never mix bleach with ammonia since the fumes produced together are toxic.)**
- ▶ Surfaces that are dry should also be cleaned.
- ▶ Wash clothing following manufacturer's instructions.
- ▶ Check for damaged packaging. Throw out canned foods, home-prepared food in jars, meats and dairy products and any packaged foods that may have been affected by the flood waters.
- ▶ If your freezer's power is off, move the frozen food to another freezer or throw it out if you can't keep it frozen.
- ▶ You may also need to rent extension cords, submersible pumps, wet/dry shop vacuums, and dehumidifiers or heaters.
- ▶ Consider getting help with flooding clean-up. Look in the Yellow Pages under "Water Damage Restoration".

The Regional Municipality of Durham

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