BACKFLOW PREVENTION

CROSS CONNECTION: A cross connection is any actual or potential physical connection between a potable water supply line and any pipe, vessel, or machine containing a non potable fluid or has the possibility of containing a non potable fluid, solid or gas, such that it is possible for the non potable fluid, solid or gas to enter the water system by backflow. A cross connection could be any physical arrangement whereby a potable water supply is connected, directly or indirectly, with any non potable or unapproved water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or any other device which contains, or may contain, contaminated water, liquid, gases, sewage, or other waste of unknown or unsafe quality which may be capable of imparting contamination to the potable water supply as a result of backflow. **

BACKFLOW: Backflow is a flow in reverse from the normal direction of flow in a piping system. It occurs due to a differential pressure existing between two different points within a continuous fluid system; a fluid of higher pressure flowing to a fluid of lower pressure. Backflow may occur due to either backsiphonage or backpressure. **

BACKSIPHONAGE: Backsiphonage is caused by negative pressure in the supply piping. Some common causes of backsiphonage are: (1) high velocity pipe lines; (2) line repair or break that is lower than a service point; (3) lowered main pressure due to high water withdrawal rate such as fire fighting or water main flushing; or (4) reduced supply pressure on the suction side of the booster pump.

CONTINUOUS PRESSURE: An installation in which the pressure is being supplied continuously to a backflow prevention device for periods over 12 hours at a time. A vacuum breaker should never be subjected to continuous pressure unless it is of the continuous pressure type and clearly identified for this service.

***American Water Works Association*

Hose Bibb Vacuum Breaker

Small inexpensive devices with hose connections that are simply attached to sill cocks and threaded faucets or wherever there is a possibility of a hose being attached that could be introduced to a contaminant. However, like the Atmospheric Vacuum Breaker, they should not be used under continuous pressure.

Backflow Preventer with Atmospheric Vent

Devices that are made for ½" and ¾" lines and may be used as an alternative for pressure vacuum breakers. In addition, however, they provide the added advantage of providing protection against back-pressure and can be used in continuous flow applications.

Double Check Valve (Continuous Pressure)

Devices designed for protection of the potable water supply in non-health cross-connections and continuous pressure applications. They are normally furnished with ball-type test cocks and quarter-turn full port resilient seated bronze ball valve shut-offs.