

# Cross Connection and Backflow Prevention

The Safe Water Drinking Act of 1974 requires the Association to evaluate every residential and commercial connection served by our system. The Association approved to establish and maintain a Cross Connection Control Program. The goal of the program is to prevent non-potable water from returning into the public water system.

## **What is Cross Connection and Backflow?**

A cross connection is any connection to the public water supply that has the potential to backflow. Backflow is the reversal of flow from the intended direction

## **Is it important to prevent Backflow?**

Washington Administration Code 246-290-490 requires all public water systems in Washington State to operate an on-going Cross Connection Control Program to protect the public water supply from contamination from possible cross connections.

The most effective method for Sallal Water Association to meet this requirement is to require customers to install a backflow prevention assembly on the main supply line to their property or facility, thus protecting the public water system from any cross connections that may be present inside a customer's plumbing system. All water users benefit from an active, on-going cross connection control program that includes the installation of backflow prevention assemblies.

The Association evaluates backflow requirements for all commercial and residential buildings on an individual basis. Buildings that present an actual or potential backflow hazard are required to install a backflow prevention assembly that is appropriate for the degree of hazard (risk).

The Association determines the backflow hazard by having a qualified CCC Specialist conduct a sanitation survey. This survey evaluates the type and purpose of the building, by what equipment and appliances the water is being used for and/or what product is being produced with the water. Certain types of buildings are mandated to have a backflow prevention assembly installed on their service line. These buildings fall under Table 9 of the WAC 246-290-490. Examples of these buildings include, but are not limited to:

- Car Wash
- Commercial Laundries or Cleaners
- Food Processing Plants
- Hospitals, Medical Centers, Nursing Homes, Veterinary, Medical and Dental Clinics, and Blood Plasma Centers.
- Laboratories
- Metal Plating Facilities
- Piers and Docks

- Wastewater Lift Stations and Pumping Stations
- Survey Access Denied or Restricted Buildings

**Why does the customer have to pay for the installation of a backflow preventer?**

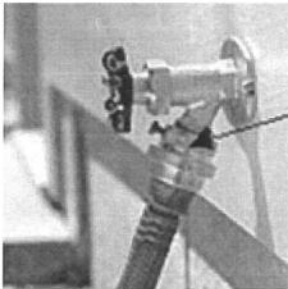
The backflow preventer is installed to protect the public water supply against any hazard (actual or potential) in the customer's water system. The actual or potential cross connection belongs to the property owner and not to the Association. If a backflow assembly is required, the person who created the risk shall purchase, install, maintain and annually test the backflow assembly.

A cross-connection is any actual or potential connection between the public water supply and a source of contamination or pollution. In homes, the most common type of cross-connections include:

## NEED TO SCHEDULE A BACKFLOW TEST?

- list of certified area testers
- Sample test report

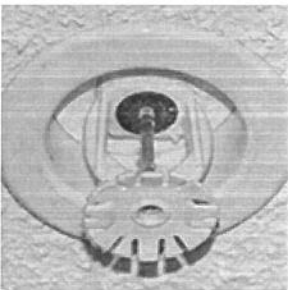
*Please note: this list is provided to you as a convenience only and is not comprehensive. The Association does not recommend any specific contractor. View the full list of certified backflow testers by county.*



hoses connected at hose bibs



in-ground irrigation systems



fire sprinkler systems (not "flow-through" type)



boiler systems



pool or pond auto-fill systems, or  
boat launches

Commercial facilities, including industrial, restaurant, and medical facilities must protect against other cross-connection hazards.

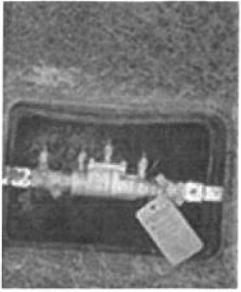
## What is backflow?

Clean, safe water is designed to flow from the main into homes. In unusual instances, this *normal direction of flow is reversed*, resulting in "backflow." In a backflow situation, **water that has contacted chemicals or other hazards can enter the drinking water system through cross-connections** in homes or commercial buildings.

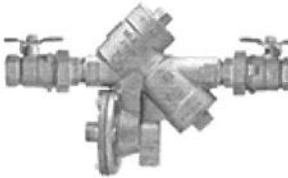
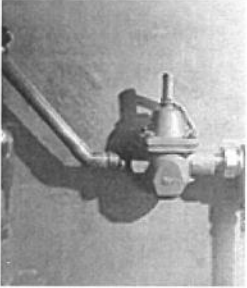
## Why do I need a backflow prevention device (backflow assembly)?

If you have one of these cross connections that poses a potential hazard to the drinking water supply, **state and federal law require you to install a backflow prevention device on your connected system**. This ensures backflow – or potential water contamination - cannot affect the public drinking water. The law's annual test requirement makes sure the device keeps working properly.

## What type of backflow device does my system need?



**For irrigation and fire sprinkler systems:** most residences need a double-check valve assembly (DCVA)



**For boiler systems and other higher hazards:** a reduced-pressure backflow assembly (RPBA) is required.



All homes should install **vacuum breakers on hose connections**, easy to find at hardware stores.

If you have questions about what type of backflow device to install on your property, please contact us

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## HOW TO PREVENT BACKFLOW FROM AFFECTING YOUR HOME

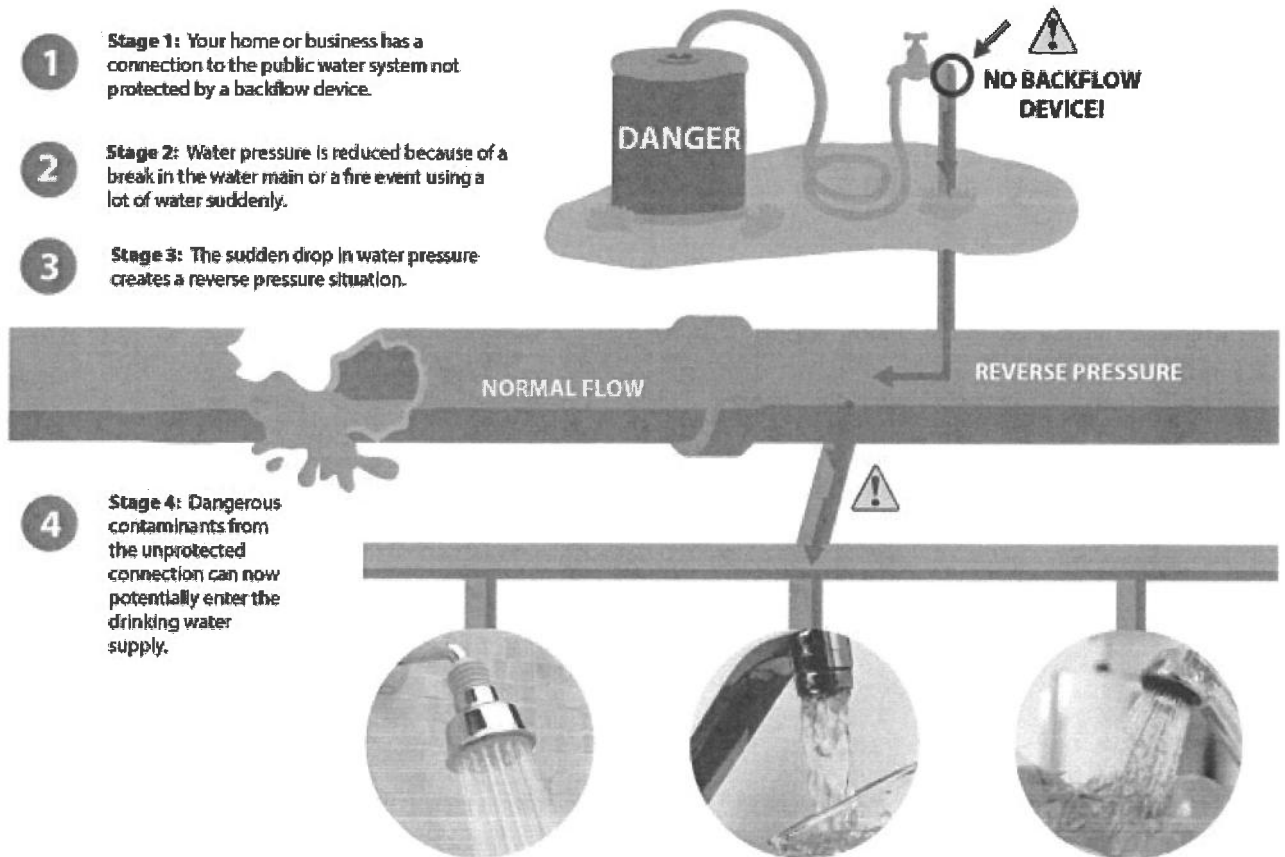
**Backflow can result from two types of situations: back-siphonage or back-pressure.**

Back-siphonage can happen when a rapid drop in water pressure (such as a main break, or a fire incident that uses large quantities of water very quickly) creates a vacuum, which can cause a reverse flow or suction in the water lines of your home.

If a water line (such as a garden hose) is submerged in a polluted or contaminated substance when the pressure drops, that substance can be drawn into the water supply. When the pressure returns to normal, the substance will flow in the opposite direction. Without a proper backflow device preventing the opposite flow, those contaminants can be pulled into your home water lines, or even possibly your neighbors'.

## HOW BACKFLOW CAN HAPPEN

- 1 **Stage 1:** Your home or business has a connection to the public water system not protected by a backflow device.
- 2 **Stage 2:** Water pressure is reduced because of a break in the water main or a fire event using a lot of water suddenly.
- 3 **Stage 3:** The sudden drop in water pressure creates a reverse pressure situation.



- Irrigation Safety and Cross-Contamination flier

### To prevent cross-connections from occurring, follow these precautions:

- Install an approved backflow prevention device on any cross-connected systems, test upon installation and annually by a state certified backflow tester.
- Never submerge a garden hose in a bucket, sink, or anything else.
- Do not use a spray attachment on your garden hose without first installing a backflow prevention assembly.
- Keep the end of the garden hose clean and free of contaminants.