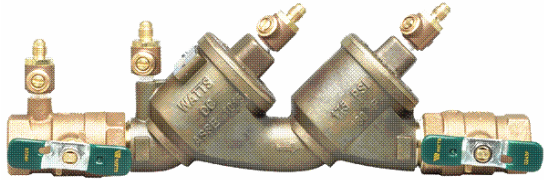
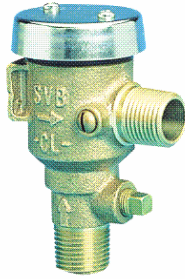


## Four Types of Backflow Prevention Devices

### Atmospheric Vacuum Breaker (AVB)

- State does not require annual testing
- Rated against backsiphonage
- Inexpensive and easy to install
- Approved for irrigation systems
- Install 6" above highest point
- No downstream valves



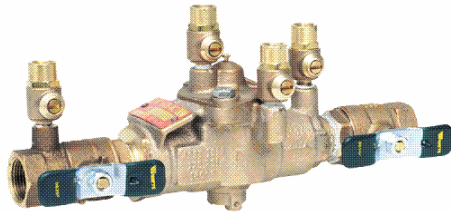
### Double Check Valve Assembly (DCVA)

- State requires annual testing
- Rated against backpressure and backsiphonage
- Install above or below ground
- Used for low-health hazards such as an irrigation system



### Pressure Vacuum Breakers (PVB)

- State requires annual testing
- Rated against backsiphonage
- More sophisticated and versatile than AVB's
- Used for low-health hazards such as an irrigation system
- Install 12" above highest point



### Reduced Pressure Backflow Assembly (RPBA) (Not Suitable for Residential Installations)

- State requires annual testing
- Rated against backpressure and backsiphonage
- Used for high-health hazards such as hospitals, mortuaries and chemical plants
- **Install above-ground**
- Only device that allows for applying fertilizers or other chemicals into irrigation systems

## DO YOU STILL HAVE QUESTIONS?

Call our Water Quality Office at  
425-337-3647 Ext. 234  
Or E-Mail  
CPARKS@SLWSD.COM

You can also request other information on

- Water Quality
- Water Conservation
- Water Conservation Kits
- Lead and Copper
- Annual Water Quality Reports



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## SILVER LAKE WATER & SEWER DISTRICT

## Do Not Let Your Irrigation System



## Contaminate Your Drinking Water

**IMPORTANT** Information for  
all irrigation system users.



P.O. Box 13888  
Mill Creek, WA 98082-1888  
Phone: 425-337-3647  
Fax: 425-337-4399



## Keeping Your Drinking Water Safe

An irrigation system makes watering lawns and gardens easier, saves time and can be designed to be water efficient. However, improperly installed or maintained systems may contaminate your private water system with weed killers, fertilizers and other harmful pollutants.

To protect your drinking water from a potential contamination, it is important to have properly installed state approved backflow preventers. Only state approved backflow preventers are acceptable per State WAC 246-290-490 and the Uniformed Plumbing Code.

We strive to make it easy for our customers to keep their drinking water safe and meet the State backflow requirements by allowing three options for backflow protection on an irrigation system. The three irrigation backflow protection options are:

- A Backflow Assembly
- Atmospheric Vacuum Breaker
- Physical Separation

## How Does Backflow Happen?

Backflow is a flow in reverse from normal direction of flow in a piping system. It occurs due to a differential pressure existing between two different points within a distribution system; water of higher pressure flowing to water of lower pressure. Backflow may occur due to either Backsiphonage or Backpressure.

**BACKSIPHONAGE** - is caused by negative pressure in the supply piping. Some common causes of backsiphonage are:

- High velocities in pipe line.
- Line repair or break that is lower than a service point.
- Lower main pressure due to fighting a fire or flushing a water main.
- Reduced supply pressure on the suction side of the booster pump.

**BACKPRESSURE** - may cause backflow to occur when the potable supply piping is connected to a system or fixture which exceeds the operating pressure of the supply piping. If these connections are not properly protected, potable and non-potable water or liquids can be forced into the potable supply system. Some common causes of backpressure are:

- Booster pumps.
- Potable water connections to boilers and other systems where thermal expansion is possible.
- Interconnections with another system operated at a higher pressure.
- Elevated Piping (e.g., 30' above finish grade).

### A Backflow Assembly

Pictured is a double check valve assembly (DCVA) which is the most common backflow protection for an irrigation system. **The DCVA, PVBA, RPBA all require initial and annual testing by a state certified Backflow Assembly Tester.**

### Atmosphere Vacuum Breaker

Pictured is an example of an irrigation system with atmospheric vacuum breakers (AVB's) for backflow protection. The AVB's need to be six inches above the highest point but do not require annual backflow testing. The District requires an initial inspection to ensure proper installation.

### Physical Separation

Pictured is an example of a physical separation. To eliminate the hazard and remove the need for backflow protection the District requires a physical separation between the public water supply and the known hazard.

