



*Reduced Pressure Principle  
Backflow Preventer*

Reduced pressure principle backflow preventers are used as protection of all direct connections which may be subject to back pressure or back-siphonage, and where there is the possibility of contamination by the material that does constitute a potential health hazard.



*Double Check Valve Backflow Preventer*

Double check valve backflow preventers are used as protection of all direct connections through which foreign material might enter the potable system in concentration which would constitute a nuisance or be aesthetically objectionable.

For additional information regarding possible cross-connection, you should contact the City of Independence Water Department, Engineering Division at 325-7652.



# CAUTION!

IS YOUR HOUSE OR BUSINESS  
HAZARDOUS  
TO THE  
WATER SUPPLY?

CROSS CONNECTIONS

## WHAT IS A CROSS CONNECTION AND WHAT CAN BE DONE TO PREVENT IT?

### What is a cross connection?

A cross connection is a direct arrangement of a piping line which allows the potable (City) water supply to be directly connected to a line which contains contaminants.

Boiler systems (heating)

Lawn sprinkler systems (underground)

Car washes

Hospitals, mortuaries, clinics

Laundries, dry cleaners

Fire sprinkler systems

Chemical sprayers (lawn and weed)

(This list is not a complete list of cross connection causes, but the most common types)

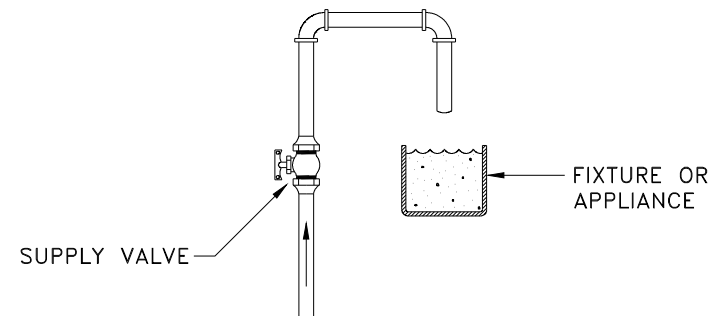
### How does the cross connection contaminate the water supply?

By back-siphonage, which is the reversal of normal flow in a system caused by a negative pressure in the supply piping.

This is created when there is stoppage of the water supply due to nearby fire-fighting, repairs or breaks in the City Main. The effect is similar to the drinking of a drink through a straw by inhaling, which induces a flow in the opposite direction.

By back-pressure, which is the reversal of normal flow in a system due to an increase in the pressure in a building above that of the City's supply pressure by means of a booster pump or boiler system for heating

### What are the basic devices used for protection of cross connections?



*Air Gap*

An air gap is frequently used on industrial processing applications