Backflow Prevention Information Keeping Your Water Safe

Backflow Prevention: If you don't want to drink it, don't connect your water system to it!

The City of Belpre Municipal Water Supply System works hard to deliver clean and safe drinking water to our customers within our service area. One of the many ways we maintain our high water quality standards is through our comprehensive Backflow and Cross Connection Control Program. As our water customer, you play a vital role in making sure this program is a success. The following serves as a general overview of the backflow program, why cross-connections matter and how you can help keep the water supply safe.

Here are some general Questions and Answers:

What is Cross connection?
A cross connection is defined as any real or potential connection between the public water system or your drinking water and a source that could contaminate or pollute that water.

What is backflow?
Backflow occurs when water flowing reverses direction and flows backward toward the water distribution system. Depending on the activities and hazards at the business or residence, this reverse flow of water may introduce pollutants or contaminants into the water system. A cross-connection is any arrangement whereby backflow can occur.

Recognizing Cross-Connections:
All homes and business have the potential for cross-connections. It is important for you to be able to recognize those that exist in your home or business.

Common household cross-connections include:
• Hose connections to chemical solution aspirators to feed lawn and shrub herbicides, pesticides or fertilizers.
• Chemically treated heating systems.
• Hose connections to a water outlet or laundry tub.
• Swimming pools, hot tubs, spas.
• Private and/or non-potable water supplies located on the property.

• Water-operated sump drain devices.
• Feed lots/livestock holding areas or barnyards fed through pipes or hoses from your water supply plumbing

Garden Hoses
Garden hoses represent a typical household cross-connection. When submerged, for instance in a bucket of soapy water or cleaning solvent, a loss in water pressure would cause the contaminated liquid to be sucked through the hose and into your drinking water. Hoses also act as a cross-connection when attached to things such as weed sprayers. Imagine all the chemicals in your weed sprayer flowing back through your hose and into your water. It is important to know that anything attached to the end of the hose has the potential to backflow. Hose bibs can be protected by built in or easily installed vacuum breakers, (which are available at your local hardware store). A frost proof hose bib vacuum breaker is recommended for colder climates.

In-ground Lawn Irrigation Systems
A recent survey conducted by the American Backflow Prevention Association found the most common cross-connections to come from irrigation systems. With a lawn irrigation system, water can accumulate by the sprinkler heads. A loss in water pressure would cause that water to be sucked back through the pipes and into your plumbing system, carrying with it any fertilizer chemicals, pesticides, animal waste or other bacteria and parasites on the ground. All lawn irrigation systems should be protected by a pressure vacuum breaker (PVB) or a reduced pressure (RP) backflow assembly, which must be tested annually. Please consult your sprinkler contractor or plumber to make sure your system is protected and up to code.

What are examples of cross-connection and backflow scenarios?
• Soapy water or other cleaning compounds back siphon into the water supply plumbing through a faucet or hose submerged in a bucket or laundry basin.
• Pool water back siphons into the water supply plumbing through a hose submerged in a swimming pool.
• Fertilizers/pesticides back siphon into the water supply plumbing through a garden hose attached to a fertilizer/pesticide sprayer.
• Chemicals/pesticides and animal feces drawn into the water supply plumbing from a lawn irrigation system with submerged nozzles.
• Bacteria/chemicals/additives in a boiler system back siphon into the water supply plumbing.
• Unsafe water pumped from a private well applies backpressure and contaminates the public water supply through a connection between the private well discharge and the potable water supply plumbing.

What is the law?
Ohio Administrative Code Chapter 3745-95 requires the public water supplier to protect

the public water system from cross connections and prevent backflow situations. The public water supplier must conduct cross-connection control inspections of their water customers' property to evaluate hazards. Local ordinances or water department regulations may also exist and must be followed in addition to state regulations.

How you can help:
To protect against backflow, Ohio EPA and the city of Belpre's rules and regulations require businesses and multi-family dwellings and some residences to have a backflow prevention assembly connected to their plumbing systems. If your residence does not have an irrigation system or a boiler system you are unlikely to have a backflow device in your home.

Responsibility of businesses and residences:
Installation and testing of the backflow prevention assemblies is the responsibility of individual businesses and residences, but we are committed to working with our customers during this process.

Backflow Surveys:
Backflow surveys are conducted by City of Belpre on all commercial facilities serviced by Belpre Water. These surveys are required by the Ohio EPA every 5 years and are designed to ensure that proper backflow protection is in place at the property and that water use hasn't changed in a way that would affect the backflow device.

– An annual test of your system(s)
These backflow prevention assemblies must be approved and tested annually. The Ohio Environmental Protection Agency (OH EPA) requires that we collect information regarding the assemblies' installation and function by doing an onsite survey. As part of that process, City of Belpre personnel are visiting businesses and residences to conduct on-site backflow and cross connection surveys to update our records and provide information. We also review all new construction to determine what type of backflow may be required.