

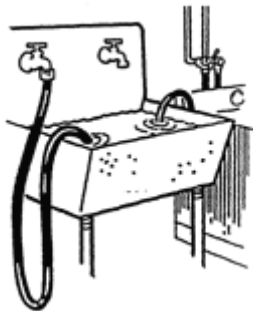
PROTECT YOUR WATER FROM CONTAMINATION

Normally, your water supply is under 40 to 80 pounds of pressure when it enters your home or business. On rare occasions, this pressure is interrupted—perhaps by a water main break, a power failure, fire fighters battling a nearby blaze, or some other disruption in water service. When there is a significant loss of pressure, water can flow back into the public water supply system. When water flows backward into the public water supply, it is called “back-siphonage” or “backflow”. Backflow can also occur when the customer’s water system has a higher pressure than Irving’s water system.

In rare instances, backflow can contaminate the public water supply. Contamination occurs when a water supply line is connected to equipment containing a non-potable (unsafe to drink) substance. Such connections are called cross connections and they are dangerous if no protective measures are taken.

Here are a few examples of common cross connections:

- A hose is submerged in polluted or contaminated water
- A secondary source of irrigation water (from a well or pond) is pumped into an irrigation system that is directly connected to the potable water supply system



- A heating boiler with treatment chemical added to prevent internal corrosion is connected directly to the water supply for make-up water
- An underground lawn sprinkler system is directly connected to the water supply system
- A fountain or swimming pool has a direct connection with the water system for filling

In all of these examples, a sudden drop in water pressure could draw contaminants – chemicals, fertilizer, soapy water or even bacteria -- back into your pipes and your drinking water supply. Any of these contaminants could be hazardous to your health if ingested.

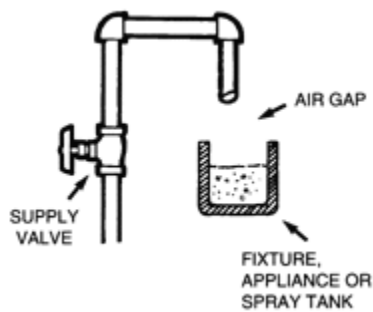
The best way to prevent this potential contamination is to eliminate the cross connection. This could mean simply making sure that you never leave a hose submerged in a tub of water or that you never apply fertilizer to your lawn with a hose-aspirator device. In some

cases (such as the lawn sprinkling system example noted above) the cross connection cannot be eliminated and the only means of protection is by installation of an approved backflow prevention device.

Commonly Used Backflow Prevention Devices

There are five types of backflow devices:

1. Air Gap



Used mainly on tanks and faucets, it is a gap between the pipe and the container.

Requirements:

-The gap needs to be a minimum 2 times the supply pipe diameter.

2. Atmospheric Vacuum Breaker



It has an air inlet valve that will drop to draw in air thus preventing customer system water from entering the City's water mains.

Requirements:

-Not under continuous pressure for more than 12 hours

- No downstream valves
- No backpressure
- 12" above high point of use

3. Pressure Vacuum Breaker

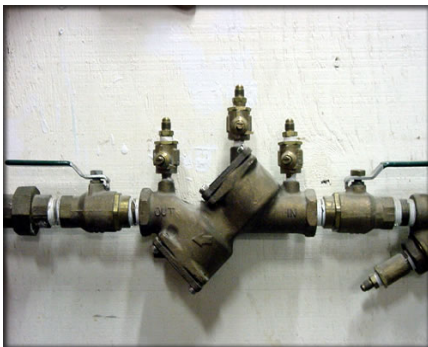


Used mainly on lawn irrigation systems. It has a one way check and a spring loaded air inlet valve that closes when City water main pressure drops.

Requirements:

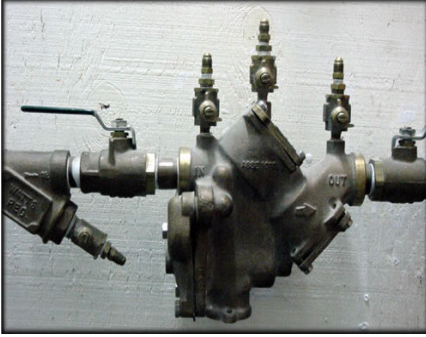
- No backpressure
- 12" above high point of use
- Protect from freezing

4. Double Check Assembly



Operates similar to a Pressure Vacuum Breaker. Used on low hazard buildings, for irrigation, and on fire lines.

5. Reduced Pressure Principle Assemblies



Used on high hazard buildings and is a combination of check valves and an air inlet allowing water from the private system to vent when City pressure drops.

Cross Connection Control Program

Each customer is responsible for preventing contaminants from entering their system as well as the water distribution system. This responsibility starts at the point of delivery and includes the customer's entire water system. As a condition of receiving water service, the customer must allow Irving personnel access to inspect and survey the customer's system for potential contamination and backflow hazards.

All costs associated with installation, operation, testing, and maintenance of a backflow prevention device are the responsibility of the customer. Accurate test and maintenance records must be maintained by customers. Documentation of installation, testing, and any repairs must be forwarded to the Backflow Prevention Specialist at the City of Irving's Public Works Environmental Compliance Section. Any re-piping or relocation of water lines also requires re-testing.

To help maintain the safety and quality of water supplied by the City, it has established a Backflow Prevention Program designed to:

- Enforce Backflow Prevention provisions of the City Ordinance and comply with the requirements of the Texas Primary Drinking Water Regulations.
- Inform customers of the hazards associated with cross connections and their responsibilities to prevent contamination of their water supply.
- Promote the elimination of cross-connections through inspection and regulation of plumbing and water piping within a customer's facility.
- Insure the proper installation and maintenance of Backflow Prevention devices on water services to facilities where actual or potential cross connections exist to prevent backflow or back siphonage of contaminants or pollutants from the customer's facility into the public water system.

Backflow prevention devices are like seat belts; they protect you, your customers, employees and family members from a contamination event that may never occur. But, if an accident occurred and an unprotected cross connection resulted in contamination of

your water supply, you would be glad that you took the time and trouble to install and maintain a backflow prevention device.

If you have a backflow prevention device on your property, please do your part by making sure that your device is tested annually. If repairs are needed, be certain to have those repairs made as quickly as possible. Remember that if the device is repaired or replaced it must be re-tested.

Backflow prevention can be accomplished by installing a vacuum breaker on an outdoor faucet.

