

The Charlottesville/Albemarle Community is fortunate to have a safe drinking water supply. Year-round, the local water purveyors and State Health Department work to ensure that the general population will never have to be concerned about the safety of their drinking water. One way in which they do that is through a program that identifies and eliminates cross connections to the potable water supply.

“Cross-connection” is a term that may be foreign to most of the general public. The American Water Works Association defines this term as “any unprotected, actual or potential connection or structural arrangement between a potable water system and any other source or system through which it is possible to introduce any used water, industrial fluid, gas or substance other than the intended potable water with which the system is supplied.”

To avoid the potential of a cross-connection contamination, backflow devices are used. A backflow device prevents the contaminant from being sucked into the potable water system when there is a drop in pressure. Drops in pressure occur when lines break, or when there are large draws on the system, as when water is drawn for fire suppression.

The water utilities' cross connection programs require that backflow devices be placed on the main water line of all commercial establishments, including home based businesses that have cross connection potential. Backflow devices are also required on residential lines when the water utility deems a potential hazard exists, as in cases of irrigation systems. This backflow device requirement became part of Virginia State Plumbing Code in September 2003, following the International Residential Code, adopted in 2000. In Virginia, backflow devices are to be tested at the time of installation, anytime work is done on them, and annually to ensure they are always in proper working order.

While cross connection programs greatly minimize the risk of contamination, they do not prevent all potential for such. Cross connections are not uncommon in residential settings. Household cross connections can occur anytime a hose outlet becomes submerged in any substance. For instance, a kitchen sink spray hose submerged in soapy dishwater, or a hand held showerhead becoming submerged while giving the family dog a flea bath. Outdoors, cross connections can occur when the end of the garden hose is submerged in a children's pool or when the hose is used as an aspirator to spray soap or garden chemicals.

To reduce potential for cross connection contamination in residential settings, Albemarle County began, in 1993, enforcing a rule that all outside hose bibs have backflow devices known as vacuum breakers. There is a chance that if your home was built prior to 1993 that you do not have cross connection protection on your hose bibs.

Whether your water comes from a well or the public supply it is prudent to be concerned about cross connections. If your home does not have a vacuum breaker on each of the hose bibs, pick one up at your local plumbing supply, home improvement or hardware store. They are inexpensive devices, costing around five dollars each, that simply screw onto the hose bib just like a garden hose. The garden hose then attaches directly to the vacuum breaker.

If you have any questions regarding cross connections contact David Jones of the Albemarle County Service Authority at [djones@acsanet.com](mailto:djones@acsanet.com)