

## Frequently asked questions (FAQs)

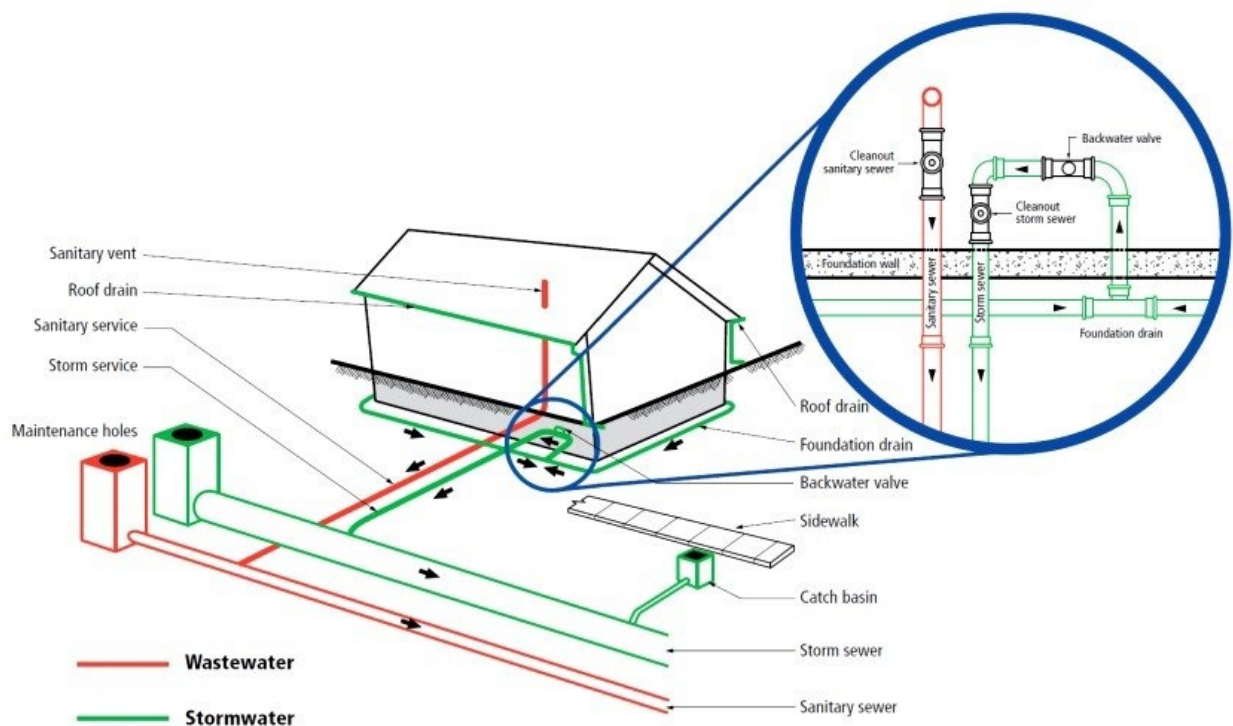
### Do I need a building permit?

Yes, a building permit is required for installation of protective plumbing devices.

Under the Program, the City provides a full rebate or refund for building permits required for the installation of approved protective plumbing devices with the submission of copy of the permit and related inspection report. This helps to ensure the necessary reviews, approvals, and inspections are completed and provides support to residents. If you are unsure if your project requires a permit please contact Building Code Client Service Centre or 3-1-1 for more information. You can also e-mail [buildingpermits@ottawa.ca](mailto:buildingpermits@ottawa.ca).

### What is protective plumbing?

Protective plumbing prevents water and sewage from entering your home during a backup. These methods can range from installing a sump pump and changing the footing drains around your foundation to installing an approved backwater valve on the sewer pipes connecting your sanitary sewer to the City sewer system.



### What is a backwater valve?

A backwater valve is a device installed on a sanitary or storm sewer lateral. Backwater valves contain a gate to help prevent wastewater or stormwater from entering your home due to increased levels in the sewer system (sewer surcharging) caused by excess rain or snowmelt or a blockage in the sewer system. Under normal conditions, the gate is open or parallel with the sewer lateral allowing wastewater from the home to travel through the lateral to the sewer system. When sewer surcharging occurs, wastewater or stormwater entering the sewer lateral causes the gate to close or become perpendicular with the lateral preventing wastewater or stormwater from entering the home.

### **What is a sump pit and sump pump?**

A sump pit is a container installed below the basement floor designed to collect excess rain and groundwater conveyed by foundation drains or weeping tile. A sump pump is installed in the sump pit. When the water level in the sump pit increases, the sump pump is activated and pumps the excess water from the sump pit through the discharge pipe to the storm sewer system or safely to the surface away from the home to help prevent basement flooding.

### **What is a secondary sump pump?**

A secondary sump pump acts as a backup pump supporting the primary sump pump should it fail or become overwhelmed by the volume of water. Given the appropriate sizing and space, the secondary sump pump could be located in the same sump pit as the primary sump pump or be located in a separate sump pit.

### **What is battery backup power?**

Battery backup power is an uninterruptible power supply which is directly connected to the sump pump. If there is a power interruption or power outage (storm event), the battery backup power helps to ensure the continued operation of the primary or secondary sump pump.

### **What is a sewer lateral?**

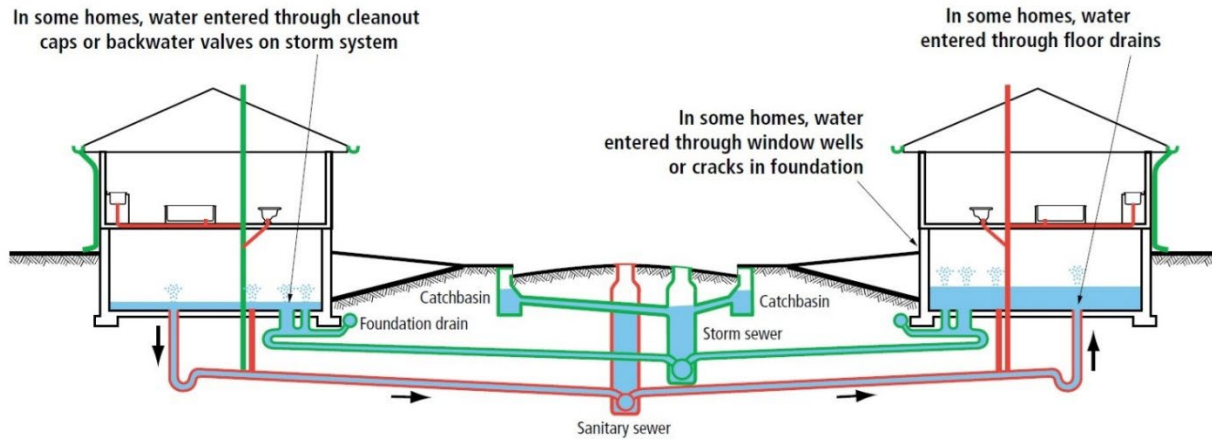
A sewer lateral is the pipe that connects your home or business to the main sewer in the street. The property owner is responsible for the portion from the property line to the home or business. The City is responsible for the portion from the property line to the main sewer.

### **How does a sewer backup occur?**

Excess rain or snowmelt or a blockage in the sewer system can cause an increase in water level or surcharge. A backup occurs when the increased water level (surcharge)

pushes water backwards through the service lateral into the home through floor drains, sinks and toilets.

## How can water enter my home?



## How do I know if I have a backwater valve installed on my property?

Backwater valves were mandatory in new homes after 2004 (stormwater) and 2012 (sanitary), but some older homes have had them installed retroactively.

If you are unsure of if you have a valve installed on your property, check between the last branch of your sewer line and where the pipe exits your foundation. It may look like a Y-shaped (wye) fitting with the wye branch plugged and pointing upward. If it's in your yard, it is most likely buried and could be several feet deep.



## Why do I hear an alarm near the backwater valve?

An alarm may be added to a backwater valve to alert you that the valve has been engaged and is restricting flow back toward your basement. When you hear the alarm and when you see that the valve is engaged, it means that the backwater valve is working as it should. Do not shower, flush toilets or wash clothing until the system has returned to routine functioning, as additional water will not flow out of the residence when the valve is engaged. You can resume routine use when the alarm and the backwater valve are no longer engaged.

## **Do I have to maintain my protective plumbing devices?**

Yes, the property owner is responsible for maintaining protective plumbing devices according to the manufacturer's direction. A protective plumbing device should be maintained periodically or before a forecasted heavy rainfall to ensure it is free of debris, functioning properly, and that cleanout caps and access covers are firmly secured. If you are unsure about the condition of the valve or are not able to complete the required maintenance, a licensed plumber can perform an inspection.

For more tips on backwater valve maintenance, refer to a video on Backwater Valve Maintenance from the [Institute for Catastrophic Loss Reduction](#).

## **Will protective plumbing keep water out of my basement?**

If properly installed and maintained, protective plumbing devices will prevent water and wastewater from a surcharging event from entering the home.

Protective plumbing devices will not stop water from entering through:

- Cracks in walls or window wells,
- Failed foundation drains or sump pumps,
- Overflowing eaves troughs and plugged downspouts,
- Poor foundation drainage,
- Poor lot drainage, or
- Water sources inside the house.

## **What are the requirements for installing protective plumbing devices?**

### **Sewer Design Guidelines**

For more information on the Sewer Design Guidelines or to order a copy, please email the City of Ottawa at [StandardsSection@ottawa.ca](mailto:StandardsSection@ottawa.ca) ✉. Fees do apply.

Note: The Sewer Design Guidelines contain applicable information regarding backwater valve installation, including but not limited to the following sections:

4.4.5 – Sanitary Backwater Valves

5.7.5 - Service Connection Hydraulics

5.7.7 – Storm Backwater Valves

### **Standard Tender documents for Unit Price Contracts**

For more information on the City of Ottawa Standard Tender documents for Unit Price Contracts or to order a copy free of charge, please email the City of Ottawa at [StandardsSection@ottawa.ca](mailto:StandardsSection@ottawa.ca) ✉.

Note: The City of Ottawa Standard Tender documents for Unit Price Contracts contain applicable drawings and material specifications, including but not limited to the following drawings

S14 – Foundation Drain Backwater Valve Installation S14.1 – Sanitary Backwater Valve Installation Type 1 S14.2 – Sanitary Backwater Valve Installation Type 2

S16 – Exterior Foundation Drain Backwater Valve Exterior Retrofit Applications (Exception Basis Only); S18 – Typical Depressed Driveway Backwater Valve and Standpipe Detail

MS-22.15 - Approved Sewer and Miscellaneous Products Listing (S18.2-1 and S18.2-2).

### **Where can I find further resources on protective plumbing?**

- [Handbook for Reducing Basement Flooding](#), Institute for Catastrophic Loss Reduction
- [Backwater valves](#) (narrated animation), Institute for Catastrophic Loss Reduction
- [Weeping tiles and sump pumps](#) (narrated animation), Institute for Catastrophic Loss Reduction