A Residential Guide to Flood Prevention and Recovery

THE CITY OF WINDSOR
ONTARIO, CANADA

EMERGENCY MANAGEMENT
WINDSOR

Dear resident:

Emergencies, such as flooding, can happen at any time. Every resident contributes to the overall ability of the City to bounce back quickly after an emergency, by being prepared. Our goal is to provide you with information on the most probable hazards and risks you may face, so that you can plan ahead, be ready and be able to protect yourself, your family, your home and your property.

In order to help you prepare for an emergency, we are providing this resource for you to keep and read before and in the event of an emergency: A Residential Guide to Flood Prevention and Recovery. You'll find important information about planning ahead, preventing damage to your home, checklists and local emergency contact numbers.

In the event of an emergency, we will use Windsor Alerts, the City of Windsor's emergency alerting system. We will also update our website and coordinate communications with local radio and television outlets. For additional updates during an emergency, please sign up for Windsor Alerts at **windsoralerta.ca** and follow us on Twitter **@CityWindsorON**.

If you have any questions or would like additional copies of these materials, please visit **citywindsor.ca**. We are committed to working together with you to keep Windsor a great and safe place to live.

Sincerely,

Drew Dilkens, Mayor of Windsor

The City of Windsor provides this comprehensive guide 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. For further information, please visit **citywindsor.ca** or call 311 / 519-255-2489 outside city limits.

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.

citywindsor.ca

@CityWindsorON

City of Windsor

Flood facts

- Floods are one of the most common hazards in Canada.
- A heavy rainfall can result in flooding, particularly when the ground is still frozen or already saturated from previous storms.
- Severe storms can cause flash flooding with little or no advance warning.
- All water courses 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.

IBC BAC

Canada food facts from The Insurance Bureau of Canada (IBC)

Dial 311
or 519-255-2489 if outside city limits
for City of Windsor municipal services

Dial 911
for emergencies

Emergency contact information

Dial 911 only in case of emergency

City of Windsor

Dial 311 in Windsor or 519-255-2489 outside Windsor.
TTY/Teletypewriter (Bell Relay Service): Type 711 for the operator or dial 1-800-855-0511.

Public Health

Windsor Essex County Health Unit
519-258-2146

Community Support

Canadian Red Cross
Windsor
519-944-8144

Salvation Army Community Church
Windsor
519-253-7473

United Way
Windsor
519-258-0000

Police

519-258-6111

Fire & Rescue

519-253-6573

Utilities

Enwin
519-255-2727

Enbridge
1-877-969-0999 *(emergency)*
1-888-774-3111 *(general inquiries)*

Inside this booklet

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Types of flooding & flood prevention

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.

Because your basement is below ground, it is most prone to flooding if there are blockages or backups in either the stormwater or wastewater systems.

Who Owns What?

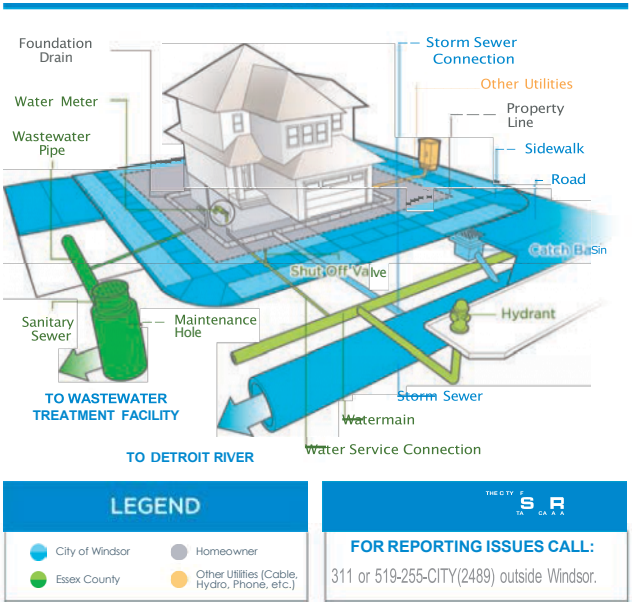
The City of Windsor is responsible for both the stormwater and wastewater systems.

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.

Types of flooding

If you've experienced flooding, it's important to know what type of water is in the basement and understand what caused it so you know what steps to take to help prevent it from happening again. The main types of residential flooding are:

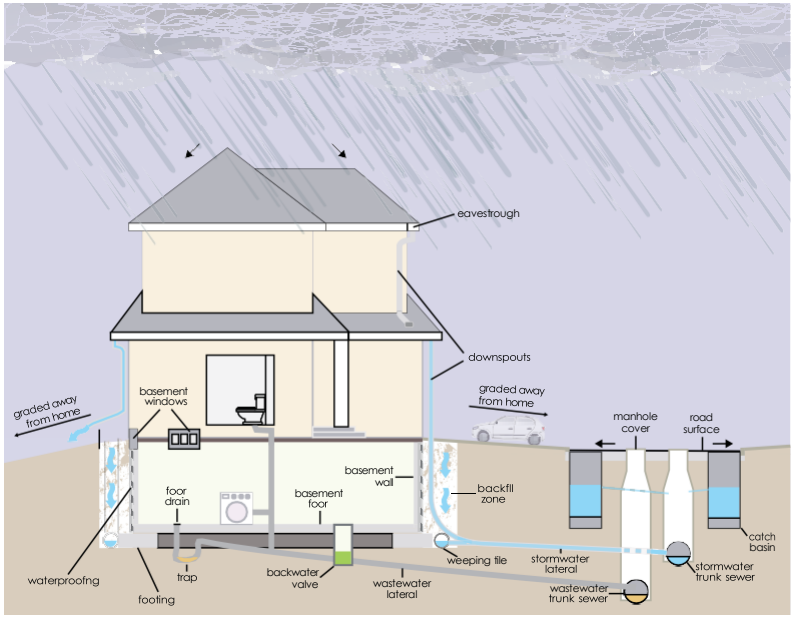
1. **Overland Flooding** (flooding as a result of creeks or rivers overflowing onto dry land)
2. **Foundation Flooding** (may be groundwater or water from roof drainage entering basement through cracks in basement walls or foundation (usually clear with no odour)
3. **Wastewater backup** (greyish in colour and typically has an odour)
4. **Stormwater sewer backup** (can reduce ability for foundation weeping tiles to drain (usually clear, may have an odour)



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
- Surcharged or blocked sanitary wastewater or stormwater pipes under street backing up into homes
- Blocked wastewater or stormwater lateral connections from homes to pipes under roadways.

Typical Home Drainage



Glossary of Terms

Wastewater lateral connection: 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 wastewater sewer.

Downspout Disconnection: The diversion of roof runoff from a connection to underground lateral to stormwater or wastewater systems to a safe discharge point on the property where infiltration can occur. The discharge point must not affect home foundations, neighbouring properties, sidewalks or driveways.

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 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 8.

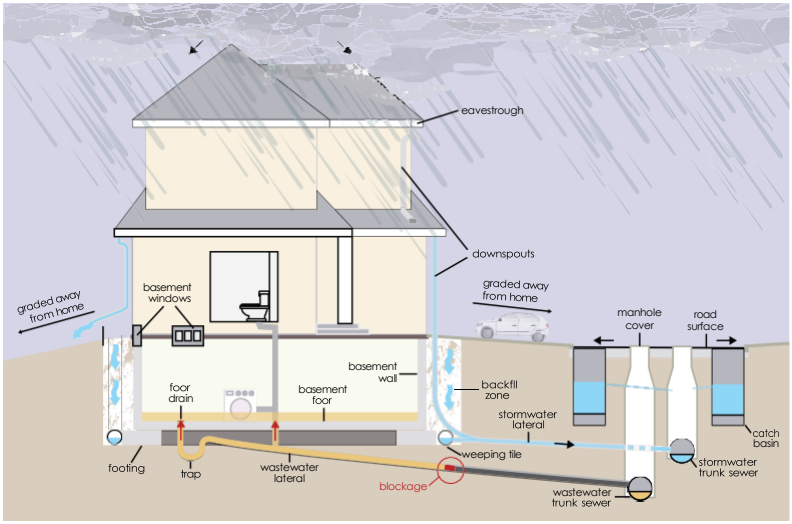
How can basements flood?

Wastewater Back-up Flooding

Wastewater backup flooding typically occurs because of a blockage in the wastewater lateral leading to the trunk sewer. 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 wastewater backup is the result of a broken lateral, which can also cause a blockage.

Reduce the Risk

How a wastewater backup can occur



- Have a drainage contractor visit your home to inspect your lateral with a Closed Circuit TV (CCTV).
- 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 including wipes of any kind even if they say flushable.
- Consider a sanitary wastewater backflow preventer valve to reduce the risk of sewage backup into your basement.
- Disconnect roof downspouts.

Glossary of Terms Continued

Backwater valve: A mechanical device that prevents wastewater from an overloaded sewer from backing up into your home. The backwater valve allows wastewater to flow from your home during normal use. When properly maintained, it will close automatically if wastewater backs up from the sewer main towards your home (reversal mode), protecting your basement from the potential flooding.

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

Kitchen grease, fats and oils should be discarded in to the garbage. By 2025, an organics collection program will be enacted.

Although convenient items such as baby and toddler training wipes are labelled as flushable, they commonly cause blockages.

For more information about items that should not go into your sink or toilet visit **citywindsor.ca** or dial **311**.

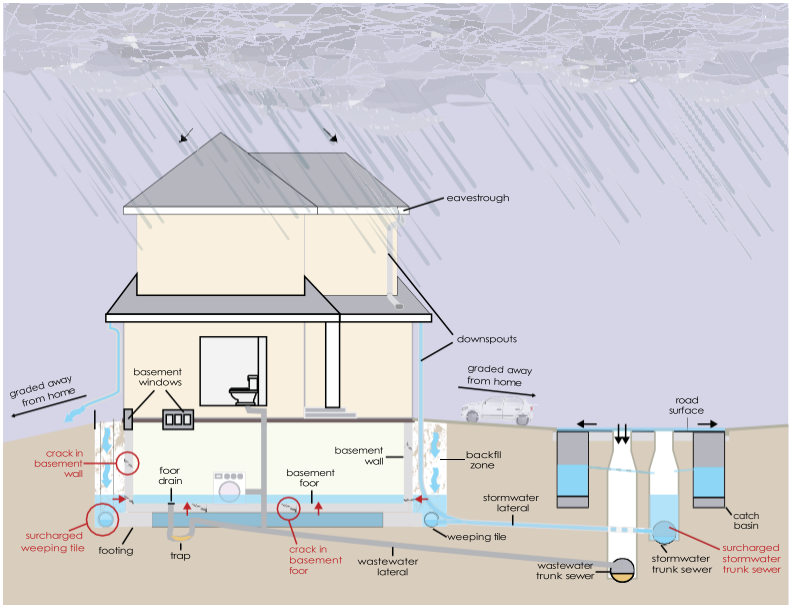
Foundation Flooding and Stormwater Sewer Backup

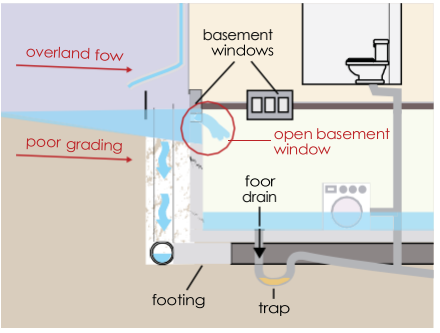
Foundation flooding can occur when heavy rainfall or significant melting snow is trapped around the foundation of your home and seeps in through cracks or window wells

Some, but not all, Windsor streets, were built with stormwater lateral connections while others have combined stormwater/wastewater lateral connections.

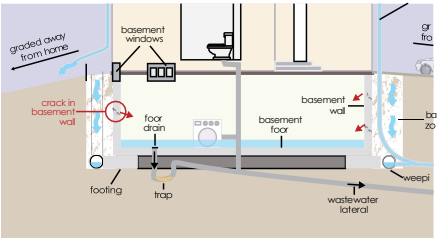
If your roof downspouts are connected to your stormwater lateral connection underground, in heavy rain, this can cause a back-up around your foundation that can increase the chance of flooding.

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.





Poor Grading



Cracks in basement walls and floor

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.
- Where possible, disconnect your roof downspouts and divert the stormwater at least 2 meters (6ft) away from your home to a vegetated, safe discharge point away from adjacent property lines, sidewalks, or building foundations.
- Check for and reduce leaks in walls, floors and windows or foundation.
- Ensure that gardens next to your basement walls do not create dams that retain water next to the house.
- Clean leaves and other debris from eaves troughs and downspouts to ensure proper drainage.
- In winter, shovel ice and snow at least 2 meters (6ft) away from basement walls.

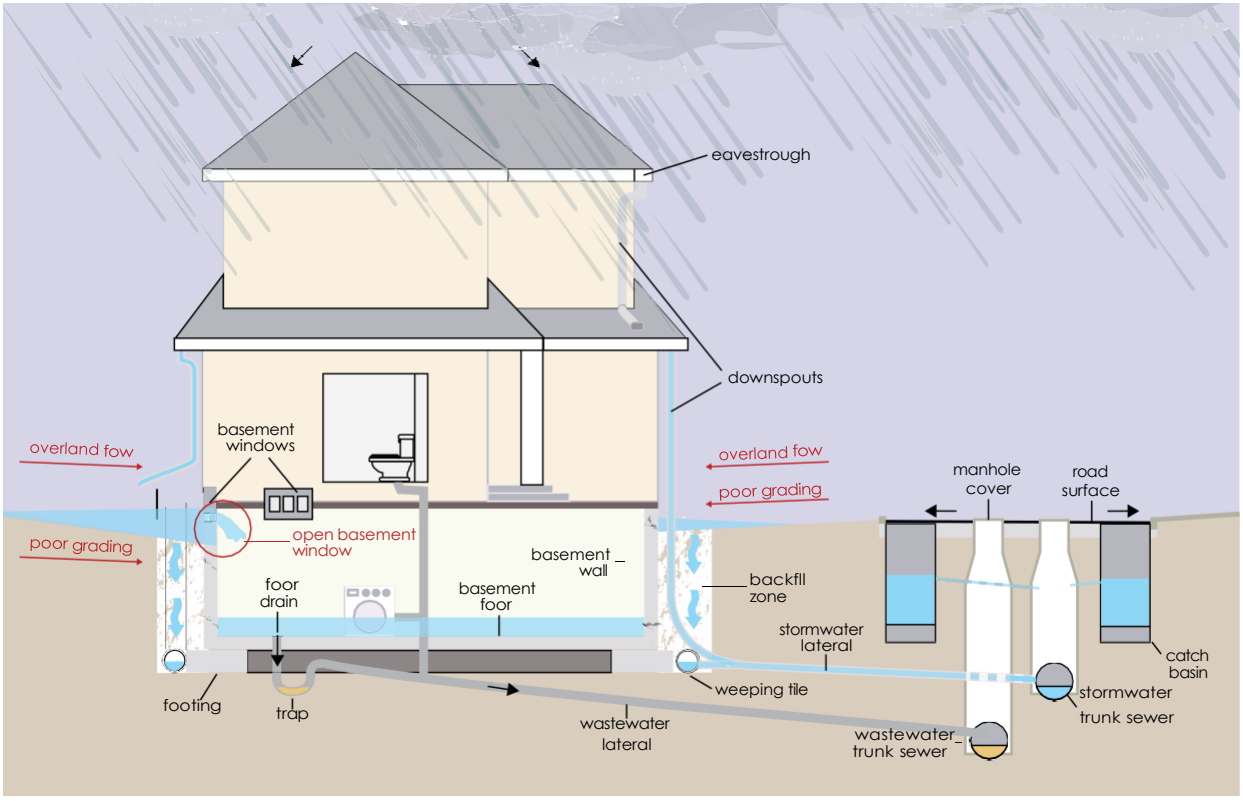
Overland Flooding

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.

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

If you live near the Detroit River or Lake St. Clair, you may be located within the regulated area administered by the Essex Region Conservation Authority with potential risk of overland flooding. Visit ERCA.org for more information regarding flooding conditions.

Stormwater and wastewater systems for homes built during the 1970's and 1980's

Prior to the mid-1970's, it was common practice to connect weeping tiles or foundation drains and downspouts directly to the wastewater system. Some of these historic connections still may exist today in older homes. These connections can overload the wastewater system and should be updated to help prevent basement flooding.

In 1975, Ontario's Building Code was introduced and required stormwater collected from homes to be discharged to a separate stormwater system.

Get to know how your home stormwater and wastewater drains and take the necessary steps to reduce the likelihood of basement flooding. You can also look for some tips on common causes of basement flooding on page 7 of this guide.

Private Sewer Replacement Program

The City of Windsor offers a Private Sewer Replacement Program to address costs related to the total replacement of the Private Drain Connection, the wastewater lateral connection that runs from the residential dwelling to the municipal sewer system.

The Replacement Program provides a one-time rebate up to $2,000 or in certain circumstances a 50% rebate where the homeowner chooses to replace and/or rehabilitate the entire Private Drain Connection from three (3) feet within the dwelling to municipal sewer system. This program does not cover partial replacement or repairs to the Private Drain Connection.

Service Line Warranties of Canada (SLWC) Program

In 2019, Windsor residents gained access to a warranty service plan program offered by SLWC, a private provider. The program is not insurance but is a contract pledge to arrange for a contractor to repair your water and sewer service lines.

Participation is optional and voluntary for homeowners in Windsor.

City of Windsor's Basement Flooding Prevention Rebate Programs

Learn more about these programs at **citywindsor.ca**

Visit **citywindsor.ca** or call **311** to obtain more information about the wastewater system and to learn more about what you can do to prevent basement flooding in your home.

Service Line Warranties of Canada

Phone: 1-866-922-9004
Website: www.slwofc.ca

Backwater valves

A backwater valve is a device that prevents wastewater in an overloaded sewer (known as surcharging) from backing up into your basement.

The valve allows wastewater to flow from your home to the wastewater main during normal use. It will automatically close if wastewater backs up from the sewer main into your home (reversal mode), and is designed to protect the basement and reduce the risk of potential flooding. The backwater valve also allows the flow of free air and outflow of wastewater for normally open valves.

Older backwater valves typically employed the normally closed type (Figure B). If there is no wastewater produced from a home, the flapper valve is closed under gravity, preventing backwater effects. However, these devices have been known to experience more maintenance issues, such as paper being caught in the flapper, holding it open. Therefore, this type of valve is no longer permitted under the Ontario Building Code for use in homes.

A normally open backwater valve is permitted by the Building Code. These valves remain open during normal use of water in the home and typically require less maintenance. Newer devices, such as the Mainline Fullport unit shown in Figure A, have the additional benefit of a clear top so that you can view the operation of the backwater valve. It is also equipped with an easily accessible cleanout. This is required in case there is a need to clean or clear your lateral from tree roots or other blockages.

Contact your insurance company for more information about the impacts of backwater valves on insurance coverage.

Location of backwater valves

Backwater valves are typically found in basements. There are several key advantages to having a backwater valve located in the home, including:

- Easy access
- Easier maintenance
- Homeowners can see if surcharging (wastewater backing up) occurs
- Lower cost to install
- Lower operating and maintenance costs

Types of backwater valves

There are typically two types of backwater valves, “normally open” or “normally closed”. The images below represent the two types.

Figure A (approved type)

Figure B (older—not approved)

Figure A shows a normally open backwater valve and Figure B shows a normally closed backwater valve.

Visit **citywindsor.ca** or call **311** for more information about backwater valves and to learn more about what you can do to prevent basement flooding in your home.

Maintenance

Regular maintenance of your home drainage system can often be the difference between staying dry and being flooded. It is good practice to evaluate the condition of your system – inside and out, on a regular basis. If you find a problem, make fixing it a priority.

Below is a checklist of what to do for backwater valve maintenance:

- Visually check the valve.
- Open the top and clean out any debris, if needed.
- Check the flapper for free movement up and down.
- Pour water through the system to make sure that the water is moving through it.
- Take a look to make sure it is working during a storm. (See page 19)

Municipal Eeling Service

The City will provide eel service (sometimes referred to as "eeling") through an acceptable cleanout, up to three times in any 24-month period. After that time, the sewer lateral will no longer be provided service until it is replaced. Please call 311 to request this service.

Basement Flooding Protection Subsidy Program:

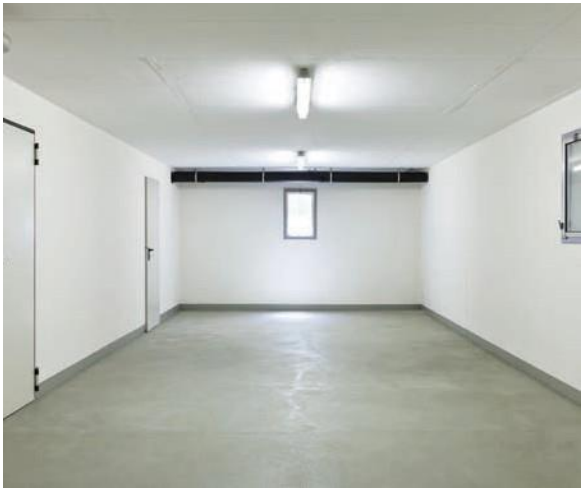
The City offers up to $2,800 per Home/Unit to:

- Install backwater valve(s) – Up to 100% of cost, $1,000 maximum
- Install sump pump with sump pump overflow and disconnect floor drains – Up to 100% of cost, $1,750 maximum
- Install only sump pump overflow to discharge outside to surface (applies to existing sump pumps only) - Up to 100% of cost, $300 maximum
- Install backwater valve and sump pump with sump pump overflow - Up to 100%, $2,800 maximum
- Disconnect foundation drains from floor drain and/or dye testing and camera work as required - Up to 100% of cost, $400 maximum

Remember:

If you are aware of surcharging, or wastewater backing up from the sewer main, do not use your water otherwise you risk flooding. Once surcharging has subsided, you may restore regular water use.

Visit citywindsor.ca or call 3-1-1 for more information about the City's Municipal Eeling and Basement Flooding Protection Subsidy Programs and to learn more about what you can do to prevent basement flooding in your home.



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 Reduce your flood risk.

Check for basement flood risk factors on Page 7 and correct those that apply to your home.

2 Make a plan

Make sure everyone in your family knows what to do before, during and after an emergency such as 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's emergency kit and grab-and-go bag. Photocopy your plan and keep it in your car and/or at work.

3 Know the risks

Like any city, Windsor is 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.

4 Stay Informed

Visit **citywindsor.ca** and search "*Emergency Preparedness*" to view the City of WIndsor's Emergency Preparedness Guide.

ARE YOU READY?

HAVE A 72 HOURS PLAN

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/** or follow @ECAlertON94 on Twitter.

A 72 hour Grab-and-Go Bag 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)
- ☐ Cell phone charger
- ☐ Garbage bags/duct tape/moist towelettes
- ☐ Pen/notepad

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

- protective clothing to fully cover skin
- hard hat
- gloves
- N-95 masks
- protective eyewear
- rubber boots (puncture-proof and waterproof are best)
- a copy of this guide

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 veternarian
- ☐ Copies of medical records/vaccinations
- ☐ Information on feeding schedule, medical, space needed and/or behavioural problems
- ☐ Medications and first aid kit
- ☐ 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** if you have any questions.

Windsor/Essex Humane Society

1375 Provincial Rd.
Windsor, ON
N8W 5V8

519-966-5751
windsorhumane.org

Important Telephone Numbers

Report an injured or distressed animal / Report a lost or found pet

3-1-1 or **519-255-2489**

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 if you ever experience flood or other damage in your home.

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**

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, the Insurance Bureau of Canada is the National industry association representing Canada's private home, car and business insurers. They can assist in providing answers or assistance with insurance questions. They can be contacted via the IBC Ontario Consumer Information Centres at **1-800-387-2880**.

Visit the IBC's web site at **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 **fsco.gov.on.ca**

Insurance Coverage

1. Damage to your home resulting from overland flooding is not covered by home insurance policies in Canada.
2. Sudden and accidental bursting of plumbing pipes and appliances is usually covered by home insurance policies.
3. Water damage resulting from sewer backup is only covered if specific sewer backup coverage has been purchased.

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 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.

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.
- Reduce water use during heavy storms. If you have a backwater valve, it may be closed to prevent backups from the sewer. Water from inside the home will not drain away from the house if the backwater valve is closed.

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. Do not travel in flood impacted areas.
- 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.

Evacuation

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. This notification may occur in several ways including:

- Windsor Alerts
- 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 Bag (refer to Before a Flood for more details), medications, and needed supplies with you in the event of an extended evacuation.
- 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 centre, register with the centre, notifying them of your whereabouts. This helps to create an accurate record of flood victims.
- Check **citywindsor.ca** for updates.

Keep up-to-date with the latest information:

citywindsor.ca

@cityWindsor

City of Windsor

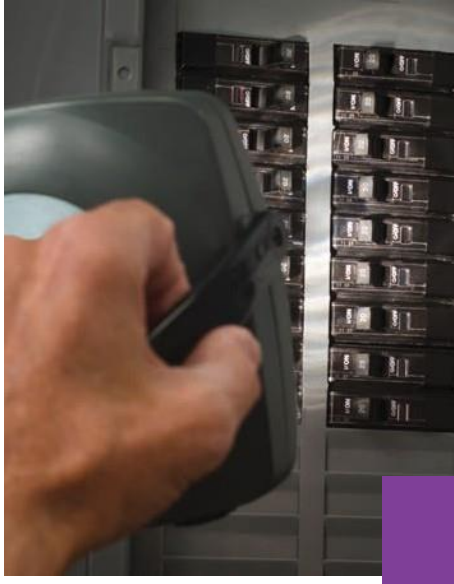
Sign up for Windsor weather alerts. Get the latest forecasts and hazardous weather conditions at **weather.gc.ca**.

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 by dialing 311 or 519-255-2489 when you are outside city limits.
- 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 dial 311 or 519-255-2489 when you are outside city limits to find out when it is safe to return home. You can also visit **citywindsor.ca** 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

- 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.

How to locate flood damage restoration companies

Institute of Inspection Cleaning and Restoration Certification

iicrc.org

Better Business Bureau Central Ontario

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

Yellow Pages Directory

yp.ca/business
Search for "flood damage" after you enter your municipality.

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
- gloves
- N-95 or equivalent masks
- protective eyewear
- rubber boots (puncture-proof and waterproof are best)

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 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. However, some items may be salvageable through specialized cleaning services.
- **Remove soaked and dirty building materials and debris.** This includes 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.

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 23 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 properly.

Medicines, cosmetics and other toiletries

Discard these items if they have been in contact with flood water.

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 discarded:

- 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 is 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.
- Throw out food items that have come into contact with raw meat juices.

Food Safety
If in doubt, throw it out.

Do not consume food products prior to consulting with health authorities or family doctor. Contact Windsor/ Essex County Health Unit at **519-258-2146** 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.

Discarding of materials

- Visit **ewswa.org** or the **EWSWA Recycle Coach App** for information about what disposal methods are available for all your waste.
- Dispose of non-salvageable items and building materials.
- 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.
- Metal and appliances can be disposed of at the Public Drop Off Depot, 3560 North Service Road East.
- Unsafe food is placed in the garbage. In 2025, an organics collection program will be available for spoiled food.
- 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 accepted as regular waste. Please visit **citywindsor.ca** and search "waste and recycling" for proper disposal of:

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

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 **citywindsor.ca** for updates concerning flood waste disposal following major flood events.

Mould

Mould can grow in your home after flood damage. It can grow on wet surfaces in as little as 48 hours as it needs moisture and a material it can live on to grow.

Mould in your home can lead to a wide range of health problems. The symptoms are caused by the mould spores and the toxins it releases. Health risks depend on exposure, each person's allergic sensitivity, and the mould species involved. For more information, visit **wechu.org/z-health-topics/mould**.

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.

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.
- Wipe surcase 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.

Any cleaning materials (e.g, sponges, clothes, etc.) used for mould cleanup should be discarded after use.

How to locate a mould removal professional

Yellow Pages Directory

yp.ca
Search "mould removal and control".

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

Replacing documents and money

Birth, marriage and death certificates
health card
driver's licence and vehicle registration
1-800-267-8097
ontario.ca/serviceontario

Employment Insurance
Social Insurance (SIN) card
Canada Pension Plan papers
Old Age Security card
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
1-800-255-4541

Passports
100 Ouellette Ave Suite 503
passport.gc.ca

Income tax records
Canada Revenue Agency

Wills
Your lawyer

Medical records
Your family doctor

Land Registry / Titles
100-949 McDougall St,
Windsor ON N9A 1L9

Phone: 519-971-9980

Animal permits/licences
City of Windsor
311 or 519-255-2489
when you are outside city limits

Bank books
Your bank

Money
(partially or completely destroyed)
1-800-303-1282
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** 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. You can also visit **citywindsor.ca** or dial **311** or **519-255-2489** if outside city limits.

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

Canadian Mental Health Association
519-255-7440

Family Services Windsor/ Essex
519-966-5010

United Way

Windsor
519-258-0000

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.
- If replacing appliances, plan where possible to elevate them off the ground.

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/western-ontario.** 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

- ☐ Do not flush wipes of any kind, even if they say they are flushable.
- ☐ 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.

When a flood happens

- ☐ Contact Windsor at 311 or 519-255-2489 when you are outside city limits 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/western-ontario**.

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.

Emergency preparedness

- ☐ Sign up for Windsor Alerts at **windsoralerts.ca** for local emergency information sent directly to your phone.
- ☐ Create and understand your emergency plan (e.g. what to do and where to go).
- ☐ Assemble a 72-hour Go Bag.
- ☐ 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 Windsor, Stormwater Website Pages.

Notes

For more information about Windsor's drainage systems or to learn more about what you can do to prevent basement flooding in your home, visit **citywindsor.ca/flooding** or dial **311** or **519-255-2489** when you are outside city limits

Our commitment is to provide you with information and services that are high quality, professional, consistent, informative and friendly.

The City of Windsor graciously thanks the City of Mississauga, who developed this guide and granted use of it for the residents of the City of Windsor

MISSISSAUGA

THE CITY OF WINDSOR ONTARIO, CANADA

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