

## Residential Customer Requirements

The state requires each public water system owner to establish a program for cross connection control and backflow prevention. Such programs are designed to prevent contamination of drinking water.

Contamination of the drinking water may occur under back siphonage or backpressure conditions, whereby contaminants are siphoned or forced back into the drinking water supply. Back siphonage of contaminants may occur when there is a pressure drop, creating a suction or partial vacuum in the system. It may happen during a waterline break or high usage in the water system, such as heavy consumption of firefighting situations (when fire hydrants are available). Backpressure may occur when there are pumps or boilers on the water system, which produce pressures higher than water system pressures.

At the residential level, various means of protection are available to protect against backflow and avoid contamination of the drinking water supply. A periodic survey may be required. Some backflow prevention methods may require annual testing. It is important to know the potential hazards and how residential customers can protect the drinking water supply.

Common Residential Premise Examples	
Potential Cross Connections	Protection Examples
Swimming pools	Air gap separation between water supply and Top edge of Swimming Pool
Hose bib connections (outside water spigots) when water aspirators are used to spray chemical and detergents.	Hose bib vacuum breaker or atmospheric vacuum breaker downstream of the last cutoff valve.
Water Softeners	Air gap separation between water supply line and brining tank.
Frost proof yard hydrants (drain to ground type)	An approved backflow preventer (pressure vacuum breaker or reduced pressure principle assembly (RP)) in the waterline leading to the hydrant as well as an approved atmospheric vacuum breaker on the threaded outlet and an approved non potable water sign.
Sanitary yard hydrants	An approved atmospheric vacuum breaker on the threaded outlet and an approved non potable water sign.
Connections to other water sources such as springs, individual wells, cisterns, etc.	<b>No connection allowed between the public and private water supply.</b>
Hose connections at laundry tubs	Hose bib vacuum breaker or atmospheric vacuum breaker downstream of the last cutoff valve.
Booster Pumps	Low pressure cut off switch on pump suction line or device, depending on installation type.
Storage Tanks (excluding hot water tanks)	Air gap separation between water supply outlet and top edge of tank.
Photo developing sinks	Air gap separation between water supply outlet and top edge of sink, or atmospheric vacuum breaker downstream of the last cutoff valve.
Lawn Irrigation Systems	Reduced pressure principle assembly (RP) or pressure vacuum breaker (PVB) are common assemblies used.
Fire Sprinkler Systems	Reduced pressure principle assembly (RP) or dual check valve assembly (DC) are common assemblies used depending on the degree of hazard.

**Please contact us at 571-339-8087, submit documents to [fortbelvoirstubmittals@amwater.com](mailto:fortbelvoirstubmittals@amwater.com), or visit us at 6035 16<sup>th</sup> Street, Building 739, Fort Belvoir Va, 22060 if you have any questions.**