



CITY OF HOT SPRINGS Cross Connection Control Program CUSTOMER OVERVIEW

Protecting Our Water Supply

The City of Hot Springs Cross Connection Control Program is a key component to our efforts to ensure the quality of your drinking water. We have designed this overview to provide you with an understanding of how a cross-connection may occur and your responsibility to prevent it.

What is a Cross-Connection?

A cross-connection is a DIRECT, INDIRECT, or POTENTIAL connection between Hot Springs Water's distribution system and another system of questionable quality. For example, the most common cross-connection is a garden hose. If the garden hose also happens to be connected to a chemical applicator when a reduction in system pressure occurs, water can be siphoned back through the hose and into the public water mains.

What is Backflow?

Water normally flows from the public distribution system through the meter and into the customer's piping. Backflow is the reversal in the flow of water from its normal direction.

What Causes the Backflow?

Backflow may occur when there is a loss of system pressure or the customer's water pressure increases above that of Hot Springs Utilities Water Distribution System.

Two types of backflow are:

- ***Backsiphonage***
- ***Backpressure.***

Backsiphonage occurs when low or negative pressure on the supply side of the system causes a reversal in the normal flow of water. It may be caused on the supply side of the system when there is a break on a water main, increased water usage during firefighting, or a motorist damages a fire hydrant.

Backpressure occurs when the water pressure within the customer's plumbing system exceeds the pressure of the water utility's distribution system. Backpressure may be caused by differences in elevation, booster pumping, or a chemical injection system.

What is the Primary Health Risk?

The primary hazard associated with cross-connections is contaminated water being drawn back into the public water system. If consumed, the contaminated water can cause serious illness or even death.

How Common is a Backflow Occurrence?

The U. S. Environmental Protection Agency, American Water Works Association, American Backflow Prevention Association, and Arkansas Department of Health (ADH) have documented numerous cases of backflow on public water systems within the state and across the country. Backflow incidents are not always documented; therefore, it is unknown just how often incidents occur.

What Can Be Done to Protect Our Public Water System from Cross-Connections?

In 1995, the Arkansas Department of Health amended Act 96 of 1913 (Rules and Regulations Pertaining to Public Water Systems) and mandated that all public water utilities institute a Cross-Connection Control Program. The intent of the program is to locate, identify, and eliminate, or protect against, **ALL POTENTIAL** cross-connections. Customers found to have a cross-connection or a potential cross-connection must be isolated from the public water system. The City of Hot Springs requires the installation of a Reduced Pressure Zone Assembly (RPZA) on all water services where a potential cross-connection may exist. RPZ Assemblies are testable in place to assure proper operation, unlike older non-testable devices such as swing-check valves, dual-check valves, and atmospheric vacuum breakers.

What Type of Device Does Hot Springs Require for My Level of Hazard?

The City of Hot Springs requires the installation of an RPZA on the water service of all facilities that may pose **POTENTIAL HEALTH HAZARDS** to the public water system. State regulations also require the protection of the public water system from the potential of backflow from **Fire Sprinkler Systems**. The installation of a Double Detector Check Valve Assembly (DCVA) is adequate unless the **Fire Sprinkler System** has additives or a secondary water source is subjected to a potential First Priority Hazard. In this situation, we require the installation of an RPZA. **Underground Irrigation Systems** pose **HIGH HEALTH HAZARDS** and require the installation and annual testing of Reduced Pressure Zone Assemblies.

How Does Hot Springs Determine the Need for Devices?

All commercial and industrial customers within the HSW service area periodically will receive a survey questionnaire in the mail. We ask that you complete and return the Survey Form to us. HSW then will be able to determine whether current regulations require the installation of a backflow prevention assembly. If the customer fails to return the Survey Form, and HSW personnel performs an on-site inspection, a service charge will be assessed to the water bill.

What are the Installation Requirements?

The Arkansas State Plumbing Code (ASPC) mandates that only licensed plumbers may install Reduced Pressure Zone Assemblies. If the assembly is on a **Fire Protection System**, then only personnel licensed by the State of Arkansas and holding a Registered Engineer license or employed by a company licensed by the Arkansas Fire Protection Licensing Board may install assemblies.

Specific installations requirements are, as follows. 1. The vent of the relief valve on the RPZA shall be between 12" and 30" above ground. 2. Horizontal clearance shall be 30" between the assembly and an adjacent wall, 12" on the opposite side, 8" at each end, 6" above the highest point, and 12" underneath the assembly. 3. Assemblies 3" or larger in diameter shall have adequate support and all installations must have a "Y" strainer and blow-off assembly. 4. Assemblies shall not be mounted in a vertical position unless it specifically is designed for that orientation.

Where Must I Locate the RPZ Assembly?

RPZA's must be installed above ground on the customer's side of the water meter and before the first point of use. Contact local plumbing inspectors for specific information on RPZA's installation locations, local city ordinances may vary.

Who is Responsible for the Cost of Installation, Testing, and Maintenance?

Under Arkansas State Law, Act 96 of 1913 as amended and the Hot Springs Cross-Connection Control Program the customer is responsible for all costs associated with installation, testing, and maintenance of backflow prevention assemblies on the customer's premises.

What Are the Requirements for Testing the Assembly?

Arkansas State Law, Act 96 of 1913 as amended and the City of Hot Springs's Cross-Connection Control Program mandate that all assemblies be tested within 10 days of installation or re-installation and annually thereafter.

Who Has Authorization to Test a Backflow Assembly?

Only personnel with current Assembly Tester Technician certification from the Arkansas Department of Health and registered with the City of Hot Springs, may test backflow assemblies in the Hot Springs Utilities service area. **Only those personnel with a valid license from the Arkansas Fire Protection Licensing Board and the Health Department may test assemblies on Fire Protection Systems.** A listing of Assembly Tester Technicians may be found in the enclosed letter sent with this overview.

What Facilities Typically Have Hazards That Require a RPZ Assembly?

Air Conditioning Cooling Towers	Livestock Facilities
Apartments/Condominiums	Master-Metered Facilities
Auto Repair, Paint & Body Shops	Medical Facilities
Beauty, Barbers & Nail Salons	Mobile Home Parks
Car and Truck Wash Facilities	Multi-Story Buildings
Commercial Laundries	Multi-Water Services
Convenience/Grocery Stores	Restricted Facilities
Facilities with Swimming Pools	Restaurants & Clubs
Film Processing Facilities	Retirement Facilities
Food Processing Operations	Schools and Colleges
Funeral Homes and Mortuaries	Sites with Chemicals
Gas Stations	Sites with Pumps
Health Clubs & Spas	Tattoo & Piercing Parlors
Industries and Manufacturers	Testing Laboratories
Landfills and Dumps	Veterinaries & Kennels
Lawn Irrigation Systems	Zoos & Animal Shelters