

## Winterization Pointers for PVB & RP:

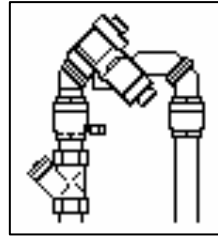
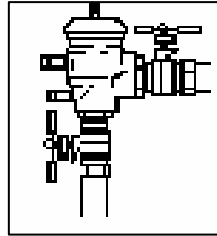
- Shut off water supply to sprinklers
- Close valves on each side of device
- **Do not blow air through device**
- Attach air compressor to blowout tee, turn 1<sup>st</sup> zone on using clock
- Apply air to zone until only air is coming out of sprinkler heads
- Repeat for each zone
- Open blowout pipe and attach compressor to blowout tee on supply side and blow out supply line from device back through blowout pipe (not applicable if you have a stop and waste valve for main shut off)
- Turn both valves on device and all test port valves to 45 degrees for winter

## Extra Steps for RP Only:

- Loosen all relief valve cover bolts until water drains out. Do not remove cover and leave loose for winter.
- Loosen #2 check cap and allow water to drain.

Important information for do-it-yourself irrigation system installers

# Home Irrigation Systems Installation and Winterization Guide for Backflow Prevention Devices



Revised 12-06-2005

**Don't let your irrigation system contaminate the water you drink!**

## What is a Backflow Preventer?

A mechanical device called a backflow preventer can prevent a serious water condition from harming you or your family.

A backflow preventer acts as a check valve to prevent used water from re-entering and potentially contaminating your drinking water.

If you have an irrigation system that is tied to your domestic water, you must have an approved backflow prevention device. This regulation does not apply if you are using water from an irrigation canal only.

## Home Irrigation Systems

Water contaminated by weed killers and/or fertilizers can be back-siphoned (backflow) from irrigation systems into your drinking water.

**To prevent backflow from happening and to protect public health, all irrigation systems, new or existing must be equipped with an approved backflow preventor.**

## Protecting Your Outside Hose

A small device called a hose bibb vacuum breaker can be installed on your outside faucets. These devices are inexpensive and give great protection against backflow from your hose.

## Pressure Losses in Backflow Preventers:

**Pressure Vacuum Breaker.** You will need to obtain the manufacturer's pressure loss information for the pressure vacuum breaker that you plan to use. As a general rule, pressure losses for pressure vacuum breakers range between 2 and 5 PSI, so using 5 PSI would be a fairly safe figure.

**Reduced Pressure Backflow Preventer.** You will need to obtain the manufacturer's pressure loss information for the reduced pressure backflow preventer that you plan to use. As a general rule pressure losses for reduced pressure backflow preventers range from 8 and 12 PSI. So using 12 PSI would be a fairly safe figure. Pressure losses for reduced pressure backflow preventers are very high compared to other backflow preventers due to the method they use to prevent backflow. The pressure drop is used to detect the backflow and redirect the water out of the bottom of the backflow preventer. Yes, it will spit water from time to time so make sure you provide somewhere for the water to go!

\*A list of certified testers and approved backflow preventers is available through the Water Utility upon request.

**For more information, contact:**

**Cross-Connection Control Coordinator  
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Water Department  
333 West Ave. Bldg A  
Grand Junction, CO 81505-7216  
(970) 256-4101  
brianb@gjcity.org**

**CITY OF  
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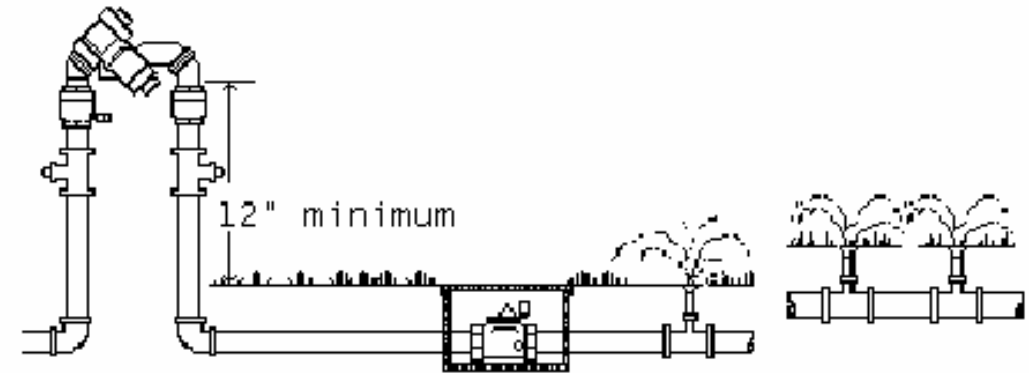
## PVB Pressure Vacuum Breaker Assembly

- Only one PVB is required to serve the whole system; control valves can be located downstream of (after) the PVB.
- PVBs must be installed a **minimum** of 1 foot (12") above the highest point of water they serve and a maximum of 5 feet high.
- PVBs must be tested by a state-certified Backflow Assembly Tester at the time of installation, annually, and when moved or repaired.
- No chemical or fertilizer may be introduced into an irrigation system equipped with PVBs.
- No pumps or back pressure permitted on downstream side of (after) a PVB.



## RP Reduced Pressure Backflow Assembly

- Only one RP is required to serve the whole system; control valves can be located downstream of the RP.
- RPs must be installed a minimum of one foot (12") above finished grade at device.
- RPs must be tested by a state-certified Backflow Assembly Tester at the time of installation, annually, and when moved or repaired.
- In an RP-equipped system, fertilizer and other agricultural chemicals may be introduced downstream of (after) the RP.



## Recommended Winterization Detail

## Requirements for Irrigation Systems

- The maximum design flow for residential systems on a 3/4" service and meter should be 15 GPM. Higher flows may damage the water meter.
- All devices must be tested when installed.
- Upon request the Water Utilities will inspect and do the first test on new installations.
- Annual testing of Pressure Vacuum Breaker Assemblies (PVB) and Reduced Pressure Backflow Assemblies (RP) will be required on all irrigation systems.
- All annual inspections and testing must be done by Colorado State Certified Cross-Connection Control testers; a list of approved testers is available from water suppliers.
- Only University of Southern California (USC) Foundation of Cross-Connection Control and Hydraulic Research approved devices are accepted for use in the Domestic Water System.
- When Yard Hydrants are installed, a dual check valve must be installed upstream.
- **No stop and waste valves are allowed in the system.**

