

Backflow Prevention

What Does it Mean to You?

Taking Clean Water for Granted...

Every time you fill a glass with water from the tap, prepare a meal, or take a bath, you take for granted that the water will always be clean, pure, and healthy.

Occasionally, situations occur outside of our control that can jeopardize the quality of your drinking water. A very common occurrence in a water distribution system is the temporary loss of pressure due to the breakage of a water supply pipe or water main.

When these situations occur, conditions are present that can allow the backflow of pollutants or contaminants into the water system and threaten the purity of our water system.

What is Backflow?

Backflow is the undesirable reversal of flow of fluids, chemicals, or any other foreign material into the public drinking water system. There are two forms of backflow:

1. Backsiphonage—usually caused by a loss of pressure in the drinking water system
2. Backpressure—caused by pumps, piping systems elevation, or thermal expansion from a heat source

Backflow can cause our drinking water to become polluted or contaminated. Pollution reduces the quality of drinking water. It does not create a public health hazard, but adversely affects the aesthetics of taste, odor, and appearance.

However, when the drinking water is contaminated, there is concern for public health if the water is consumed. This creates a threat of illness or, in extreme cases, human mortality.

What are Potential Contamination Hazards from Cross-Connections?

Potential threats to a drinking water supply include, but are not limited to:

- Chemical plants using equipment connected to the public water supply
- Hospitals
- Mortuaries
- Medical, dental, and veterinary clinics
- Laboratories
- Irrigation and lawn-sprinkler systems
- Marinas
- Connections with an auxiliary water supply, which could be polluted

Can Backflow be Prevented?

Yes, the backflow of undesirable elements into the drinking water system can be prevented. A cross-connection is a physical connection between the water supply and any source of possible pollution or contamination. By eliminating or controlling all actual or potential cross-connections, the public drinking water system will be protected within the city water main system and within buildings.

Simple plumbing changes can easily eliminate many cross-connections. However, where this is not possible, backflow prevention assemblies are installed to protect the water supply.

What Type of Backflow Prevention Assembly is Necessary?

The type of backflow prevention assembly required is determined by the degree of hazard. In other words, the severity of the actual or potential hazard will dictate what level of protection is necessary to adequately protect the drinking water.

For temporary cross-connections, such as a garden hose, an inexpensive hose bib or vacuum breaker is acceptable.



Other types of backflow prevention assemblies are available for permanent specialized applications, such as fire systems, irrigation sprinkler systems, and piping connections within a commercial facility.

What Can You Do?

First, you should determine if there are potential cross-connections in your home or business. The local plumbing inspector or water provider can assist in this determination.

Next, you should investigate alternatives for eliminating or protection against all actual or potential cross-connections.

After determining the necessary method of cross-connection control, the appropriate plumbing changes or the addition of a mechanical backflow prevention assembly should be made.

Local codes or government regulations are used to determine what specific backflow prevention assemblies are required for each application. The local water provider should always be consulted prior to purchasing and installing any backflow prevention assembly.