Backflow Prevention and Cross Connection Control

Protecting our Public Water System

What is a cross connection? A cross connection is a connection or arrangement of piping or appurtenances through which backflow of nonpalatable water could flow into the public drinking water system as a result of backflow due to backsiphonage or backpressure.

What is backsiphonage? Backsiphonage is the reversal of flow in a piping system which is caused by a negative pressure. Backsiphonage can occur during watermain breaks, fire fighting events or during an interruption in a building or home's water supply.

What is backpressure? Backpressure is the reversal of flow in a system due to an increase in downstream pressure above that of the supply pressure. Examples of backpressure include high pressure boilers and downstream pumps.

Examples of Cross Connections:

- Lawn irrigation systems
- Hoses submerged in dirty buckets
- Swimming pools/hot tubs
- Outside faucets
- Toilet fill valves
- Water Assisted Sump Pumps
- Boilers (hot water heating)
- Water softeners
- Solar heating systems
- Chemically treated heated systems

This list of potential cross connection hazards is by no means complete. A home that has one or more of these situations is seriously jeopardizing its own potable water and that of the community if it is served by a public water supply system.

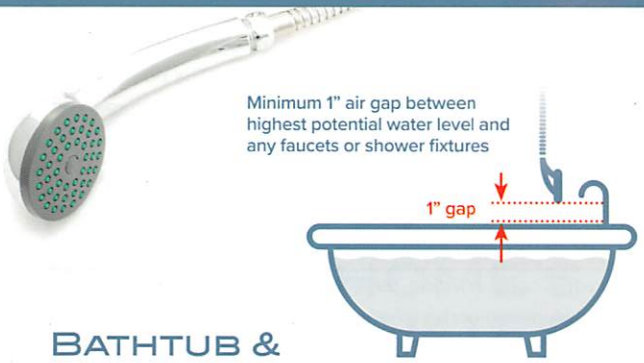
DO!

- Keep the ends of hoses off the ground and clear of all possible contaminants.
- Install ASSE-certified "hose bib vacuum breakers" on all faucets in and around your home.
- Install an approved backflow prevention device on all underground lawn irrigation systems. Remember, these systems require a plumbing permit and must be inspected.

DON'T!

- Submerge hoses in buckets, swimming pools, tubs, sinks, ponds, or any standing water.
- Use spray attachments without a backflow prevention device.
- Leave the hose nozzle closed when not in use.
- Use a hose to unplug blocked toilets or sewer pipes.

AVOIDING BACKFLOW THROUGHOUT THE HOME

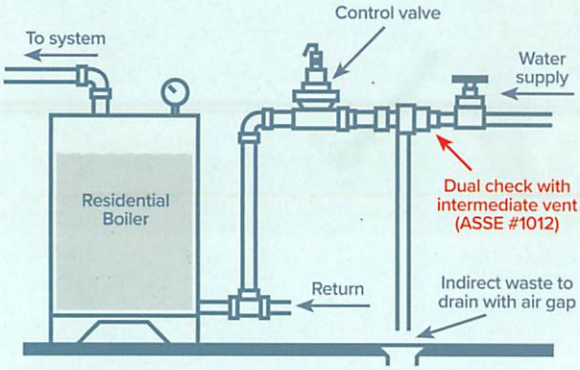


BATHTUB & SHOWER FIXTURES

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

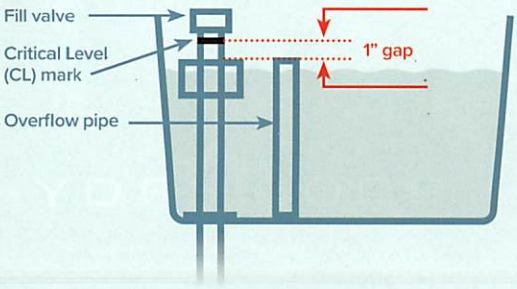


Boilers with chemical additives require an ASSE #1013 – Reduced Pressure Principle Backflow Prevention Assembly.

TOILET TANKS

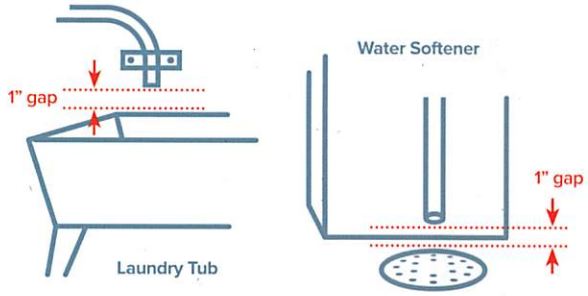
There are many unapproved toilet tank fill valve products sold at common retailers which do not meet the state plumbing code requirements for backflow prevention.

- 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.
- 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.