

## Who is required to install backwater valves?

- Per City of Cambridge Regulations and State Plumbing Code (248 CMR 10.15 [11] 1 & 2), all fixtures and appliances below the roadway (dishwashers, sinks, showers, toilets, washing machines) are required to be protected by a backwater valve.

## Who installs and maintains backwater valves?

- Property owners are responsible for the installation and maintenance of backwater valves.
- Property owners must first obtain a permit from Inspectional Services, and should contract with a licensed plumber to install backwater valves.

## How do I maintain my backwater valve?

Maintenance should be performed on a regular schedule, every month or following the manufacturer's recommendation. A standard inspection procedure should include:

1. Check to make sure it isn't raining.
2. Remove the cover on the backwater valve chamber.
3. Attach a short garden hose to the sink and slowly turn on the tap, gradually increasing the flow to clean out the backwater valve.
4. Ensure the flap can move with ease.
5. Replace the cover on the backwater valve chamber.

## For more information on backwater valves:

City of Cambridge  
Department of Public Works  
617-349-4800  
[www.cambridgema.gov/theworks](http://www.cambridgema.gov/theworks)

City of Cambridge  
Inspectional Services  
617-349-6100  
[www.cambridgema.gov/inspection](http://www.cambridgema.gov/inspection)

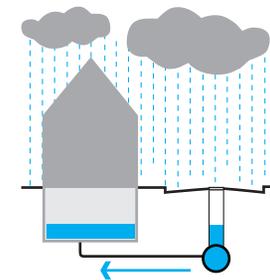
Massachusetts State  
Uniform State Plumbing Code  
248 CMR, 10.15 (11) 1 & 2  
[www.mass.gov](http://www.mass.gov)

CAMBRIDGE  
DEPARTMENT  
OF PUBLIC  
**THE  
WORKS**

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# Protect Your Home from Sewer Backups

## Sewer Backwater Valves



Backup Flow



Backwater valve

*Do you have a sink, shower, toilet, dishwasher, washing machine, or floor drain in your basement?*

*Do you own a basement-level apartment or condo?*

***If so, you need to install backwater valves to help protect your property from sewer backups.***

## Overview

During heavy rain or a blockage in the municipal sewer system, sewage can surcharge or “build up” in pipelines causing sewage to flow backwards into basements. A backwater valve can help protect your property from back-ups.

### What is a backwater valve?

A backwater valve is a device installed to prevent sewage from flowing backwards into basement fixtures, such as dishwashers, sinks, showers, toilets, washing machines, or floor drains.



Backwater valve

## How does it work?

A backwater valve has a flap door inside which allows wastewater to flow in one direction, out towards the street (Figure 1), but closes automatically and does not allow sewage flow backwards through your pipe and into the basement (Figure 2).

### NOTE:

When the backwater valve closes because of surcharging in the municipal pipeline, wastewater from basement fixtures will not be able to exit (Figure 2). Use of basement-level fixtures should be minimized during heavy rain.

## Where to install

Proper placement of backwater valves is critical.

- Backwater valves should be installed on the plumbing of each basement fixture.
- Never locate a backwater valve on plumbing that services units above the basement or roof drains (Figure 3).
- The backwater valve should be accessible for monthly maintenance (Figure 4).
- A licensed plumber can determine the appropriate installation location.

Normal Conditions

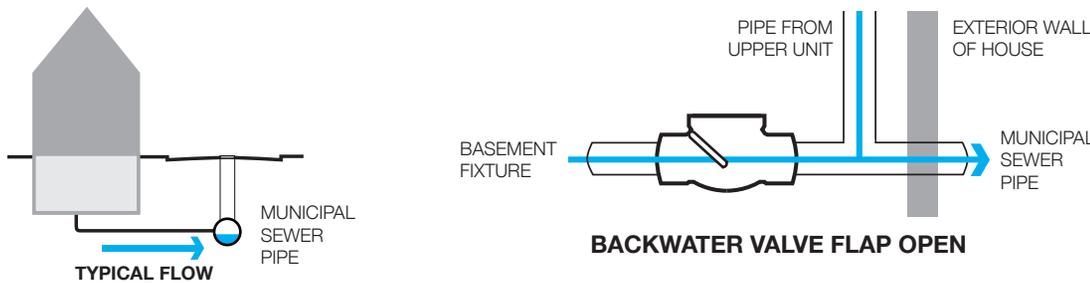


Figure 1: Under normal conditions, water flows from basement fixture through backwater valve to municipal sewer pipe.

Rainfall/ Sewer Backup Event

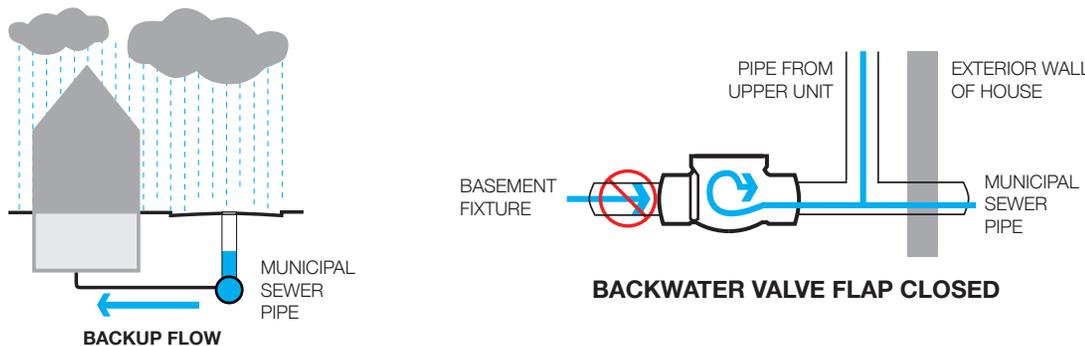


Figure 2: During rainfall or sewer backup event, backwater valve flap closes to block sanitary sewage from entering basement fixtures. Note: Closed valves also prevents basement wastewater from exiting to municipal sewer pipe.

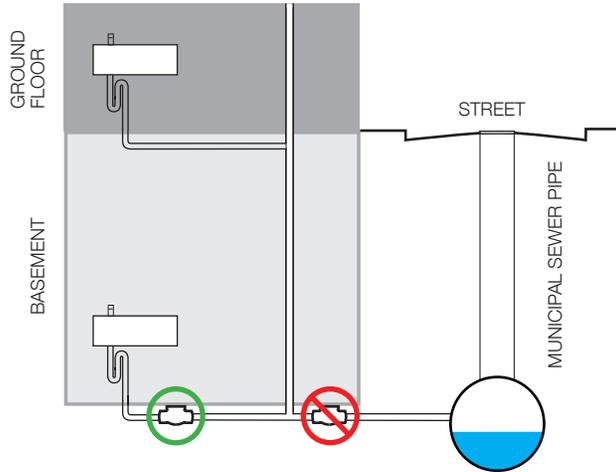


Figure 3: Install backwater valves on each fixture. Never install on pipes servicing units above basement.

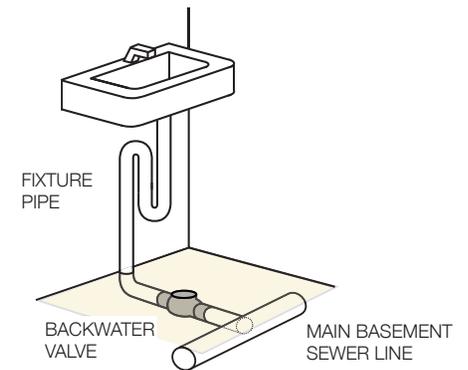


Figure 4: Install a backwater valve on each fixture, in a location easily accessible for monthly maintenance.