



## CROSS CONNECTION AND BACKFLOW PREVENTION

To help protect your drinking water and the health of our communities, customers may be required to install proper backflow prevention equipment.

Have questions about our cross connection and backflow prevention program?

Contact our program administrator, BSI Online, at 1-888-966-6050 or [support@backflow.com](mailto:support@backflow.com).

To learn more

Visit us online at [pennsylvaniaamwater.com](http://pennsylvaniaamwater.com). Under Water Quality, select Cross Connection & Backflow Prevention.

### Backflow prevention and how to comply

All non-residential customers are required to take steps to prevent cross connections and backflow to the water system. This includes the installation of an approved backflow prevention device and having it tested annually. All new and existing residential service connections are required to have appropriate backflow protection in place. In addition, fire sprinklers require a Double Check Valve Assembly (DCVA) and lawn sprinklers require an additional Reduced Pressure Zone (RPZ) backflow prevention device. Failure to comply can result in water service disconnection. Pennsylvania American Water can help to determine if you are in compliance with the regulations, and we are available to answer any questions that you may have related to backflow prevention.

### Why backflow prevention is important

Drinking water that meets regulations leaving the water treatment facility can become contaminated in the distribution (pipeline) system by backflow when:

- A drinking water distribution main is unprotected because of the lack of a properly installed and functioning backflow prevention device on the service connection at the customer's supply.
- A physical cross connection is made between the drinking water distribution main and a contaminant source.
- Backflow conditions occur.

### How to prevent backflow contamination

Backflow contamination can be prevented. All water utility customers are required to have an approved and functioning backflow-prevention device installed. The cost of the device, maintenance and installation is the responsibility of the customer. We recommend that customers obtain a cost estimate before installation. Visit [pennsylvaniaamwater.com](http://pennsylvaniaamwater.com) for additional resources, including a link to find local ASSE Certified Testers. Under the Water Quality drop-down menu, select Cross Connection & Backflow Prevention.

### What is a cross connection and backflow?

**Cross Connection** is any actual or physical connection between a potable (drinkable) water supply and any source of non-potable liquid, solid or gas that could contaminate drinking water under certain circumstances.

**Backflow** is the reverse flow of water or other substances through a cross connection into the treated drinking water distribution system. There are two types of backflow: backpressure and backsiphonage.

**Backpressure** happens when the pressure of the contaminant source exceeds the positive pressure in the water distribution main. An example would be when a drinking water supply main has a connection to a hot water boiler system that is not protected by an approved and functioning backflow preventer. If pressure in the boiler system increases to where it exceeds the pressure in the water distribution system, backflow from the boiler to the drinking water supply system may occur.

**Backsiphonage** is caused by a negative pressure (vacuum or partial vacuum) in the water distribution system. This situation is similar in effect to the sipping of water through a straw. Negative pressure in the drinking water distribution system can happen because of a water main break or when a hydrant is used for fire fighting.