



Southern Clinton County Municipal Utilities Authority

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Backwater Valve and How They Work

What is a backwater valve?

A backwater valve (sometimes called a backflow or sewer backup valve) is a valve you can install on your sewer line and is designed to allow water or sewage to flow only one way, that is, out of your house. Anytime there is a sudden heavy rainfall; the city sewer lines can become overwhelmed, causing water or sewage to flow back towards your home. If there is a sewer system backup, and you have a backwater valve in place, sewage will not be able to flow back into your house.

The risk of sewer backup increases if there is a basement in your home, or if the ground floor is less than a foot above street level. If a new home has any fixtures located lower than the street level, The National Plumbing Code requires to have a backwater valve installed.

How does it work?

Your home's sewer system allows water and sewage to flow out of the house. A backwater valve will stop water or sewage from flowing into your house should the main sewer line become overloaded. In most cases, you can check to see if it's working properly by looking through the clear cover on the backwater valve access box.

Inside the valve is a small flap that is normally open allowing water to exit your home. It also allows any sewer gases to be vented. There is a small floatation device on each side of the flap. If water or sewage starts to flow back into the house, these floaters cause the flap to lift up and close, thus preventing anything from entering your home.

When the water stops coming back towards the house, gravity will allow the flap to fall into the open position again, allowing water and sewage to resume flowing out of the house.

If this backwater valve is being put in an existing home, as opposed to being installed in the initial construction, a plumbing permit from your municipality is needed. A licensed, qualified plumber will have to cut a hole in the concrete floor, usually near the floor drain. They will dig down to the main sewer line, cut out a portion, and replace it with the new valve. These valves often have a clear top so you can see if it is operating properly. There is a lid that can be removed for cleaning.

Without a properly placed and installed backwater valve, sewage could come into the basement through a floor drain, sinks, tubs, and toilets.

- Talk to your municipal government to find out if any local permits are required, as well as to find out what sort of equipment they recommend.
- Check that your drain and downspouts are not connected to the weeping tile and sanitary sewer. In most cases, if you disconnect the foundation drain, your home will require the installation of a sump pit and pump. It is recommended to talk to a plumber and your local government department for advice on how to properly disconnect downspouts and foundation drains.
- Hire a licensed plumber. They can install the backwater valve and can also obtain any necessary building permits. Municipal governments sometimes have lists of pre-approved plumbers.
- Make sure eavestroughs, once disconnected from the sewer system, drain away from your home, but not directed toward your neighbor's property.

Take a look at this great video by the [Insurance Bureau of Canada](#) on how a backwater valve is installed, and how it works.

What can you do to maintain your backwater valve?

You should check at least annually to remove any debris that could clog the valve and to make sure all moving parts have free movement. Most valves have an easily removed cover, to allow quick cleaning. But be careful. Some experts recommend running some hot soapy water down your sink first to make sure the system is fairly clean. Always wear rubber gloves and use a long-handled brush to scrub

around and under the flap. Most backwater valves will have a manufacturer's recommendations regarding maintenance.

You'll also want to look at the O-ring around the lid to make sure it's in good condition. If not, it should be replaced to ensure a proper seal. Also, check the floats at each side of the flap, and replace if necessary. If these are worn, they will lose their ability to float, and won't be able to lift the flap when needed.

To keep everything flowing smoothly, you may want to consider NOT flushing such things as "flushable wipes" or diaper liners. By disposing of these things in the garbage, rather than in the toilet, you will be saving your system from performing extra work, and will hopefully be preventing the system from getting clogged.

If you're unsure about the condition of the valve or are not comfortable attempting it yourself, you can call a plumber to do an inspection.