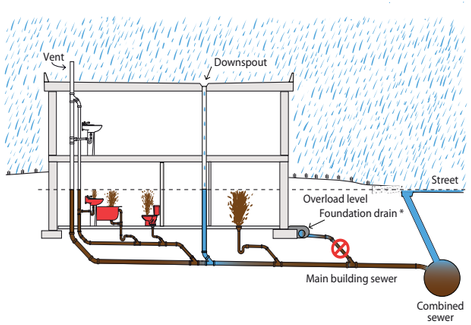
In today's world of climate change, heavy rainstorms are increasingly frequent. During these downpours, the large amounts of water flowing into the sewage system in record time may cause the sewer to back up toward your plumbing fixtures that are not protected by a backwater valve.

Backup of a sewer due to heavy rainstorms

ALL TYPES OF BUILDINGS WITH A FLAT ROOF

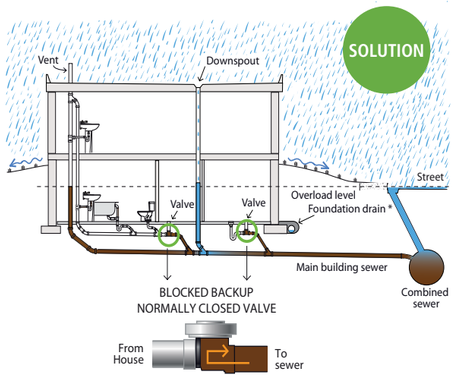


To guard against the risks of water seeping into your house, the foundation drain must not be directly connected to the sewer, as it is often overloaded during heavy rainstorms.

Smart precautions to take…

- In order to meet the requirements of the municipal bylaw, water from the foundation drain must first flow inside the building, into a sump, before being directed to the sewer. This sump will have to be equipped with a pump that automatically pushes the water back outside in case of a backup.
- In a heavy rainstorm, try to avoid using your washer, dishwasher, toilet flusher or shower or emptying your bathtub water. Wastewater draining from the building toward the sewer risks getting blocked by the valve, which has closed.

For all types of buildings with a flat roof, install a "normally closed" valve.



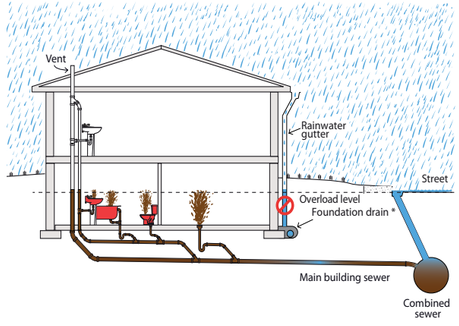
To prevent wastewater from backing up through plumbing fixtures, these fixtures must be protected by means of a "normally closed" valve.

Buildings with a flat roof have no outdoor gutters, but rather interior downspouts, which carry the water toward the sewer.

The "normally closed" backwater valve is a device designed to prevent wastewater from backing up into your building by opening only for the normal evacuation of wastewater. In case of a backup, the valve flap blocks the water that backs up in the opposite direction.

Sewer backup due to heavy rainstorms

SINGLE-FAMILY HOME WITH A SLOPING ROOF

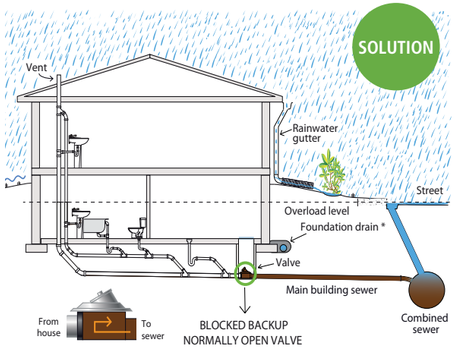


Smart precautions to take…

- In order to meet the requirements of the municipal bylaw, water from the foundation drain must first flow inside the building, into a sump, before being directed to the sewer. This sump will have to be equipped with a pump that automatically pushes the water back outside in case of a backup.
- In a heavy rainstorm, try to avoid using your washer, dishwasher, toilet flusher or shower or emptying your bathtub water. Wastewater draining from the building toward the sewer risks getting blocked by the valve, which has closed.

Bylaw 2008-47 stipulates that rainwater captured by a gutter system must not be directed toward the foundation drain.

An alternative for a single-family home with a sloping roof: a "normally open" valve



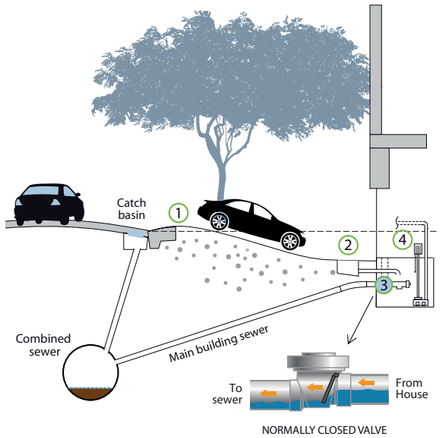
This device is designed to prevent wastewater from backing up into your home. In case of a backflow, the flap of this "normally open" valve closes and prevents the wastewater from backing up.

Installation conditions

A "normally open" valve is an acceptable alternative for preventing sewer backups. It may be installed on the main sewer only, if all the following conditions are met:

1. The main sewer serves only one housing unit.
2. The main sewer serves an existing building and not a new construction.
3. The main sewer doesn't carry any rainwater.
4. If there is a pump that automatically pushes the water back outside in case of a backup, the drain pipes must be connected after the "normally open" valve, which is installed on the main drain of the building.
5. The valve serves only plumbing fixtures installed before June 21, 2011, the date of adoption of the Bylaw on the protection of buildings against sewer backups and floods.

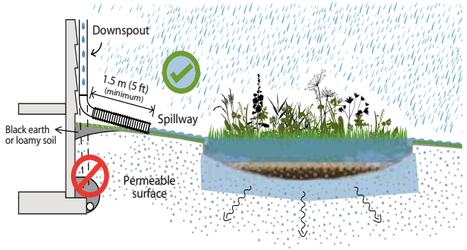
Solutions for a driveway sloping toward your house



Make sure you have:

1. an upward slope between the public roadway and your driveway.
2. an outdoor drain, of sufficient dimensions and in good working order, located at the bottom of the garage slope.
3. a "normally closed" backwater valve installed on the drain pipe of the indoor sump. The municipal bylaw may also require a vent.
4. a sump equipped with a pump connected to the storm sewer of the building. The drain pipe of this pump must be equipped with a backwater valve and have a bypass toward outside in case of a backup, in keeping with the requirements of the municipal bylaw.

If you have a sloping roof, disconnect your gutters from the foundation drain, in accordance with a bylaw…



In this way, you will be able to:

- protect the foundation of your building
- divert the rainwater away from the sewer system
- redirect the rainwater toward your landscaping, in order to cut down on the need for watering

An efficient way of saving drinking water… Set up a rain garden: Plants prefer rainwater!
Once your gutters have been disconnected, divert the rainwater runoff from the roof toward your plants, by installing an inexpensive downspout extension or deflector. Make sure the rainwater flows at least 1.5 metres (5 feet) away from the foundation. It is preferable if the ground slopes direct the runoff water away from the building.

Under Bylaw 2008-47
When the water runoff from the roof is captured by a gutter system (…), this water must be directed along the surface of the ground at least 1.5 metres (5 feet) from a building, to prevent it from going into any foundation drain.

Ville de Montréal is well aware of the impacts of heavy rainstorms. In order to cut down on the number of sewer backups, it is constantly striving to improve the drainage system and reduce the flow of rainwater directed into this system.

Useful links

More information may be found on our Internet site:
ville.montreal.qc.ca/eaudemontreal/refoulement

Régie du bâtiment du Québec (RBQ)
rbq.gouv.qc.ca

Corporation des maîtres mécaniciens en tuyauterie du Québec (CMMTQ)
cmmtq.org

The City has set up an inspection service available to residents in most boroughs. For further information, phone 311.

Please note:
All drawings in this leaflet are for information only; they may not be considered to have any legal value. Conditions apply in accordance with Chapter III (Plumbing) of the Québec Building Code. For information on the type of valve that best suits your building as well as on its installation and maintenance, it is highly recommended that you seek advice from a plumber who is a member of the CMMTQ. In all cases, your valve must be easily accessible and regular maintenance should be carried out to make sure it is in good working order.

Graphic design studio, **Ville de Montréal** 4533 (02-14) *French version also available*

Combined system

SEWER BACKUP SOLUTIONS

PROTECT YOURSELF!

Service de l'eau
Montréal