



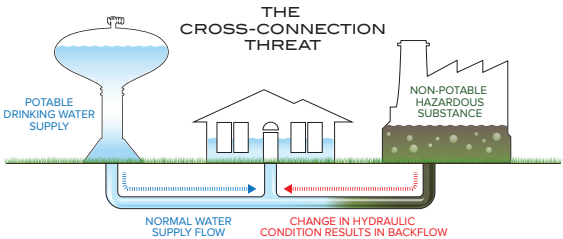
# KEEPING WISCONSIN'S DRINKING WATER SAFE



Your local water provider is making improvements to protect the safety of drinking water. Here's why.

## PREVENTING THE HAZARDS OF BACKFLOW

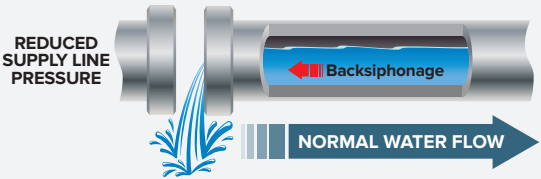
Certain conditions known as cross-connections may allow hazardous substances to contaminate your own – or the public's – water supply. A cross-connection is an actual or potential connection between the safe drinking water (potable) supply, and a source of contamination or pollution. Cross-connections can result in a hazardous event known as *backflow*, which can draw those contaminants into your drinking water supply. Wisconsin Administrative Code requires plumbing and piping systems in business, residential, industrial and commercial facilities to be checked periodically for actual and potential cross-connections. These inspections or surveys are performed by municipal water department personnel, or trained individuals acting on behalf of the water authority.



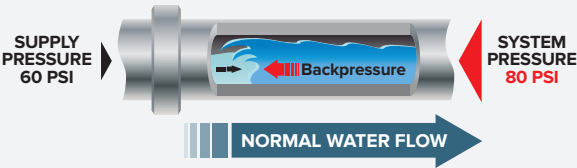
## WHAT IS BACKFLOW?

Water normally flows in one direction. Under certain conditions, water can actually flow backwards; this is known as backflow. There are two conditions that can cause water to flow backward: backsiphonage and backpressure.

**Backsiphonage** – this may occur due to a loss of pressure in the public water system from a water main break, fire fighting emergency, or system repair. This loss of pressure creates a siphon effect that can pull contaminants into the drinking water.



**Backpressure** – may be created when a source of pressure in your plumbing system (such as a boiler or pump) creates a pressure greater than the water pressure of the public water system. This may cause contaminated water to be pushed into your plumbing system through an unprotected cross-connection.



## A PROGRAM FOR SAFE DRINKING WATER

In Wisconsin, unprotected cross connections are prohibited in potable piping systems, and water utilities have a mandatory cross-connection control inspection program, as outlined in the Wisconsin Administrative Code, Department of Natural Resources, Chapter 810, section NR 810.15, and the Wisconsin Department of Safety & Professional Services (DSPS) SPS382 (formerly Department of Commerce).







## WHAT DOES “DEGREE OF HAZARD” MEAN?

This determines whether, and to what extent, a substance is a toxic contaminant (High or Health Hazard) or a nontoxic pollutant that generally presents an aesthetic (Low or Non-Health) hazard. Both types of substances can make drinking water nonpotable. Evaluating the degree of hazard helps determine the most appropriate type of backflow prevention.

## HOW DOES THIS PROGRAM AFFECT ME?

1. Backflow Prevention Assemblies must be registered through the DSPS. A certified tester must inspect and test these assemblies upon installation, after repairs, and at least once a year thereafter.
2. Your water provider or its authorized agent will assist in protecting your drinking water from the hazards of backflow. They will visit your location, identify unprotected cross-connections, and verify that correct backflow prevention measures are installed. Many inspections take 20-30 minutes; more complex sites take longer. The **degree of hazard** posed by each connection will determine the type of backflow prevention.



## COMMON CROSS-CONNECTION SITES

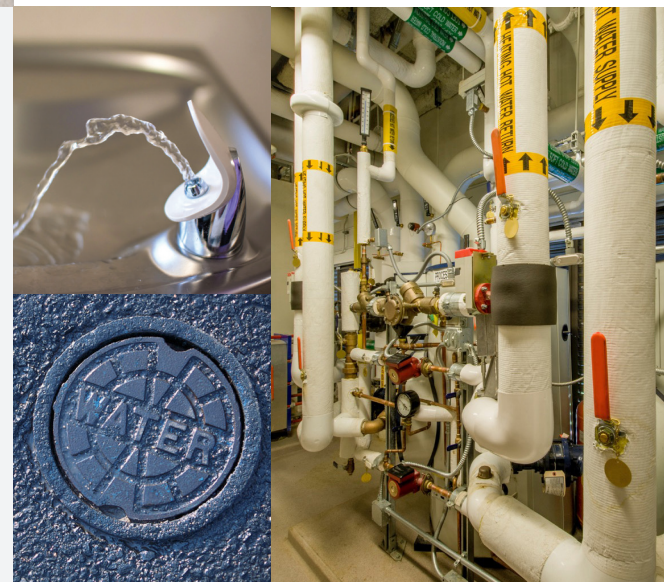
- Hose bibbs
- Boilers
- Cleaning/Mop Stations
- Lawn Irrigation Systems
- Fire Protection Systems
- Lab & Medical Equipment
- Restaurant Equipment
- Power Washers/Sprayers
- Water Softener Drains

## BACKFLOW PREVENTION METHODS

Once the degree of hazard has been determined, the proper backflow preventer can be installed. Plumbing specialists working with local municipal officials will determine which measure is best suited for each application. Five basic methods are used:

- Air Gap
- Atmospheric vacuum breakers, including hose connection vacuum breakers
- Pressure-type vacuum breaker assembly (PVB)
- Double check-valve assembly (DCVA)
- Reduced-pressure principle backflow preventer assembly (RP or RPZ)

Many cross connections can be corrected with a simple hose bibb (faucet) vacuum breaker. This means equipping each hose connection, both outside and inside, with a simple, inexpensive vacuum breaker (left) that can be obtained from hardware stores for about \$10.



Remember, we're all in this together – and together we can work to keep your drinking water safe from the hazards of backflow.

For more information, contact your local water utility, or visit [hydrocorpinc.com/wi](http://hydrocorpinc.com/wi)



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### RESOURCES:

State of Wisconsin, Department of Natural Resources  
<http://www.dnr.wi.gov>

Wisconsin Department of Safety & Professional Services  
(Formerly Department of Commerce):  
<http://dsps.wi.gov/sb/SB-HomePage.html>

U.S. Environmental Protection Agency (EPA)  
Ground and Drinking Water:  
[www.epa.gov/safewater](http://www.epa.gov/safewater)

Public Service Commission of Wisconsin (PSC):  
<http://psc.wi.gov>

Cross-Connection Control Assembly  
Registration & Testing Information:  
<http://dsps.wi.gov/sb/SB-PlumbingCccaTestsRegists.html>