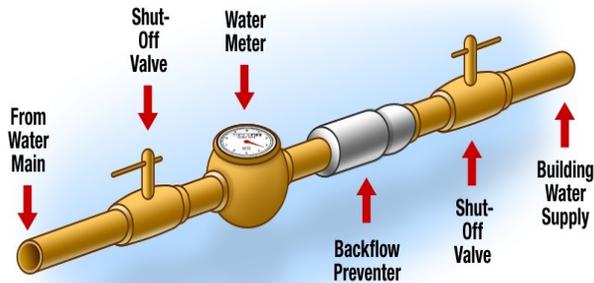


## Prevention

Without the proper protection, something as simple as a garden hose has the potential to contaminate or pollute the drinking water lines in your house. There are simple steps you can take to prevent such hazards:

- **NEVER** submerge a hose in soapy water buckets, pet watering containers, pool, tubs, sinks, drains or chemicals.
- **NEVER** attached a hose to a garden sprayer without the proper backflow preventer.
- Install a hose bib vacuum breaker in any threaded water fixture.
- Identify and be aware of potential cross-connections to your water line.
- Purchase appliances and equipment with a backflow preventer
- Install backflow prevention devices or assemblies for all high and moderate hazard connections such as boilers and irrigation devices.



The backflow preventer ensures that the drinking water will flow in one direction only and keeps the tainted water or chemicals in the equipment or system (A/C, boiler, etc.) from entering the drinking water line.

## Take Action

Contact your local plumbing and water departments to apply for all necessary approvals and permits for the maintenance of cross connections and installation of backflow prevention devices on plumbing devices and irrigation systems.

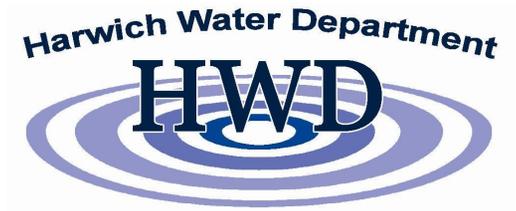
- Have a certified backflow prevention device technician test annually or semiannually depending on the device.
- Maintain records for all devices, including as-built plans, design data sheets, and copies of Inspection and Maintenance report forms.

By following the steps above, you can help to ensure the drinking water remains safe for consumption at your property and neighborhood.

The Town of Harwich works very hard to protect the quality of the water delivered to our customers. From the time water is extracted from Cape Cod's underground aquifers to when it reaches the tap, there still a need to protect the water quality from contamination caused by cross-connection hazards.

Everyone can do their part to help protect our precious water resource!

*"An ounce of prevention is worth a pound of cure"*  
~Benjamin Franklin



## Cross-Connection Control & Backflow Prevention



196 Chatham Rd  
Harwich, MA 02645  
Phone: 508-432-0304  
Fax: 888-774-3557  
[www.harwichwater.com](http://www.harwichwater.com)

## What is a cross-connection?

A cross-connection is formed at any point where a drinking water line connects to any equipment or system containing chemicals or water of questionable quality.

- Boilers
- Air conditioning systems
- Fire sprinkler systems
- Irrigation systems
- Laboratory equipment
- Planting tanks
- Chemical vats
- Restaurant soda dispensers

Community drinking water distribution systems are continuously jeopardized by cross connections unless appropriate valves, known as backflow prevention devices, are installed and maintained. Owners of cross connections have the responsibility to maintain the system so that the public drinking water is not contaminated. Serious illness, even deaths, have been caused by “backflow” contamination-incidents that could have been prevented.

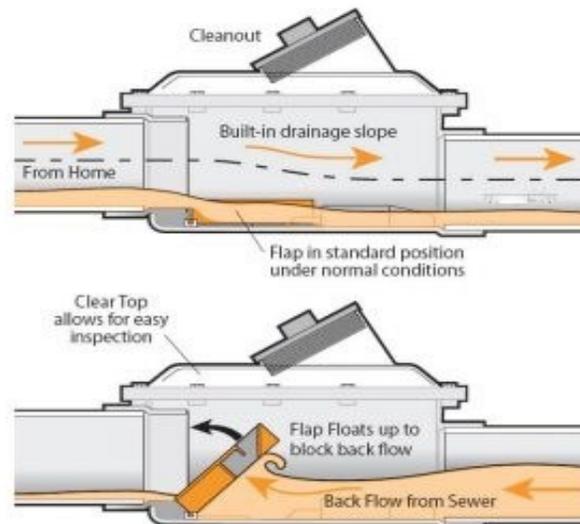
## What is a backflow?

Back-pressure occurs when the pressure in the equipment or system (A/C, boiler, irrigation, etc.) is greater than the pressure in the drinking water line. Back-siphonage occurs when the pressure in the drinking water line drops (main breaks, fires, heavy demand) and contaminants are sucked out of the system into the drinking water line. Backflow is an issue every water customer has a responsibility to help prevent.

## Where Can Cross-Connections Occur?

Cross-connections can occur throughout a distribution system. Cross-connections can be identified by looking for physical interconnections (or arrangements) between a customer's plumbing and the water system. Some examples of backflow incidents that can occur are:

- Lawn chemicals backflowing (backsiphoning) through a garden hose into indoor plumbing and potentially into the distribution system.
- Backsiphonage of "blue water" from a toilet into a building's water supply.
- Carbonated water from a restaurant's soda dispenser entering a water system due to backpressure.
- Backsiphonage of chemicals from industrial buildings into distribution system mains.
- Backflow of boiler corrosion control chemicals into an office building's water supply.



## Protection

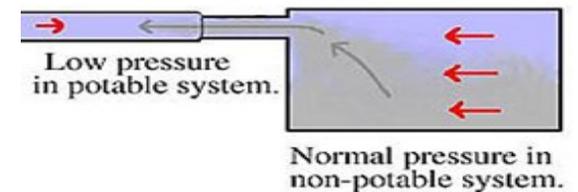
The Massachusetts Plumbing Code (248 CMR 2.14) and Massachusetts Drinking Water Regulations (310 CMR 22.22) both require installation of backflow preventers at all cross connections. In addition, backflow preventers at cross connections are to be inspected either once or twice a year (depending on the type of device) by a certified backflow prevention inspector. A survey can be scheduled to determine if a device is needed. Please contact the Harwich Water Department for more information.

## Backpressure vs. Backsiphonage

*Backpressure* - Backflow occurs when the pressure in an unprotected downstream piping system exceeds the pressure in the supply piping.

*Backsiphonage* - Resulting from negative pressures in the distributing pipes of a potable water supply.

## Back Siphonage:



## Back Pressure:

