

What is a Cross Connection?

A cross connection is a temporary or permanent connection between a potable (drinking) water supply and a non-potable source. An example would be the pipes connecting the public water system to an irrigation system.

What is Backflow?

Backflow is the undesirable flow of non-potable water or other substances through a cross connection back into the consumer's plumbing system or public water system. There are two types of backflow: backsiphonage and backpressure.

What is Backsiphonage?

Backsiphonage is backflow caused by negative pressure in the public water system or the consumer water system. Backsiphonage can occur during a watermain break, when repairs are being made to a watermain, a stoppage in the water supply, etc.

What is Backpressure?

Backpressure is caused by a downstream pressure that is greater than the supply pressure of the public water system or the consumer's water system. This is caused by elevated plumbing, booster pumps, pressure vessels, etc.

Why Protect Against Backflow?

Backflow into the public water system can pollute or contaminate the water. This means that water in the system would be unusable or unsafe to drink. It is important for everyone to make sure their cross connections are controlled.

Where are Cross Connections Found?

Cross connections are found in all plumbing systems. It is important that each cross connection be identified and evaluated as to the type of backflow prevention required to protect the drinking water supply. Some plumbing fixtures have built-in backflow protection in the form of a physical air gap.

However, many cross connections will need to be controlled through the installation of an approved mechanical backflow prevention device or assembly. Some common cross connections include:

1. Wash basins and service sinks
2. Hose bibs
3. Irrigations sprinkler systems
4. Auxiliary water supplies
5. Laboratory equipment
6. Photo developing equipment
7. Processing tanks

8. Boilers
9. Water recirculation systems
10. Solar heat systems
11. Fire sprinkler systems
12. Swimming pools

What are some Devices that Help Prevent Backflow?

Every water system has cross connections. Water regulations require cross connections to be controlled by approved methods (air gap) or approved mechanical backflow prevention devices or assemblies. The various types of mechanical backflow preventers include: pressure vacuum breaker assembly (PVBA), double check valve assembly (DCVA), atmospheric vacuum breaker (AVB), and reduced pressure backflow assembly (RPBA).

For a backflow preventer to provide proper protection, it must be approved for backflow protection, designed for the degree of hazard and backflow it is controlling, installed correctly, tested annually by a State certified tester, and repaired as necessary.

An air gap is considered to be the highest level of protection available against backflow or backsiphonage, but because it is not always practical the mechanical preventers are used to control connections and prevent backflow.

How Can You Help Prevent Backflow?

- Do not submerge a hose in buckets, pools, spas, tubs, or sinks. They may contain dangerous bacteria or harmful cleansers.
- Always keep the end of the hose away from possible contaminants.
- When not using the hose, make sure the water is turned off.
- Do not put a spray or cleaning attachment on your hose without a backflow prevention device on the hose.