

# PROTECTING THE SAFETY OF YOUR HOME'S DRINKING WATER

From the Hazards of Cross-Connections and Backflow



## What is a Cross Connection?

A cross-connection is an actual or potential connection between the safe drinking water

(potable) supply and a source of contamination or pollution.

State plumbing codes require approved backflow prevention methods to be installed at every point of potable water connection and use. Cross-Connections must be properly protected or eliminated.

### HOW DOES CONTAMINATION OCCUR?

When you turn on your faucet, you expect the water to be as safe as when it left the treatment plant. However, certain hydraulic conditions left unprotected within your plumbing system may allow hazardous substances to contaminate your own drinking water or even the public water supply.

Water normally flows in one direction. However, under certain

conditions, water can actually flow backwards; this is known as Backflow. There are two situations that can cause water to flow backward: backsiphonage and backpressure.

#### BACKSIPHONAGE

May occur due to a loss of pressure in the municipal water system during a fire fighting emergency, a water main break or system repair. This creates a siphon in your plumbing system which can draw water out of a sink or bucket and back into your water or the public water system.

#### BACKPRESSURE

May be created when a source of pressure (such as a boiler) 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.



## INSIGHTS TO PROTECT YOUR DRINKING WATER

### Do...

- Keep the ends of hoses clear of all possible contaminants.
- Ensure that lawn irrigation systems have proper backflow protection.
- Verify and install a simple hose bibb vacuum breaker on all threaded faucets around your home.
- Make sure water treatment devices such as water softeners have the proper “air gap”, which is a minimum of one inch above any drain.

### DON'T...

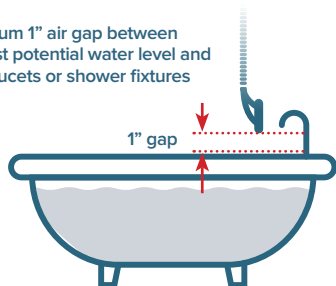
- Submerge hoses in buckets, pools, tubs, sinks or ponds.
- Use spray attachments without a backflow prevention device.
- Connect waste pipes from water softeners or other treatment systems directly to the sewer or submerged drain pipe. Always be sure there is a one-inch “air gap” separation.



# AVOIDING BACKFLOW THROUGHOUT THE HOME



Minimum 1" air gap between highest potential water level and any faucets or shower fixtures

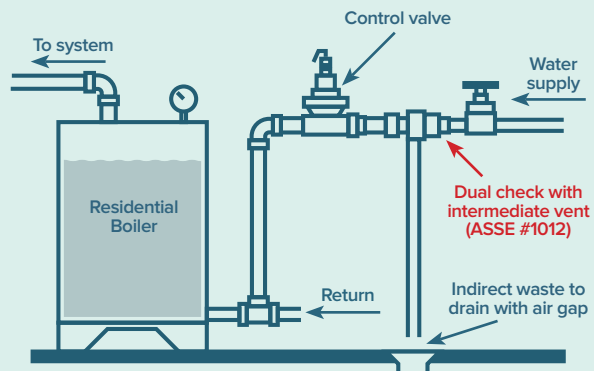


## BATHTUB & SHOWER FIXTURES

A hand-held shower fixture is compliant if:

- When shower head is hanging freely, it is at least 1" above top of the flood level rim of the bathtub
- Complies with ASSE#1014
- Has the ASME code A112.18.1 stamped on the handle

## BOILERS



Boilers with chemical additives require an ASSE #1013 – Reduced Pressure Principle Backflow Prevention Assembly.

## DID YOU KNOW...

Your water can become contaminated if connections to your plumbing system are not properly protected! The purpose of the local Cross-Connection Control Program is to ensure that everyone in the community has safe, clean drinking water.

## PUBLIC HEALTH & SAFETY....

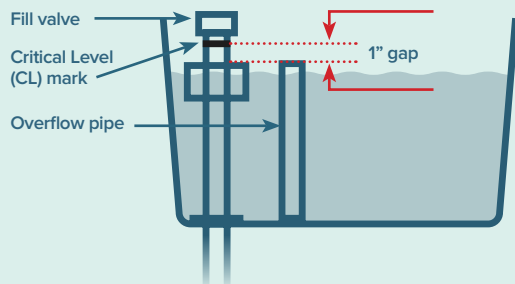
To avoid contamination, backflow preventers are required by state plumbing codes wherever there is an actual or potential hazard for a cross-connection. The Wisconsin Department of Natural Resources (DNR) requires all public water suppliers to maintain an on-going Cross-Connection Control Program involving public education, onsite inspections, and if required, corrective actions by building and home owners.

For more detailed information about cross-connection control and backflow prevention in Wisconsin, please visit [www.hydrocorpinc.com/residential](http://www.hydrocorpinc.com/residential) [www.hydrocorpinc.com/wi](http://www.hydrocorpinc.com/wi)

## TOILET TANKS

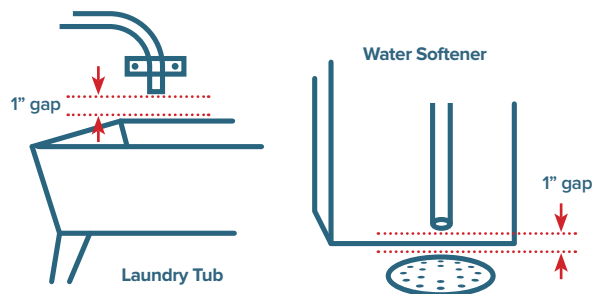
There are many unapproved toilet tank fill valve products sold at common retailers which do not meet the state plumbing code requirements for backflow prevention.

- 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. Average cost is typically \$12 to \$22 at home improvement stores.
- Verify overflow tube is one inch below critical level (CL) marking on the fill valve.



## ELSEWHERE IN THE HOME

Always maintain an air gap of at least 1 inch between the end of drain hoses and the highest potential water level.



## HOME EXTERIOR

Verify all outside faucets are protected with a hose bibb vacuum breaker of the ASSE-certified types shown below.

ASSE #1011



ASSE #1011 Frost-Free



ASSE #1019



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