



Mandating Authorities

There are several mandating authorities regarding Cross-Connections and Backflow Protection.

The Federal Safe Drinking Water Act of 1974 provides jurisdiction over the public health aspects of the drinking water supply.

The Missouri Department of Natural Resources Division 60 - Public Drinking Water Program, addresses Backflow Protection in Chapter 11.

The City of Branson Ordinance Number 2013-0012 also addresses Backflow Prevention and Cross-Connection Control.

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Pacific Street Tower

City of Branson - Utilities Department Backflow Prevention Program

~To Insure Safe Drinking Water



How Backflow Contamination Occurs

Water normally flows in one direction, from the public water system through the customer's cold or hot water plumbing to a sink tap or other customer plumbing fixture. The customer plumbing fixture is the end of the potable water system and the start of the waste disposal system.

Under certain conditions water can flow in the reverse direction. This is known as **backflow**. Backflow occurs when a backsiphonage or backpressure condition is created in a water line.

Backsiphonage may occur due to a loss of pressure in the water distribution system during a high withdrawal of water for fire protection, a water main or plumbing system break, or a shutdown of a water main for repair. A reduction of pressure below atmospheric pressure creates a vacuum in the piping. If a hose bib was open and the hose was submerged in a pool or attached to a chemical feeder during these conditions, this non-potable water would be siphoned into the house's plumbing and back into the public water system.

Backpressure may be created when a source of pressure, such as a pump, creates a pressure greater than that supplied from the distribution system. If a pump supplied from a non-potable source, such as a landscape pond, were accidentally connected to the plumbing system, the non-potable water could be pumped into the potable water supply.

To keep these conditions from occurring, standards have been established which require certain customers to install backflow prevention assemblies where if a backflow occurred it could potentially place the public at risk.

The purpose of the Branson Utilities Department Cross-Connection Control program is to protect the public potable water system from contamination or pollution that could backflow into the public water supply system. There are two degrees of hazards that can degrade water quality.

Class I Hazard-Means any condition, device, or practice connected to the public water system that could create a danger to the health and well-being of the water user. All facilities identified as Class I must protect the public water supply with an air gap separation or a reduced pressure principle backflow assembly (RP) on the service line to the facility.

Following is a list of examples (but not limited to) of Class I facilities; Hospitals, medical buildings, morgues, car washes, manufacturing facilities, laboratories, commercial laundries, facilities with auxiliary water systems, food preparation facilities with chemical injection equipment, fire sprinkler systems using any chemical additives, waterscapes, pools, spas, and any other facility that could permit introduction of any substance that could create a health hazard.

Class II Hazard-Means any actual or potential threat to the public water system which would constitute a nuisance or be aesthetically objectionable or could cause minor damage to the water system, but not be dangerous to health. All class II facilities will require an approved air gap separation, a reduced pressure principle backflow assembly, or a double check valve assembly on the service line to the facility.

Following are examples (but not limited to) of Class II facilities; Food preparation facilities without chemical injection equipment, fire sprinkler systems without chemical additives, multi-story buildings, irrigation systems not using chemical additives, and all other cross-connections that could introduce pollution hazards.

All backflow prevention devices must be tested annually by a State Certified Tester and provided to the City.

Example of a Reduced Pressure Principle Backflow Assembly



Example of a Double Check Valve Assembly

