

The Colorado State Health Department requires that all purveyors of treated water have a cross connection policy, in adherence to Colorado's regulations, the Cross-Connection Control and Backflow Prevention Program protects the public water system from cross-connection contamination by requiring customers to:

- Install containment assemblies (also known as backflow prevention assemblies, containment devices or backflow prevention devices) on the following water service lines:
 - Commercial property water service lines
 - Dedicated irrigation lines
 - Fire lines
 - Multi-Family Residential Units
 - Single-Family Residential Units with a Dual Water Supply Agreement
- Test containment assemblies after initial installation and annually thereafter to make sure they are functioning properly.
- Submit completed test reports to Central Weld County Water District (CWCWD).

Affected customers are notified by postal mail of required assembly installation and testing.

The American Water Works Association (AWWA) recognizes water utilities have the responsibility to supply potable water to their customers. In the exercise of this responsibility, water utilities or other responsible authorities must implement, administer, and maintain ongoing backflow prevention and cross-connection control programs to prevent backflow; protect public water systems from the hazards originating on the premises of their customers, such as the interface between water systems and fire prevention/control systems; and protect public water systems from temporary connections that may impair or alter the water. The return of any water to the public water system after the water has been used for any purpose on the customer's premises or within the customer's plumbing system is unacceptable and opposed by AWWA.

Water utilities or other responsible authorities should assure that effective backflow prevention measures are implemented commensurate with the degree of potential hazard and likelihood of occurrence, to ensure protection of the water in public water distribution systems. Customers, together with authorities, are responsible for preventing contamination of the public water supply due to cross connections with their plumbing systems and for maintaining associated backflow prevention devices. If appropriate backflow prevention measures have not been taken, water utilities or other responsible authorities should take or initiate reasonable measures to ensure that public water distribution systems are protected from actual or potential backflow hazards. These measures could include the testing, installation, and assurance of proper operation and installation of backflow-prevention assemblies, devices, and methods commensurate with the degree of hazard and likelihood of occurrence at the service connection, point of use, or both. If these actions are not taken, water utilities should be empowered to suspend service.

To reduce the risk customer plumbing systems pose to the public water distribution system, water utilities' backflow prevention programs should include public education and coordination with the cross connection efforts of local authorities -- particularly public health and plumbing officials. This is of increasing importance given the growing application of dual plumbing systems utilizing recycled water. In areas lacking a health or plumbing enforcement agency, water utilities should additionally promote the design and maintenance of customer plumbing systems for health and safety and to protect their customers from backflow hazards.

Commonly Used Backflow Prevention Devices

The three most common and effective devices installed to prevent backflow are shown below:

1. Air Gap - Used mainly on tanks and sinks, it is a gap between the outlet and the basin.

Requirements: - The gap needs to be a minimum two times the supply pipe diameter.

2. Pressure Vacuum Breaker - Used mainly on lawn irrigation systems. It has a one way check and a spring loaded air inlet valve that closes when water pressure drops.

Requirements:

- No backpressure (from fertilizer injection system or water well)
- 12" above highest sprinkler head
- Protect from freezing

3. Reduced Pressure (RP) Principle Assemblies

A reduced pressure principle assembly is a mechanical valve assembly that consists of two internally loaded independently operating check valves and a mechanically independent, hydraulically dependent relief valve located between the check valves. It is used for services that have either health hazards or non-health hazards and under conditions of backpressure. It provides the highest level of protection among the mechanical backflow prevention devices.

The best way to prevent this potential contamination is to eliminate the cross connection. This could mean simply making sure that you never leave a hose submerged in a tub of water or that you never apply fertilizer to your lawn with a hose-aspirator device. In some cases (such as the lawn sprinkling system example noted above) the cross connection cannot be eliminated and the only means of protection is by installation of an approved backflow prevention device.

All costs associated with installation, operation, testing, and maintenance of a backflow prevention device are the responsibility of the customer. Accurate test and maintenance records must be maintained by customers. Documentation of installation, testing, and any repairs must be forwarded to the Backflow Prevention Coordinator at CWCWD. Any re-piping or relocation of water lines also requires re-testing. To help maintain the safety and quality of water supplied by the District, it has established a Backflow Prevention Program designed to:

Enforce Backflow Prevention provisions of CWCWD Rules and Regulations and comply with the requirements of the Colorado Primary Drinking Water Regulations.

Inform customers of the hazards associated with cross connections and their responsibilities to prevent contamination of their water supply.

Promote the elimination of cross-connections through inspection and regulation of plumbing and water piping within a customer's facility.

Insure the proper installation and maintenance of Backflow Prevention devices on water services to facilities where actual or potential cross connections exist to prevent backflow of contaminants or pollutants from the customer's facility into the public water system.

If an accident occurred and an unprotected cross connection resulted in contamination of your water supply, you would be glad that you took the time and trouble to install and maintain a backflow prevention device.

If you have a backflow prevention device on your property, please do your part by making sure that your device is tested annually. If repairs are needed, be certain to have those repairs made as quickly as possible. Remember that if the device is repaired or replaced it must be re-tested. Customers with questions about backflow prevention can contact the District's Backflow Prevention Coordinator at 970-352-1284 and schedule a time to meet to answer questions.