

July 1, 2011

Dear Water System Customer,

The Town of Luray wanted to make you aware of several significant issues that can negatively impact the water system we are all connected to. The three issues are Backflow Prevention, Back Pressure Prevention, and Prevention of Cross Connections.

Backflow Prevention

Backflow occurs when water that normally flows into the structure suffers a reversal due to a partial vacuum or suction in the Town's main water distribution system. This is typically remedied by a backflow preventer, check valve or anti-siphon valve. This is a plumbing device installed in the water supply line that allows the water to move in only one direction. A licensed plumber can install one.

A typical backflow event is also sometimes referred to as back-siphonage. This situation occurs when there is a significant and sudden drop in water pressure in the Town's water mains. This could occur if there is a water main break, or if high volumes of water are being used near your area, such as when fighting a fire, or from a major industrial function using a large volume of water in a short span of time.

The danger to the water system, and all of its connections, occurs if a user has a hose or other device that allows a harmful substance to be "pulled back" (siphoned) into the structure's plumbing and out into the Town's network. A common residential example is when a homeowner has a water hose connected to a faucet, and the hose end is submersed in a chemical sprayer. When the backflow/back-siphonage event occurs, the chemical in the sprayer can be siphoned through the hose, into the house, and out into the Town's water supply network.

For some residential connections, there is a backflow/back-siphonage device built into the meter assembly at the street near where the house supply line connects to the Town water main. When properly functioning, this device will stop the contaminated water from getting into the Town network, but this contaminated water is still inside the house plumbing system. Therefore it is critical to avoid situations that can lead to backflow/back-siphonage events in all events. This list has some other examples everyone should look for and prevent: any threaded spigot or faucet where a hose can be attached, pools, hot tubs, lawn irrigation systems, laundry facilities, hot water boiler, yard hydrants, animal waterers, mop sinks, fire sprinkler systems, water supplied equipment for foodservice or medical uses, water storage tanks, pressure washers, pressure booster pumps, automatic drink machines, shampoo sinks, and other plumbing situations where a potential contaminant can be siphoned back into the water supply.

Back Pressure Prevention

Back pressure is similar to backflow and back siphonage in that the water is moving backwards from the structure into the Town's water supply network. However, back pressure events occur when equipment, such as a hot water boiler or pump, is directly connected to the structure's water line. A boiler can generate pressures far greater than those in the Town water supply network. If a backflow/back pressure plumbing device is not installed between the boiler and the rest of the structure's water supply lines, the boiler can "push" contaminated water from the boiler into the rest of the structure's plumbing system, including the Town's water supply network. It is imperative that these devices be inspected and tested annually to ensure they are still functioning properly. Such devices are typically found in commercial and industrial applications, but can be found in residential structures where hot water radiators are used for a heat source. If you are not sure if your plumbing arrangement is properly installed and protected, please contact a licensed plumber to evaluate your specific situation.

For commercial and industrial facilities that utilize backflow/back-siphonage/back pressure prevention devices, they are required by state and local law to have a licensed contractor to inspect and test their devices at least annually. At the end of a satisfactory inspection, the contractor will generate an inspection report, and place a tag on the device indicating the test date, the results, and the contractor's contact information. Each business and industry must submit a copy of the inspection report to the Town of Luray every time the test is completed.

In commercial and industrial settings, such devices are typically located on the drinking water main where it enters the building, on the fire suppression line where it enters the building, and immediately adjacent to equipment that uses water for circulation, cooling, or heat. While many pieces of equipment, especially in foodservice and medical settings have built-in, dual-check backflow prevention devices, only the manufacturer or a licensed plumber can verify this. If you are not sure whether the requirements are being met, please contact a licensed plumber for an evaluation.

Cross Connection Prevention

Cross connection occurs when a non-potable, or contaminated, water line is accidentally plumbed (or connected) to a potable, or drinking water line. In rare cases, this is done by mistake and uses permanent piping connections. In most cases, this is a mistake using temporary piping connections, such as hoses. A cross connection provides an immediate threat to the safety of the drinking water supply inside the structure as well as to the entire Town, and potentially all of its users. Examples of non-potable lines are fire suppression piping, drain lines from equipment such as air-conditioning units, and wastewater lines.

All residential, commercial, and industrial users that have both potable and non-potable water lines in their facilities must complete at least an annual review of their plumbing systems to ensure that no cross-connections exist. A copy of this inspection report must be maintained at the facility forever, and be made available to the Town upon request. Many users simply send a copy of this report (s) to the Town once a year with their annual backflow device inspection reports.

If you are unsure if a cross connection exists, or may exist, in your structure, please contact a licensed plumber to assist you with an evaluation.

It is **illegal** to connect a private drinking water system (such as a well or cistern) to the same plumbing system as the Town water supply network. If you have such a system and a connection now, it is considered a cross-connection. Contact a licensed plumber to separate the two water supply piping networks **immediately**.

If you have questions or concerns about how these issues may impact your water supply, please contact the Town's Director of Utilities at (540) 743-1974.

NOTICE TO ALL COMMERCIAL AND INDUSTRIAL CUSTOMERS

If you have an over-sized water meter (2" or greater), a fire suppression system that uses water, any type of boiler, or other water-supplied cooling/circulating/heating equipment, you likely have one or more backflow prevention devices in your facility.

Please have your annual inspection and tagging of devices completed by an authorized contractor, and forward a copy of your device inspection reports to the Town Office by July 1 of each year. Please forward a copy of your annual Cross Connection inspection report at the same time.

Thank you for your cooperation!