

Acknowledgements and useful links:

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

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

Please note: All the drawings presented in this brochure are for guidance purposes and cannot be deemed prescribed by regulation. Since certain conditions are specified under Chapter III (Plumbing) of the Québec Building Code, it is highly recommended that you seek advice from a plumber who is a member of the CMMTQ in order to obtain information about the type of valve suited to your building and its installation and maintenance. In all cases, your valve must be easily accessible and should undergo regular maintenance to ensure it is in good working order.



Studio de design graphique, Ville de Montréal, 000554-6968 (04-2011)

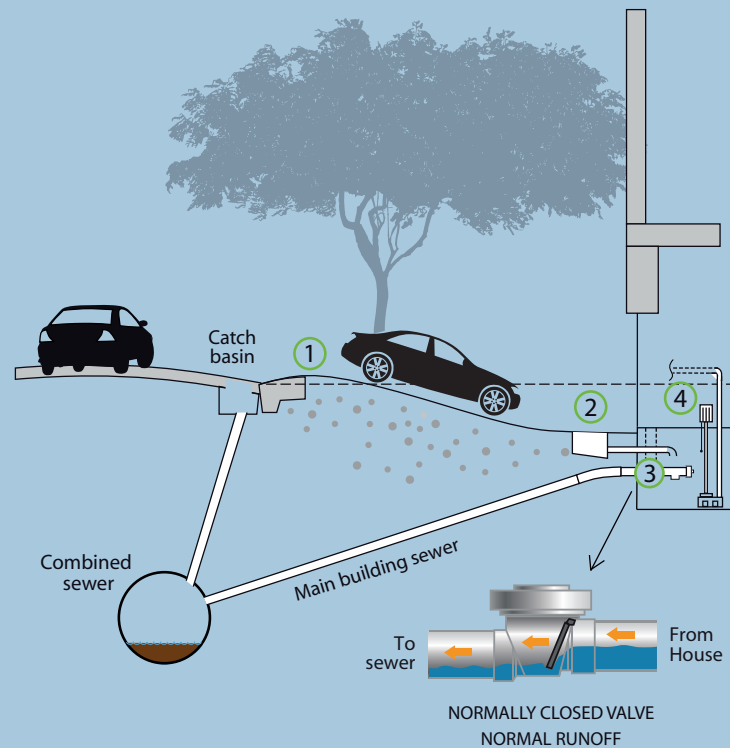
For information, call 311 or your City.

To find out more about what you can do to protect your home against sewer backups and flooding, visit our Web site at:

ville.montreal.qc.ca/eaudemontreal

Solutions for a driveway sloping toward the house:

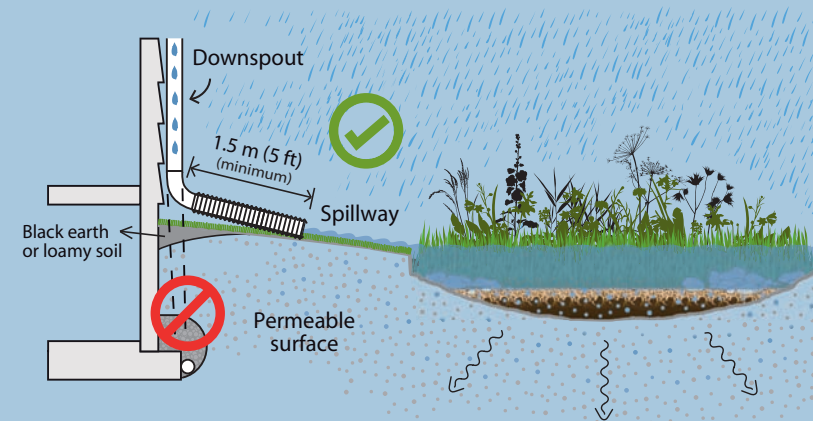
1. Build an upward slope between the public roadway and the driveway.
2. Install a drain of the proper size and in good working condition at the bottom of the garage slope.
3. Install a normally closed backwater valve on the drainage pipe of the indoor sump. A ventilation pipe may also be required, in accordance with municipal bylaws.
4. Install a sump equipped with an automatic pump connected to the building storm sewer. The pump drainage pipe must be equipped with a check valve and a bypass toward the outside in case of backflow, in accordance with municipal bylaws.



If you have a sloping roof, disconnect your gutters from the foundation drain.

In this way, you will be able to:

- Protect the foundations of your house;
- Redirect the rainwater to your landscaping, in order to reduce watering. An effective way to preserve drinking water.



Create a rain garden! Plants adore rainwater...

Once your gutters have been disconnected, divert the rainwater runoff from the roof to the vegetation by installing an inexpensive downspout extension or deflector. Rainwater must flow at least 1.5 m (5 ft) away from the foundation. (Bylaw 2008-47)

Under article 3, paragraph C, of Communauté métropolitaine de Montréal's Bylaw 2008-47 on water treatment:

"When water runoff from the roof is captured by a gutter system (...), this water must be directed along the surface of the ground and at least 5 m (5 ft) away from a building, while preventing it from flowing toward any foundation drain."

COMBINED SYSTEM

PROTECT YOURSELF!

Installation of backwater valves and other simple actions

Montréal

In a context of climate change, heavy rainstorms are increasingly frequent. During these downpours, large amounts of water flowing into the sewer system in record time may cause sewer backup.

For all types of buildings with a flat roof, INSTALL A **NORMALLY CLOSED VALVE.**

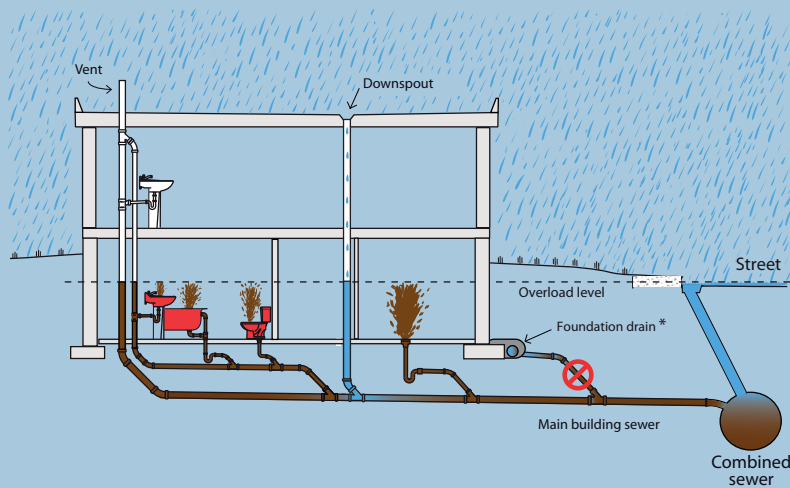
SEWER BACKUP DUE TO HEAVY RAIN

During heavy rainstorms, plumbing fixtures located below street level must be protected from the risks of sewer backup by means of a **normally closed** valve.

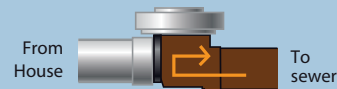
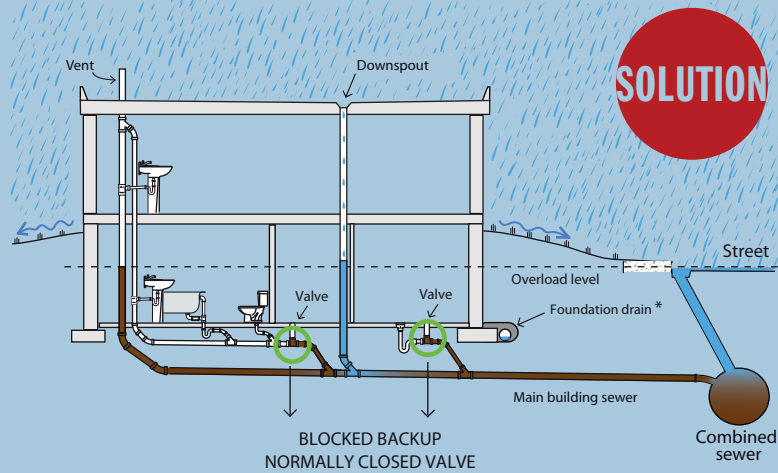
Buildings with a flat roof do not have outdoor gutters. Instead, they have indoor downspouts which carry the water directly to the sewer and therefore risk flooding it and causing a sewer backup.

The **normally closed** backwater valve is designed to prevent wastewater from backing up into your building. The valve flap opens only for the normal discharge of wastewater. In case of backflow, the water runs in the opposite direction and is blocked, preventing it from backing up.

During heavy rainstorms, try to avoid using your washing machine and dishwasher, flushing the toilet, taking a shower or emptying your bathtub. Wastewater draining from the house to the sewer risks being blocked by the closed valve.



* In order to prevent the risks of infiltration, the foundation drain must not be directly connected to the sewer, since the latter is already overloaded by the heavy rain.



It is preferable that slopes take runoff water away from the building.

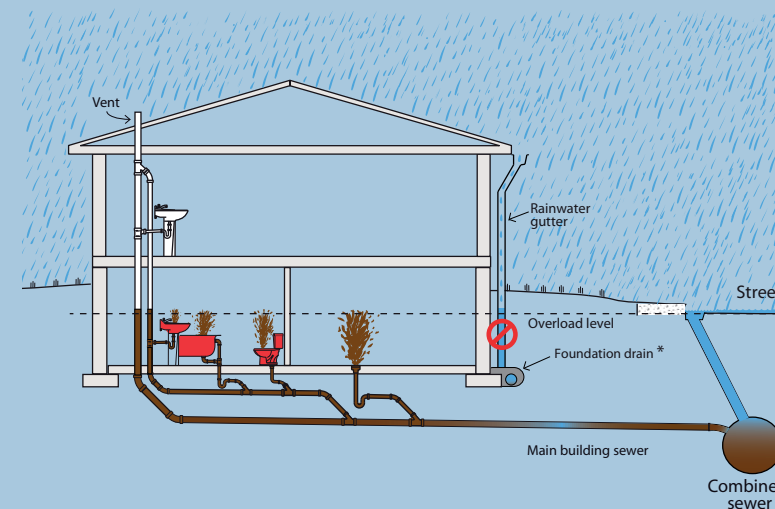
* In order to prevent the risks of infiltration, water from the foundation drain must flow inside the building before being carried to the sewer, in accordance with the requirements of municipal bylaws.

Ville de Montréal is sensitive to the impacts of heavy rainstorms. In order to cut down on the number of sewer backups, the City is constantly striving to improve the drainage system and reduce the amount of rainwater flowing into this system.

An **OPTION** for single-family homes with a sloping roof **Normally open backwater valve.**

SEWER BACKUP DUE TO HEAVY RAIN

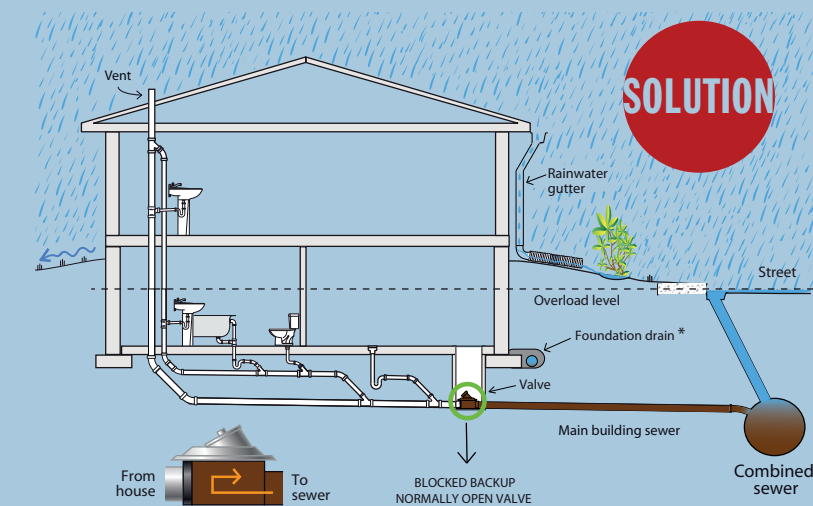
Plumbing fixtures located below street level must be protected from the risks of sewer backup by means of a **normally closed** valve. In certain cases, the use of **normally open** valve constitutes an acceptable **OPTION** for preventing sewer backups in single-family homes with a sloping roof.



* Water runoff captured by a gutter system must not be directed toward the foundation drain, under **Bylaw 2008-47**. (read further details)

During heavy rainstorms, try to avoid using your washing machine and dishwasher, flushing the toilet, taking a shower or emptying your bathtub. Wastewater draining from the house to the sewer could be blocked by the closed valve.

The **normally open** backwater valve, installed on the main sewer, is designed to prevent wastewater from backing up into your basement. In case of backflow, the flap of the valve, which is normally open, closes and prevents the water from backing up.



This type of valve constitutes an acceptable **OPTION** for preventing backflow. It can be installed on the main sewer **only if all the following conditions are met**:

1. If the main sewer serves only one unit;
2. If the main sewer serves an existing building – and not a new construction;
3. If the main sewer does not carry rainwater;
4. If the valve serves only plumbing fixtures installed before the upcoming adoption of the Règlement sur la protection des bâtiments contre les refoulements d'égout et inondation. **If all these conditions are met and there is automatic pumping equipment** (sump pump), the drainage pipes for this equipment must be connected to the normally open valve, which is installed on the main building sewer.

It is preferable that slopes take runoff water away from the building.

* In order to prevent the risks of infiltration, water from the foundation drain must flow inside the building before being carried to the storm sewer, in accordance with the requirements of municipal bylaws.