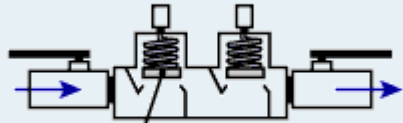


Normal Flow

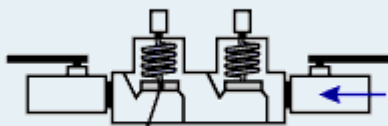


Spring Loaded Check Valve
Open During Normal Flow

A double check valve or double check assembly (DCA) is a backflow prevention device designed to protect water supplies from contamination. It consists of two check valves assembled in series usually with a ball valve or gate valve installed at each end for isolation and testing. Often, test cocks (very small ball valves) are in place to attach test equipment for evaluating whether the double check assembly is still functional.

The double check valve assembly is suitable for prevention of back pressure and back siphonage, but is not suitable for high hazard applications. It is commonly used on lawn irrigation and fire sprinkler systems.

Reverse Flow



Spring Loaded Check Valve
Closed During Reverse Flow

We are here to help!

Over half of the nation's cross connections involve unprotected garden hoses.

In Kansas, a man died from drinking out of his garden hose. After spraying the yard with poison to get rid of bugs, he connected his garden hose to the spraying device. Unknown to him, during the spraying, a drop in pressure occurred in the main water system causing the poisoned water to backflow into the hose. It was enough to kill him when he took a drink from the garden hose after spraying. He had contaminated his own water system.

We, your Water Department, protect the water entering your system. However, it is **your** responsibility to protect the water on your property or in your home.

Oregon Administrative Rule 333-061-0070 states the premise owner shall assume responsibility for testing, maintenance, and repair of the installed approved backflow prevention assembly and that testing shall be done at least annually.

If you need information on locating a certified tester or have any questions, please call (503) 357-3011. We will be glad to assist you.

City of Cornelius

Public Works
1355 N Barlow Street
Cornelius, OR 97113

Phone: 503-357-3011
Fax: 503-357-3424

BACKFLOW TESTING

Protecting Your Drinking Water Against Contamination

Cornelius
Oregon's Family Town

An Introduction to Cross Connection Control

Everyday, the City of Cornelius proudly supplies an average of 1 million gallons of water to its citizens. Before the water is pumped to your home or business, it has gone through careful treatment and numerous tests to ensure its quality.

Did you know that your tap water (drinking water) has to meet standards that exceed those for bottled water? Unlike tap water, the quality of finished bottled water is not government-monitored. You don't need to buy bottled water for safety reasons in the City of Cornelius because our tap water exceeds federal and state drinking water standards.

Congress established the Safe Drinking Water Act (SDWA) in 1974 to protect human health from contaminants in drinking water and to prevent contamination of existing groundwater supplies. This act and its **amendments** (1986 and 1996) **require** many actions to protect drinking water and its sources. One of these actions is the **installation and maintenance of an approved backflow prevention assembly at the water service connection whenever a potential hazard is determined to exist in the customer's system.**

Without proper protection devices, cross connections can occur.

What is cross connection?

A connection between your drinking water and another source of water that combines the two when a backflow condition occurs. When this occurs, your drinking water can become contaminated.

What is backflow?

Backflow is when the water in your pipes (the pipes after the water meter) goes backward (the opposite direction from its normal flow). There are two situations that can cause the water to go backward (backflow):

- *Backpressure* - the pressure in your pipes is greater than the pressure coming in.
- *Backsiphonage* - a negative pressure in one of the pipes.

To protect the water system, two kinds of **backflow prevention assemblies** (devices that prevent the backflow of water) are required for all customers that present a potential hazard to the City's water system:

- *External* - to protect the City's water from cross connection with the water on the customer's premises.
- *Internal* - to protect the customer from potentially hazardous cross connections in their own system.

What is considered a potential hazard?

ANY possibility of pollutants, contaminants, and system or plumbing hazards. For example: Fire protection systems, irrigation systems, gasoline refineries and stations, restaurants, hospitals, and manufacturers. Just to name a few.

To keep your drinking water safe, we diligently check the plans of each new business for compliance with cross connection/backflow requirements. The City of Cornelius sends reminder notices for the annual testing and repair of all internal back flow prevention assemblies.

We take pride in the water we provide and will continue to protect it and our citizens.

Now that you have some background, you may ask... what's the big deal? Well, the big deal is that backflows due to cross connections can cause sickness and death. Even in your own home, you can unwittingly create a cross connection:

- Putting the garden hose in a swimming pool to fill it.
- Putting the garden hose in a pet's water bucket, or fish tank, to fill it.
- Putting the garden hose down the drain to flush out debris when it's backed up.
- Connecting your garden hose to a plant fertilizer or bug spray unit.