



GENERAL ENGINEERING COMPANY

Engineers • Consultants • Inspectors

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What is a cross connection and how does it happen?

A cross connection is defined as an actual or potential connection between a public water supply and a source of possible contamination or pollution. It occurs when contaminated water from homes or businesses enter into the drinking water system. Cross connections are generally unintentional and can happen anywhere there are pipes to supply water. You may risk a cross connection if you attach something that uses chemicals, etc., to your water pipes, fixtures, or hoses.

What is backflow? Is it really that important to prevent?

Backflow is the undesirable reversal of flow of a liquid, gas or other contaminants in a potable (drinking) water distribution piping system. Backflow can happen if there is a water main break, water line repair, fire, or during a period of high water usage. Preventing backflow helps protect the water customers in your community and helps to insure uninterrupted water service. Numerous cases about illnesses and other hazards posed by cross connections have been well-documented.

What is a backflow device?

A backflow device prevents water from flowing backward from your plumbing into the public water system. There are many different types of backflow preventers, such as an air-gap, a vacuum breaker, a double check valve assembly, or a reduced pressure principle backflow preventer. There should be no direct connections to any manufacturing processes, such as plating, food processing, and chemical mixing. Backflow prevention should be installed. A certified plumber can help you determine the correct backflow preventer for your assembly or you will be notified during your cross connection survey by your inspector.



Commercial RPZ Backflow Prevention Device

Do I need to do anything to maintain my backflow device?

There are many backflow devices that will need to be tested regularly by a certified cross connection tester and registered with the state. It is the responsibility of the owner of the cross connection assembly to have it tested. Also, outdoor backflow devices will need to be winterized to protect from freezing or bursting pipes.

How often will my business be inspected?

Wisconsin Department of Natural Resources regulations in NR 810.15 recommend that all industrial, commercial, and institutional facilities be surveyed every two to ten years, depending upon the degree of hazard within the facility.

Cross Connection Control



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Safe Practices of Cross Connection

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ALWAYS install a hose bibb vacuum breaker on all fixtures that a hose may be attached to. It will prevent harmful materials (pesticides, herbicides, and dirt) from being drawn back into your hose, keeping your drinking water safe.



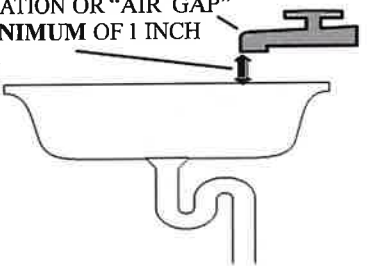
NEVER submerge a hose in a bucket, pond, swimming pool, fish tank, or pet water dish. The bacteria and chemicals can be drawn into water meant for your family. If someone were to drink or bathe in contaminated water, it can cause serious health problems.



ALWAYS create an air gap between the end of the hose or faucet and water surface. To do this, secure the hose or faucet on a surface high enough to prevent it from touching the water surface at any time.

PHYSICAL SEPARATION OR "AIR GAP"
TYPICALLY A **MINIMUM OF 1 INCH**

OVERFLOW RIM
OR RIDGE



NEVER use a lawn sprinkler system without backflow protection. Vacuum breakers must be installed above the ground, and above all sprinkler heads. Water pooling around sprinkler heads may be contaminated by chemicals, fertilizers, or animal waste.



ALWAYS use only approved backflow protection devices. Generally, these can be purchased at your local hardware store. If you have questions about which device to use, check with a certified plumber or your municipal public works department.



NEVER 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.



ALWAYS ask questions if you are not sure! Visit these websites for more information:

WI Dept. of Safety & Professional Services:
www.dsps.wi.gov

Environmental Protection Agency:
www.epa.gov

WI Dept. of Natural Resources:
www.dnr.wi.gov

WI Cross Connection Control Resources:
www.generalengineering.net/services/cross-connection.html