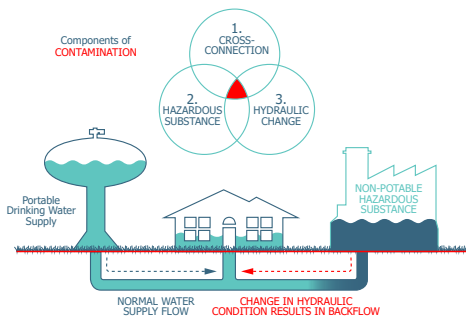


Your local water provider is making improvements to protect the safety of drinking water. Here's why.

Delaware's Department of Health Code 4455 requires specific backflow prevention devices, methods and assemblies to isolation cross-connection control hazards associated with potable water supply plumbing.

## PREVENTING THE HAZARDS OF BACKFLOW

Delaware water providers are responsible for ensuring that water is safe for everyone to drink. However, 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.



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

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

### RESOURCES:

Delaware Department of Health and Social Services Chapter 16, Code 4455 and Code 4462  
<https://regulations.delaware.gov/AdminCode/title16/>

Environmental Protection Agency (EPA)  
[www.epa.gov/ground-water-and-drinking-water](http://www.epa.gov/ground-water-and-drinking-water)

American Water Works Association (AWWA)  
[www.awwa.org/](http://www.awwa.org/)

Delaware Rural Water Association (DRWA)  
[www.drwa.org](http://www.drwa.org)

USC-Foundation for Cross Connection Control  
<https://fccchr.usc.edu/>

### CORPORATE OFFICE

5700 Crooks Road, Suite 100  
Troy, MI 48098  
844.493.7641 PHONE

[www.hydrocorpinc.com](http://www.hydrocorpinc.com)

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# KEEPING DELAWARE'S DRINKING WATER SAFE



## HOW DOES THIS PROGRAM AFFECT ME?

As a business owner or manager, your cooperation is important to make this program work. By providing easy and courteous access to your facility, your water utility or authorized agent can evaluate and help assure safe drinking water. They may identify unprotected cross-connections, and verify that the correct backflow prevention measure is properly installed at each service connection. Many inspections take as little as 10 minutes; more complex sites take longer. The “hazard” level associated with each connection determines the type of backflow prevention method.



## 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.

Individual non-residential facilities will also be assessed and categorized as either High Hazard or Low Hazard service connection types based on known or potential cross-connections.

## 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).

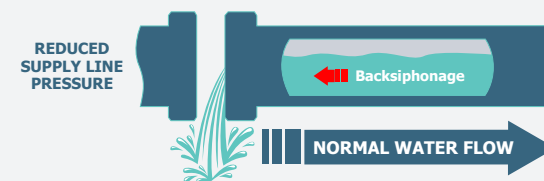
## COMMON CROSS-CONNECTION SITES

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

## 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.

