

Cross-connections and backflow can create health hazards

and cause our drinking water to become contaminated or polluted. Often times, cross-connections are found within the plumbing systems of homes and businesses. It is important that these connections be identified and eliminated. In the event that a cross-connection cannot be eliminated, a backflow prevention assembly must be installed.

The Miami-Dade County Code, Chapter 32, Article VIII, currently requires certain water customers to install backflow prevention assemblies at their water service connection. Such customers include, but are not limited to: hospitals, adult congregate living facilities, service stations, auto repair shops, and water customers with lawn irrigation systems. In addition to installing a backflow prevention assembly, the water customer must also have the assembly tested upon installation and annually, by a Certified Backflow Prevention Assembly Tester.



Important Safety Information

Protecting Our Water

Cross-Connection Control and Backflow Prevention



Miami-Dade Water and Sewer Department
Cross-Connection Control Unit
1001 NW 11th Street
Miami, FL 33136
Hotline: 305-547-3046
Fax: 786-268-5485
email: ccc@miamidade.gov

<https://www.miamidade.gov/water/cross-connection-backflow.asp>

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What is a cross-connection and how can it be avoided?

A cross-connection is a link between the potable water supply and a non-potable source. A cross-connection can be avoided by eliminating the link between the two sources. If the link cannot be removed, then the potable water supply must be protected through the use of a backflow prevention assembly.

Potable Water Supply:

Water that is safe for human consumption and that is aesthetically pleasing.

Non-potable Source:

Any liquid, gas, or other substance that is not fit for human consumption and can adversely affect the quality of water.

What is the most common type of cross-connection?

The most common example of a cross-connection is a typical garden hose, which is left submerged in a volume of water or other fluid (i.e. garden hose left in a bucket of soapy water). Other cross-connections include kitchen sprayers in a sink filled with dirty water, irrigation systems, boilers, and other appliances supplied by water.



What is backflow and how can the water supply be protected?

Backflow is the undesired reversal of flow of any liquid, gas, or other substance in the potable water supply. This can occur via a cross-connection, due to a change in pressure caused by either backpressure or backsiphonage.

The potable water supply can be protected from backflow by the elimination of all cross-connections and/or through the use of the proper backflow prevention assembly.

Backpressure – A type of backflow condition that exists when the pressure in the downstream side of the customer's piping system becomes elevated greater than the supply pressure at the potable water system.

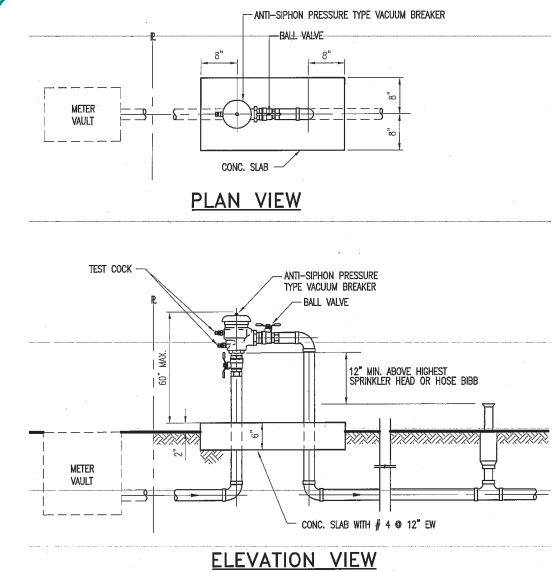
Backsiphonage – A type of backflow condition that exists when the pressure in the potable water supply system becomes lower than the atmospheric pressure (14.7 psi).

What is a backflow prevention assembly?

A backflow prevention assembly is a mechanical valve arrangement, which is designed to prevent the “backflow” or reversal of flow of water, once it has passed through the valve. There are different types of backflow prevention assemblies for different uses, and different degrees of hazard.

The different types of backflow prevention assemblies are: the Reduced Pressure Principle Assembly (RP), the Double Check Valve Assembly (DCVA), the Double Check Detector Assembly (DCDA), and the Pressure Vacuum Breaker (PVB).

The RP is typically installed at the domestic water service connection, the DCVA/DCDA are typically installed at the water service connection that supplies fire suppression systems, and the PVB is typically installed at the water service connection that supplies lawn irrigation systems.



Pressure Vacuum Breaker (PVB)

Helpful Hint

An air gap is the least expensive form of backflow prevention. It is simply the UNOBSTRUCTED vertical space between the

water outlet and the flood level rim of the receiving vessel. An example of an air gap is the space between the faucet and the sink. This arrangement will prevent contaminants or pollutants from entering into the potable water supply.

