

Who can install and test backflow preventers?

Approved backflow prevention assemblies must be installed by licensed plumbers and contractors. Installation must comply with local and state plumbing codes, City Utilities' regulations and other local ordinances .

Only a person who is a certified backflow prevention device tester, registered with IDEM, may inspect and/or test backflow preventions assemblies. (Rule 10; 327 IAC 8-10; Cross Connections; Control; Operation)

What do backflow preventers look like?

There are many manufacturers, types, sizes and configurations of backflow devices, each suited for different applications.

REDUCED PRESSURE ZONE (RP)



May be used on direct connections that may be subject to backpressure or backsiphonage, and where there is the possibility of low or high hazard contamination.



DOUBLE CHECK VALVE ASSEMBLY (DCVA)

May be used as protection against all direct connections where there is the possibility of low hazard contamination only. These are typically used on fire suppression systems.



PRESSURE VACUUM BREAKER (PVB) or SPILL RESISTANT VACUUM BREAKER (SVB)



May be used on direct connections where there is the possibility of low or high hazard contamination. These devices are designed to protect against backsiphonage only. Installation locations are also limited.



ATMOSPHERIC VACUUM BREAKER (AVB)

May be used on direct connections where there is the possibility of low or high hazard contamination. These devices are designed to protect against backsiphonage only. Locations for installation are limited.

We understand that installing, testing and maintaining backflow prevention devices, and complying with City Utilities' requirements, does involve investment of time and resources. But protecting public health and safety is everyone's responsibility and is a commitment we make to our community.

If at anytime you notice a change in look, smell or taste of the drinking water supplied by Fort Wayne City Utilities' water system, please contact us at (260) 427-1247 or dial 311 for water emergencies.

This publication is property of Fort Wayne, Indiana City Utilities. No alterations or reproductions are allowed without permission from City Utilities. This publication is provided free of charge to the general public for educational and informative purposes.

Rev. 6/2015



Fort Wayne City Utilities
200 E. Berry Street
Fort Wayne, Indiana 46802
www.cityoffortwayne.org/utilities
Phone: 260-427-1234
email:

CrossConnectionControl@cityoffortwayne.org



BACKFLOW

What is it all about?

Fort Wayne City Utilities' Cross-Connection Control Program

- Protecting Our Water
- Irrigation Systems
- Hazards
- Prevention
- Compliance



The Fort Wayne municipal Water Utility works hard to protect your drinking water from all forms of contamination.

This effort begins with the protection of the rivers that water is pumped from and continues through the entire treatment and distribution process right up to where the water service enters your home or business.

What happens after that point? Who protects the water from there to your glass? What is a cross-connection? What is backflow? What are the hazards? What can we all do to help protect the water that is supplied and that we all use?

What is a Cross-Connection?

A “cross-connection” is any actual or potential connection between the public water supply and a source of contamination or pollution. Common examples of this would be: having the garden hose attached to a faucet with the other end submerged in a tub of detergent; using a hose to apply lawn fertilizer or insecticide; or connecting to a secondary water source, such as a well or pond, while already having a city water supply present. That is a cross-connection.

What is Backflow?

Backflow is a reversal in direction of the normal flow of water in a piping system. This can be caused by backpressure or backsiphonage. Negative or reduced pressure in water supply piping causes backsiphonage in much the same way as you do when you drink through a straw. The potential for backflow due to backpressure exists wherever there is a heating system, elevated tank or other pressure producing equipment. If the pressure is reduced, the flow in the supply piping may be reversed. Contaminants may enter the public drinking water system through a cross-connection when backflow occurs.

Does water really flow backwards?

Yes, it does happen. When the water distribution system is in normal operation, water flows directly from the city’s main to your property under pressure. In certain situations a backflow can occur causing water and contaminants to flow back into the distribution system. This is most likely to happen during periods of high water usage such as fighting a fire or flushing fire hydrants, or when water main breaks

occur or repairs are being made in the water distribution system.

Many cases of injury and illness occur every year from cross-connections and backflow. Recognizing this hazard, the Indiana legislature, in November 1977, added rules to the Indiana Administrative Code (170 IAC 6-1-20) requiring water purveyors such as Fort Wayne City Utilities to protect the public water system against cross-connections and backflow. The American Backflow Prevention Association (ABPA) website documents many recently reported backflow incidents from around the country. To learn more visit <http://www.abpa.org/incidents.htm>.

What hazards does backflow cause?

Backflow due to cross-connections is a serious plumbing problem. Water within your property may be in contact with many different types of fixtures including lawn irrigation systems, fire sprinklers, washing machines, garden hoses, kitchen sinks, tubs, showers and toilets. For industrial users, water may be used in boilers, photo processing equipment, chemical mixing tanks, chillers, water reclamation devices, pressure pumps, medical and laboratory equipment, etc. An actual or potential direct connection between any of these fixtures and the potable water system is a cross-connection, and a potential source of pollution or contamination.

Why have a Cross-Connection Control Program?

As the provider of drinking water to more than 250,000 people, Fort Wayne City Utilities’ responsibility is to produce and supply safe drinking water and to protect the public water distribution system from contamination.

City Utilities’ Cross-Connection Control Program provides an additional layer of protection for the public water system. It begins with the identification of all businesses, industries and residences that are on the city’s water distribution system that are also required by Indiana law to install, inspect, periodically test and repair, as needed, backflow prevention devices.

Fort Wayne’s program of “Backflow Prevention By Containment” requires these identified customers to use systems or practices to prevent the backflow of contaminated water into the public water distribution system. Backflow preventers are installed between the customer’s water meter and the first branch line in their private plumbing. By requiring the installation of a containment assembly and annual testing of each assembly by a certified tester, City Utilities can be confident that backflow occurrences have been prevented to the greatest extent possible using industry-wide best practices and protocols at the point of delivery.

What is Low Hazard and High Hazard?

A Low Hazard cross-connection is one that may cause a non-toxic “pollutant” to be introduced into the public water system that could adversely affect the aesthetic qualities of potable water. A High Hazard cross-connection exists when there is an actual or potential connection that could introduce a toxic or infectious contaminant into the public water supply that could create a danger to the health and well-being of anyone using the water.

The type of backflow preventer required is determined, in part, by the level of hazard determined to exist.

How to Help protect the Water Supply?

Have you ever put the end of the garden hose into the bucket of soapy water while washing? Have you ever sprayed insecticide or fertilizer with a garden hose sprayer? Have you attached a hand spray attachment to the faucet in a service sink to wash your dog?

These actions seem harmless but they create cross-connections that could endanger the health and safety of you, your family, your neighbors and others. If the water supply pressure drops creating a backsiphonage while the hose is submerged, contaminants could be sucked back into your pipes and the public water supply. Fortunately keeping your water safe from these contaminants is easy. A Hose Bibb Vacuum Breaker (HBVB) is an inexpensive temporary backflow preventer that eliminates this type of cross-connection.



Do you have a Lawn Irrigation System?

Irrigation systems are considered non-potable and are classified as High Hazard for backflow because of the bacterial and chemical contaminants found on lawns. These systems must have an approved backflow prevention device. City Utilities recommends an approved Double Check Valve Assembly (DCVA) or an approved Pressure Vacuum Breaker (PVB) as a minimum level of protection. Indiana law requires that either of these devices must be inspected and tested annually by a tester certified by the Indiana Department of Environmental Management (IDEM).