

What is a Backflow Preventer?

A backflow preventer is a means or mechanism to prevent backflow. The basic means of preventing backflow is an air gap, which either eliminates a cross-connection or provides a barrier to backflow. The basic mechanism for preventing backflow is a mechanical backflow preventer, which provides a physical barrier to backflow. The principal types of mechanical backflow preventers are the reduced-pressure principle assembly, the pressure vacuum breaker assembly and the double check valve assembly. The standard device required by the Town of Payson is a reduced pressure principle assembly.

What type of building would require a backflow preventer?

The type of backflow prevention required is determined by the degree of hazard. This means that the severity of the actual or potential hazard will dictate the level of protection necessary to protect the drinking water. Buildings with fire sprinkler systems, commercial irrigation sprinkler systems and car washes are examples of facilities that would be required to have a backflow assembly installed.

Other examples where cross connections can occur include

dentist offices, school science labs, hospitals, mortuaries and gas stations. In addition, all new building plans or facility use changes are reviewed to determine whether a backflow assembly is needed.



Reduced Pressure Backflow Assembly



Double Check Backflow Assembly



Pressure Vacuum Breaker

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**PROTECTING
YOUR
WATER SUPPLY.....**



**Cross
Connection
Control**



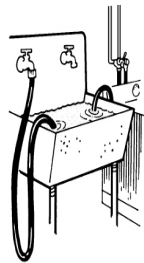
What is a Cross Connection?

Cross Connection means any actual or potential physical connection between a public water system or the consumer's water system and any source of non-potable liquid, solid or gas that could contaminate the potable water supply by backflow.

How does a cross connection occur?

For a drinking water (potable) supply to become contaminated via a cross connection, three things need to happen simultaneously:

- 1) The potable water supply piping must be unprotected (or improperly protected from a cross connection);
- 2) A physical cross connection must be made between the potable water supply piping and a contaminant source; and
- 3) Backflow conditions must occur.



Hose attached to service sink with the end submerged in tub full of detergent

What is Backflow?

Backflow means the undesirable reversal of flow of water or other substances through a cross connection into the public water system or consumer's water system.

Backflow may be due to either: **Backsiphonage** or **Backpressure**.

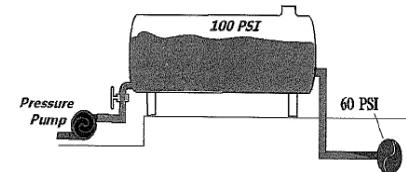
Backsiphonage occurs when negative or reduced pressure exists in the supply piping allowing undesirable substances to be "drawn" in the potable water supply. The effect is similar to drinking water through a straw.



Backsiphonage can occur when there is a stoppage of water supply due to nearby fire fighting, a break in a water main, etc.

Backpressure may occur when the pressure in an unprotected piping system on the customer's side exceeds the pressure from the supply side of the public water system. Examples of backpressure include booster pumps, pressure vessels and elevated plumbing. If a pump sup-

plied from a non-potable source, such as a boiler in an industrial facility, were accidentally connected to the potable supply piping, the non-potable water could be pumped into the potable water supply which serves the building and the public water system.



Backflow can cause our drinking water to become polluted or contaminated.

Pollution reduces the quality of the drinking water. It does not create a public health hazard, but adversely affects the aesthetics of taste, odor and appearance.

Contamination, however, poses a public health risk through poisoning and the spread of disease.

Protecting our water supply against either of the hazards is a serious consideration of the Town of Payson Water Department.