



# HOW TO KEEP YOUR WATER SAFE

WHAT YOU NEED TO NOW ABOUT CROSS-CONNECTION AND BACK-FLOW

# WHAT IS A CROSS-CONNECTION?

- A cross-connection is a point in a plumbing system where it is possible for a nonportable substance to come into contact with the potable drinking water supply, most cross-connection occur beyond the customer service connection within residential, commercial or industrial plumbing systems.

# WHAT IS CROSS-CONNECTION IN THE WATER SYSTEM?

- Is the physical connection between the potable water system and end-use where a potential hazard exists.

# POSSIBLE CROSS-CONNECTION RISKS

- Submerged hoses
- Lawn sprinkler systems
- Fire protection systems
- Swimming pools and hot tubs
- Water features and fountains
- Solar water heating systems
- Cooling towers
- Wells and auxiliary water supplies
- Boilers

# WHAT IS BACKFLOW?

Backflow is water flowing in the opposite of its intended direction.

Example: when the customers side has high pressure then the distribution side water can flow backwards

# WHAT IS A BACKFLOW PREVENTION ASSEMBLY?

- Backflow prevention assemblies are mechanical devices installed on water service lines to prevent the backflow of contaminated (unsafe to drink) water from entering the drinking water supply.

# REDUCED PRESSURE BACKFLOW ASSEMBLY (RP)

Common applications include swimming pools pump systems, chemical injections systems.

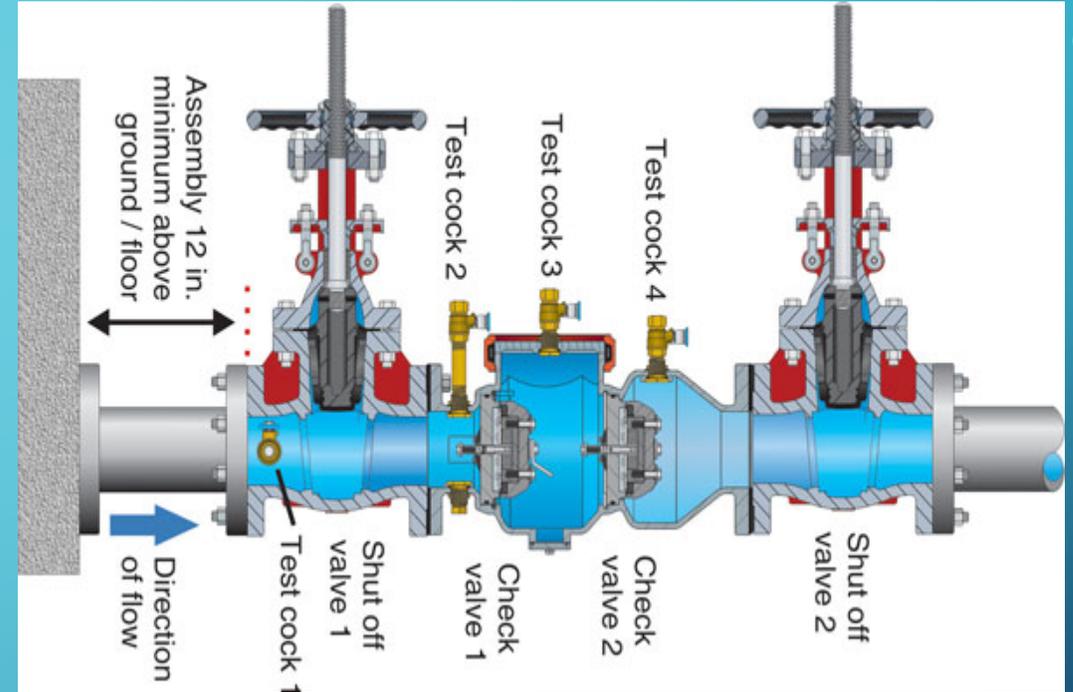
- Must be installed above ground
- Require annual testing
- Highest protection
- Must protect from freezing



# DOUBLE CHECK VALVE ASSEMBLY (DCVA)

The most common residential assembly. Common installation point include: Lawn irrigation and fire sprinkler system

- May be installed below ground
- Requires annual testing
- Protects against many but not all hazardous conditions



# PRESSURE VACUUM BREAKER (PVB)

Common applications include: Lawn irrigation systems

- Must be installed a minimum of 12" above the highest downstream piping
- More susceptible to freezing than the DVCA
- Requires annual testing
- Must protect from freezing



# HOSE BIB VACUUM BREAKER

Common applications include: hoses, wash tubs and utility sinks

- Easy to install
- No test requirements
- Limited backflow protection

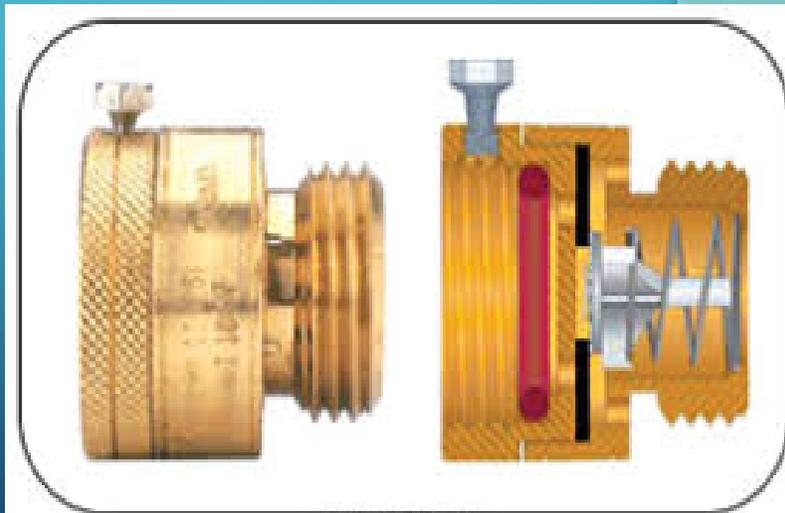


FIGURE B



# ATMOSPHERIC VACUUM BREAKER (AVB)

These devices are not recommended because they can't be tested to confirm they are working properly and are limited to size.



## DID YOU KNOW ?

- Back-flow assemblies are required to be tested annually by a certified backflow assembly tester.
- A list of certified backflow assembly testers is available on the Oregon Health Authority website at [www.public.health.Oregon.gov](http://www.public.health.Oregon.gov).
- A copy of all backflow assembly test reports are to be submitted to the city of Boardman upon completion.
- Maintain a cross-connection a control program is critical to protecting the safety and high quality of the potable water system. Cross connections exist and can result in serious contamination event.

# BE AWARE OF THERMAL EXPANSION

- You may need to protect your water heater from thermal expansion when you install a backflow prevention assembly at the water meter.
- Protection may be provided by the installation of a thermal expansion tank and a temperature relief valve ( commonly referred to as a T & P Valve.
- Contact a licensed plumber for assistance.

# HOW CAN I HELP PROTECT MY DRINKING WATER?

- Be aware of the possible hazards of cross connections and avoid them whenever possible.
- Protect all cross connections with appropriate backflow assemblies
- Prior to installation of the appropriate backflow prevention assembly, contact the city of Boardman Building Department at 541-481-9252 to obtain a plumbing permit.
- Have all backflow assemblies tested annually by a certified tester.
- Submit backflow assembly test reports to the city of Boardman.

