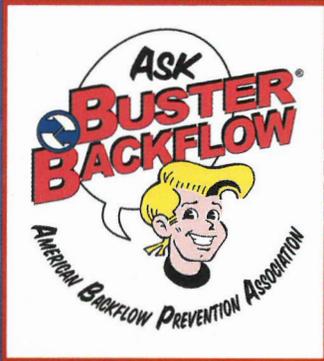


## Consumer Warning



Potential problems may occur with your potable drinking water in your home with the installation of a lawn irrigation system that can make you sick. It is possible for contaminations, such as fertilizers, bug sprays, insects, bacteria, fecal matter, and other organic compounds to backflow into your drinking water. Where the lawn irrigation piping is connected to the potable waterline is called a cross-connection. The solution is simple with the installation of a backflow preventer installed at the connection point of the irrigation system and the potable water source.



**Enjoy your lawn and gardens while keeping your drinking water safe**



The Irrigation Association is the leading membership organization for irrigation companies and professionals. We help our members grow with networking, education and certification, while working to protect your interests. Together with our members, we are committed to promoting efficient irrigation and to long-term sustainability of water resources for future generations.

[www.irrigation.org](http://www.irrigation.org)

Membership in ABPA is open to anyone who has a common interest in protecting drinking water from contamination through cross-connections. ABPA is an organization dedicated to education and technical assistance. Through its network of regions and chapters, local needs and interests are supported with the resources of the national organization. ABPA is committed to advancing all aspects of backflow prevention for the continued protection of all water users.

[www.abpa.org](http://www.abpa.org) or call 877-227-2127

## Working to Protect Safe Drinking Water



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# LAWN IRRIGATION SYSTEMS & BACKFLOW PREVENTION



**IMPORTANT INFORMATION FOR THE HOME OWNER**

The American Backflow Prevention Association  
P.O. Box 3051  
Bryan, TX 77805-3051

[www.abpa.org](http://www.abpa.org)



*Here are some common questions that will help you understand the need for backflow prevention and select the right type of backflow preventer for your irrigation system.*

**Why should I be concerned about backflow?**

Backflow should be everyone's concern. Statistics show that backflow occurs about 100,000 times every year in the United States. Contamination entering your drinking water can cause serious health problems to you and your family. Sickness and even death can occur from ingesting water that has been contaminated.

**How can contaminated water get into my drinking water from my lawn irrigation?**

Contamination can enter into your drinking water through backflow from a sprinkler, a hole or crack in the irrigation underground piping system. Lawn sprinklers are often installed at or below the ground level. Water will puddle around the head and form a submerged outlet allowing contamination to collect in this puddle. EPA rules, regulations and most plumbing codes require the installation of backflow preventers to stop backflow from entering into the potable water supply.

**What is Backflow?**

The term backflow means any unwanted flow of used or non-potable water or substances from any domestic, industrial or institutional piping system into the safe potable water distribution system.

The direction of flow under these conditions is in the reverse direction from that intended by the system and normally assumed by the owner of the system.

**How does backflow take place?**

Backflow can take place by either backsiphonage or backpressure. In most home lawn irrigation systems backflow is usually caused from backsiphonage.

**What is backsiphonage, backpressure?**

Backpressure is when the downstream side of the piping system is greater than the water sources pressure. This can



be caused with a pump installed on the sprinkler system. Backsiphonage is when the upstream source pressure is reduced to a lower pressure than the downstream pressure. The negative pressure will cause a siphon, much like drinking from a straw, and allow the flow to reverse to the lower pressure. This can be caused many different ways, such as a water main break, a repair being made to your potable water piping or a heavy demand placed on the water system when a fire hydrant is opened or your neighbors are watering their grass at the same time.

**What can I do to protect my drinking water from being contaminated through my lawn sprinkler system?**

Let's talk a little about each assembly and where they can be used.

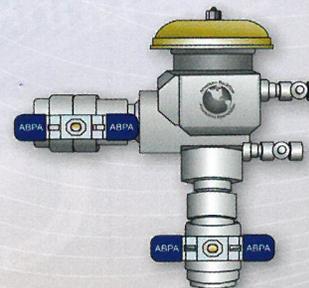
**Atmospheric Vacuum Breaker**

The atmospheric vacuum breaker (AVB) is the simplest of the three. This device is only used on irrigation to protect against backsiphonage with no valves downstream of the device and must be installed a minimum of 6 inches above the highest sprinkler head. This device is not testable but should be inspected annually to ensure proper operation.



**Pressure Vacuum Breaker**

The pressure vacuum breaker (PVB) is very similar to an AVB but has a spring to assist the opening of the plunger. This assembly permits the use of valves or zones downstream of the



assembly and is subject to periodical testing. This assembly must be installed 12 inches above the highest opening. No pumps or chemical injectors are permitted and will protect against backsiphonage only.

**Reduced Pressure Backflow Preventer**

A reduce pressure type assembly has the highest level of protection and can be used to protect against both backpressure and backsiphonage. Chemical injectors can be used downstream of the assembly with pumps. This assembly is subject to periodic testing and must be installed a minimum of 12 inches above the ground or flood plane.



**In addition to my lawn sprinkler system I often use my garden hose to fertilize my grass and plants. Do I need a backflow preventer for my garden hose?**

Yes, garden hoses are an extension of your piping system and are subject to backflow. A simple device called a hose bibb vacuum breaker can be installed on your existing hose bibb. Hose bibb vacuum breakers are readily available at most hardware stores and will protect against backsiphonage only and should not be subjected to continuous pressure.



None of these assemblies or devices should be installed in a pit or vault below ground.

**Where can I get more information on backflow prevention for lawn irrigation systems?**

For further information contact your local water provider, lawn irrigation contractor or a licensed plumbing contractor.

