

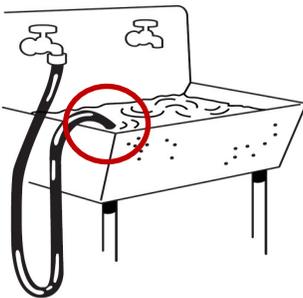


Backflow Prevention Program

Protecting the safety of your home's drinking water

What is a Cross Connection?

Water can become contaminated if connections to your plumbing system are not properly protected. A cross connection is an actual or potential connection between the safe drinking water (potable) supply system and a source of contamination or pollution. The most common offender is the ordinary garden hose, as it can easily be connected to the potable water supply and used for a variety of potentially dangerous applications. An example is a garden hose attached to a service or laundry sink with the end of the hose submerged in a tub full of detergent.



What is Backflow?

The normal direction of water flow is from the utility water main in the street to the home. However, under certain conditions water can actually flow in the reverse direction. This is called **backflow**. Backflow occurs when the flow of water in any pipeline or plumbing system reverses and flows in the opposite direction than intended.

Types of Backflow

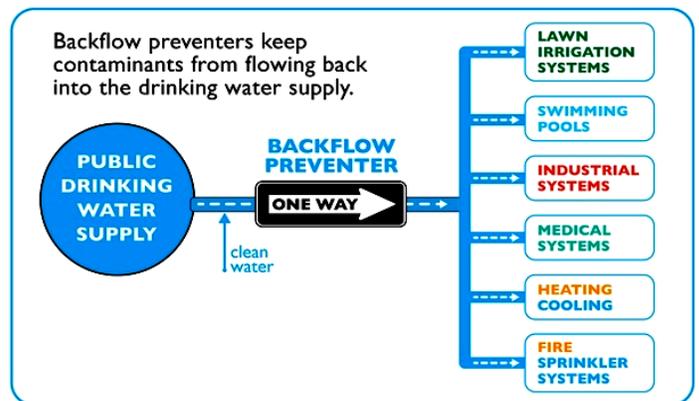
There are two situations that can cause backflow:

Backsiphonage creates a vacuum which may pull or siphon contaminants backwards into the drinking water supply. Back siphonage may occur due to a loss of pressure in the municipal water supply such as from a water main break, system repair, or during a fire fighting emergency.

Backpressure may force contaminant-laced water back into the building's piping system. Backpressure may occur when a source of pressure creates a pressure greater than the pressure supplied from the public water system. This may cause contaminated water to be pushed into your plumbing system through an unprotected cross connection. To avoid contamination, state plumbing codes require approved backflow prevention methods or devices to be installed wherever there is an actual or potential hazard for a cross connection.

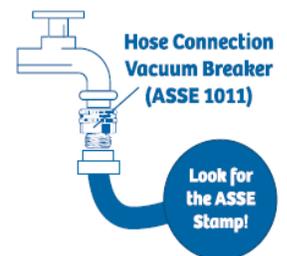
Types of Backflow Preventers

Backflow preventers are designed and installed to prevent the flow of water backwards through a pipe. The selection of a backflow preventer is based on several factors, including determining the type of cross connection and assessing the degree of hazard.

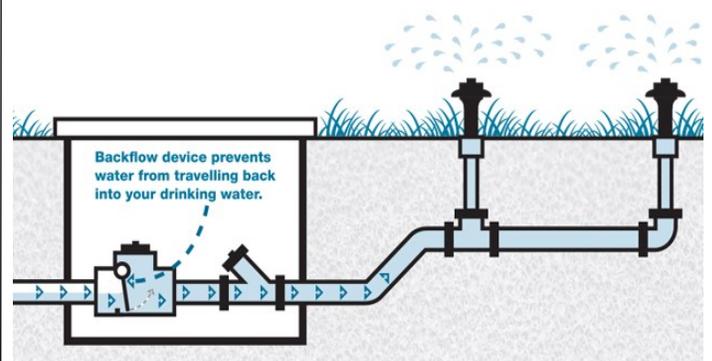


What Protection is Required for a Hose Faucet?

A hose bibb is the part of a faucet with screw threads on the exterior for attaching a hose.



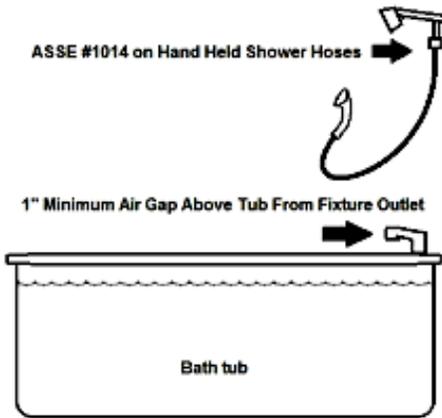
A hose faucet vacuum breaker should be installed on every hose faucet to isolate garden hose applications, thus protecting the water supply from contamination.



Avoiding Backflow Throughout Your Home

Common Household Hazards: The most common cross connection is a garden hose, which is easily connected to the public water supply system and can be used to apply a variety of potentially dangerous substances including chemicals and fertilizer. To ensure that no harmful materials are drawn back into a hose, a vacuum breaker should be installed on each hose connection. For extra protection, install a bibb vacuum breaker on your faucet to protect your water. All hoses connected to sinks, faucets, dishwashers, water softeners, etc. must have proper backflow prevention devices or methods. Below are some of the common types of backflow and ways to avoid them in your home.

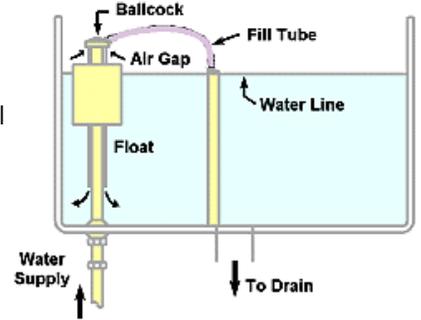
BATHTUB & SHOWER



- There should be a minimum 1" air gap between the highest potential water level and any faucet or shower fixture.
- When the showerhead is hanging freely, the handheld fixture should be at least 1" above the top of the flood level rim of the bathtub.
- The fixture must comply with ASSE #1014.
- The fixture must have the ASME code A112.18.1 stamped on the handle.

TOILET TANK

The toilet can be a source for cross connection if the fill valve (ballcock) is submerged below the water overflow line, or if a non-approved fill valve was installed.



- Look for the ASSE #1002 standard symbol on the device and packaging.
- Replace any unapproved devices with an ASSE #1002 approved anti-siphon fill valve device.
- Verify overflow tube is 1" below critical level (CL) marking on the fill valve.

WATER SOFTENER

A common problem with water softener installations is that a cross-connection can easily be overlooked.

All residential water softeners must have an air gap of at least 1-1/2 inch.

If discharged to a vented floor drain, the air gap measurement should be made from the high point of the floor and not the strainer.



Connect the small drain tubing to the water softener valve drain fitting. Then connect the overflow drain hose to the drain elbow on the salt tank.

OUTSIDE THE HOME

The purpose of a hose faucet is to allow easy attachment of a hose for outside watering purposes. However, garden hoses can be extremely hazardous when left submerged in swimming pools or laid in elevated locations when watering which may be contaminated with fertilizer and garden chemicals.

Verify all outside faucets are protected with the correct ASSE-certified type hose bibb vacuum breaker.



What Should I Do?

Check your home and reduce potential hazards with the proper backflow preventers. A licensed plumber is a good source of information and can provide recommendations for your home. If you have additional questions, please contact the City Water Utility at (262) 691-0804.

The City of Pewaukee Water Utility Cross Connection Program is designed to prevent backflow or backsiphonage of contaminated water into the public drinking water supply. The City routinely checks municipal water to ensure it is safe for potable use in accordance with the City's Cross Connection Control Program (Municipal Code Chapter 16.0208). This program is run in accordance with the Wisconsin Department of Natural Resources and Wisconsin Administrative Code NR 810.15. For additional information, please visit the DNR website at dnr.wi.gov.



City of Pewaukee Water & Sewer Utility

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