

The importance and need for safe drinking water is evident. Since the passing of the Safe Drinking Water Act of 1974 the United States Environmental Protection Agency has passed many regulations requiring public water systems to produce safer and safer drinking water to protect the health and welfare of consumers. In our efforts to require water systems to produce safe drinking water it is equally important that we make those same efforts in requiring water systems to protect the integrity of our safe drinking water when it leaves the production and treatment facilities and enters the water distribution system that conveys this water to your homes and businesses.

It is important to understand that once a water system pumps its water from the ground, river, lake, or whatever its source might be and then treats it to make it safe the water then enters the distribution system whereby there is still risk for contamination. This risk is not only attributed to physical damage due to things such as leaks or line breaks but also due to unsafe connections called cross connections. Cross connections are an actual or potential connection between a potable (safe) drinking water supply and any (un-safe) non-potable substance or source. A few examples of such connections are things like a fertilizer watering product that connects to a garden hose, soap and wax injections in water lines at car washes, makeup water lines for chemical feed tanks or chemical mixing tanks, water make-up for chilled water air condition systems, and fire sprinkler systems where the water sits in pipes and becomes stagnant. All of these cross connections and many others which are too numerous to name possess a potential to contaminate the water system through backflow. Backflow is the undesirable reversal of flow where water that is in a plumbing system or cross connection flows back to the water supply system. Backflow can occur often unnoticed and can happen for many reasons. Because of this there is a need to protect our safe drinking water systems from contamination through these cross connections and that is done through the use of backflow prevention devices and methods. The different types of backflow prevention devices and methods are air gaps, reduced pressure principle type backflow preventers, double check valve assemblies, pressure type vacuum breakers, and atmospheric type vacuum breakers.

Our Louisiana State Plumbing Code, 2000 Edition regulates the requirements for backflow prevention devices and methods specifying applicable standards, installation, field testing, and maintenance requirements. Our state plumbing code addresses backflow prevention needs at two locations. The first location is at the point of use. For instance, all hose bibs are required to be provided with an atmospheric type vacuum breaker so that if a backflow event occurs the vacuum breaker stops the reversal of flow of contaminated water through the garden hose into the plumbing system and into the public water supply system. The second location the state plumbing code addresses is customer isolation. Customers such as hospitals, funeral homes, manufacturing and processing facilities, veterinary clinics, fire protection systems, lawn irrigations systems, multistoried buildings, and many others are required to have backflow prevention devices immediately downstream of the water meter since there are numerous instances for possible cross connections within these facilities that potentially pose a significant risk, if not properly protected with point of use devices, to contaminate the public water supply system.

The Department of Health and Hospitals not only requires public water system to produce and treat water to acceptable standards for drinking but also to ensure their water supply

system is protected from potential contamination from certain of their customers through containment practices as described above and prescribed in the state plumbing code. These regulations require public water systems in Louisiana to identify customer connections to their system that require backflow protection and ensure that those customers have the proper backflow prevention device(s) or methods installed and tested per the requirements of the state plumbing code. If a public water system fails to perform this required activity then enforcement action including potential penalties is taken against the public water system by our agency requiring the public water system to comply with these requirements.

As customers of the public water system because these cross connections would exist within your plumbing system it is your responsibility to have the necessary backflow prevention device(s) or methods installed and tested per the requirements of the state plumbing code. The need for backflow prevention device(s) or methods is typically only for commercial type customers or irrigation services and not residential. However, if there multiple unsafe connections found at a residence or if some type of business or activity is taking place at a residence that would pose potential risk for contamination due to cross connections then proper protection may be required on these residential connections.

What a precious resource safe drinking water really is and how blessed we are to have it readily available for us here in Louisiana. We must also realize the importance of keeping our water safe, the risk we take when we make connections with unsafe sources or substances, and need to provide proper protection within our water system to prevent contamination of our public water supplies.