

## If my device is located outside, how do I keep it from freezing?

Backflow devices located on irrigation systems can be removed when not in use, which is typically in colder months of the year. Winterizing your backflow device helps protect it from freezing or bursting. Here are some tips on winterizing an outside backflow device:

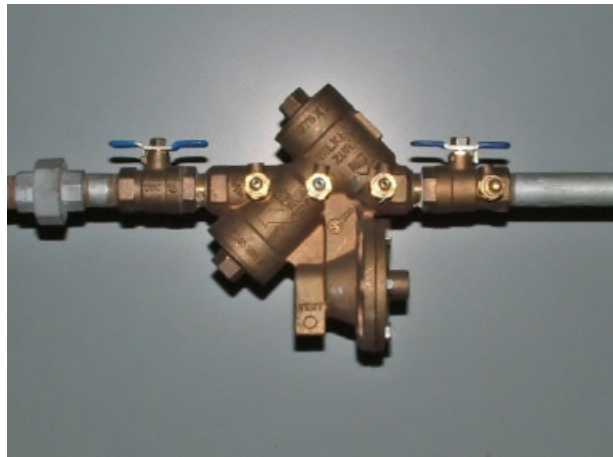
- Remove the backflow device before applying air pressure to winterize your irrigation system. Do not blow air through the backflow device or secondary water meter, as this may break internal parts.
- Drain all water from the device and store it in a location that stays dry and safe from freezing.
- Put unions and caps on both inlet and outlet pipes for protection, easy removal, and reinstallation of the device.

For outside devices that must be installed year round, you can protect the device by supplying a heat source, or installing an enclosure or insulation to protect the device from freezing. Many local irrigation and backflow testing companies can advise on the best ways to protect your device from freezing.



## Can I remove my backflow device?

Backflow devices can only be removed if an air gap is installed in its place, or if the use of water has changed so that the risk of cross-connection is eliminated. For example, if your device is installed outside on an irrigation system, you can remove the device if it has been tested and cap the water lines while the system is not in use. You cannot remove or bypass backflow devices and continue to connect potential risks to the water system. If in doubt, call KUB before removing your backflow device.



**Additional information on KUB's Cross-Connection Control Program is on our website at [www.KUB.org](http://www.KUB.org). Look at the Cross-Connection Control Program link under the Hot Topics Index on the home page. For questions concerning backflow devices, installation specifications, and testing requirements, you can also call KUB at 594-8333.**

## Drinking Water's Quality Standards

To ensure tap water is safe to drink, EPA and TDEC prescribe regulations that limit amounts of certain contaminants in water provided by public water systems, like KUB. TDEC also mandates operational and maintenance requirements.

Since 1939, KUB has provided safe, reliable, and abundant drinking water to help our community grow, and we are proud of our excellent water quality record. To help ensure your water is safe, KUB's Water Quality Laboratory annually performs about 100,000 tests—many more than required. We check for over 150 contaminants to help protect our drinking water and report the test results to our customers each year.

**To learn more about KUB's water quality and water system, see [www.kub.org](http://www.kub.org). Look for our Water Quality Report and Drinking Water Guide under the Hot Topics index on the home page.**



**KUB** [www.kub.org](http://www.kub.org)  
**(865) 524-2911**

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## Protecting the Public Water System: Cross-Connection Control and Prevention

**You can help protect the quality of our community's drinking water by using a backflow device to prevent cross-connection contamination.**



*Backflow prevention device.*



## What is Cross-Connection?

### How is it prevented?

Cross-connections are connections in your plumbing that could allow contaminated water from your home or business to flow backward if there is a loss of water pressure and enter the drinking water. You may introduce a risk of a cross connection if you directly attach something that uses chemicals, an alternative water source, or anything that could potentially add contaminants to the drinking water system to your water pipes, fixtures, or even a hose.

Unprotected cross-connections introduce

potential public health risks. You can eliminate these risks by leaving at least a **two-inch air gap** between the water source and anything that contains dangerous or objectionable

materials, such as a bucket of soapy water or a container of fertilizer. If you cannot leave an air gap, a backflow device is required to prevent your water from flowing back into the public water supply.



## What is a backflow device?

A backflow device is a special valve that allows water to only flow in one direction; therefore, preventing water from flowing backward from your plumbing into the public water system if there is a loss in pressure. Under the State of Tennessee and KUB regulations, customers who may introduce the potential for contamination must install and maintain a backflow device. These devices must be tested annually to ensure they have not become worn or damaged and continue to work properly.

### Commercial backflow prevention device.



### Who can install a backflow device?

Depending on the type of water use, a licensed plumber, licensed fire line contractor, or state-certified backflow testing company may be able to install your device. Additional permits and inspections may be needed, so contact your local plumbing or building inspections office to determine their requirements.

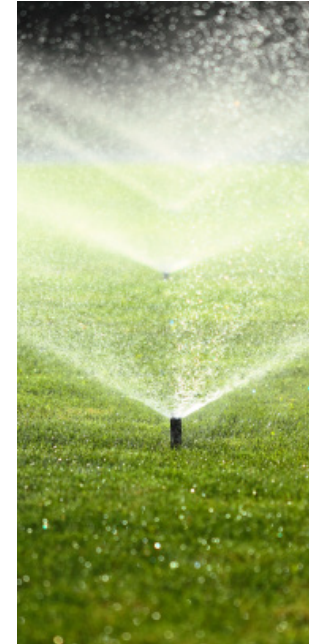


## Is it really important to prevent backflow?

Yes! Preventing backflow helps protect the health of water customers in our community. Water quality regulations require KUB to inspect properties to see if water use there may introduce a risk for contamination. If KUB finds a potential risk, customers must install, test, and maintain a backflow prevention device or risk possible termination of their water service.

### Who needs a backflow device?

For residential customers, cross-connections can occur where lawn irrigation systems, swimming pools, water treatment systems, or fire protection systems exist. Alternative water sources, like wells, springs, and harvested rainwater can also pose a risk if connected to your home's plumbing. Most businesses need a backflow device. Some examples of businesses that need backflow protection include but are not limited to: industries, restaurants, car washes, hospitals, dry cleaners, and salons.



## What are my responsibilities?

If your water use introduces the potential for a cross-connection, you must install a backflow device following manufacturer's instructions, local plumbing codes, and KUB specifications. For a copy of KUB's backflow Standards and Specifications, you can call 594-8333 or visit our website at [www.KUB.org](http://www.KUB.org). Look at the Cross-Connection Control Program link under the Hot Topics Index on the home page.

You own this device and are responsible for maintaining and repairing the device as needed. Backflow devices must be tested annually, after installation, and after any repairs. KUB provides a list of state certified and KUB approved backflow testing companies. Companies on this list will send paperwork showing passing test results to KUB after each test. This paperwork is required after every test to ensure there is no disruption in your water service. KUB must terminate water service to customers who do not install, properly maintain, and test their device.

### If I need a backflow device, what type am I required to install?

A reduced pressure zone (RPZ) backflow device is required on domestic water lines, irrigation water lines, and chemical fire suppression system lines. Fire suppression system lines that do not contain any chemical additives may have a double check (DC) backflow device installed. KUB accepts the installation of backflow devices approved by the Foundation for Cross-Connection Control and Hydraulic Research. A list of these devices can be found at <http://www.usc.edu/dept/fccchr/list.html> or you can call KUB to verify if your device is approved.

**Unprotected cross-connections introduce potential public health risks. KUB must terminate water service to properties without properly working backflow devices.**

Always call 811 to have buried utility lines marked for free before any digging project.

