

Weiss Estates Water System
26 Weiss Estates Rd
Bandon Oregon 97411

March 1, 1996

ID# 4105581

Pursuant to Chapter 333 61-070, Division of the Oregon Administrative Rules, it is the responsibility of the Weiss Estates Water System to protect its drinking water by instituting and enforcing a cross-connection (Backflow) control program.

No connections will exist except in accordance with this document.

A cross connection is defined as any link or channel between the piping which carries drinking water and the piping or fixtures which carry nonpotable water or other substances. This means that a physical connection exists between the drinking water system and some source of contamination which can allow the contamination to flow into the water system.

DEFINITIONS:

A cross connection can allow backflow to occur. A backflow is a reversal of the normal direction of flow in piping. There are two types of backflow, backpressure backflow and backsiphonage backflow.

Backsiphonage is caused by negative pressure or reduced pressure in the water supply piping. If there should be a large reduction in water pressure due to a water break or other cause, a siphoning action could cause the contents of spas, pools, etc. to flow back through the piping or hose into the water system.

Backpressure backflow occurs when the potable water system is connected to a private well which operates at a higher pressure.

BACKFLOW DEVICES:

Cross connections must either be physically disconnected or an approved backflow prevention device must be installed to protect the water system. There are five types of approved devices:

1. Air gaps
2. Atmospheric vacuum breaker
3. Pressure vacuum breaker
4. Double check valve
5. Reduced pressure principle backflow preventer

The type of device selected for a particular installation depends on several factors. First the degree of hazard must be assessed. A high hazard facility is one in which a cross connection could be hazardous to health, such as a chrome plating or sewage treatment plant. A low hazard installation is one in which a cross connection would cause only an aesthetic problem such as a foul odor. Second, the plumbing arrangement must be considered. Third, the use of the device for protection at the meter or at an in-plant location must be considered.

AIR GAP

An air gap is a physical disconnection between the free flowing discharge end of a potable water pipeline and top of an open receiving vessel. The air gap must be at least two times the diameter of the supply pipe between the end of the pipe and the top of the receiving tank. This type of protection is acceptable for high hazard installations and is theoretically the most effective protection. However, an air gap is easily bypassed using a hose, and repumping of the water may be necessary. The air gap is selected for high hazard facilities or where a physical disconnection is needed. (See Attached)

VACUUM BREAKERS

There are two types of vacuum breakers, the atmospheric type and pressure type. The difference between the two devices is that the pressure vacuum breaker is spring loaded to assist the device in opening. Both devices open the pipeline to atmosphere in the event of backsiphonage conditions only. Neither device is approved for backpressure conditions. Their primary purpose is to protect the water system from cross connections due to submerged inlets, such as irrigation systems and tank applications. Shutoff valves may not be installed downstream of atmospheric devices but can be on pressure devices. The devices must be installed above the highest downstream outlet. (See Attached)

DOUBLE CHECK VALVE

A double check valve is only for low hazard applications but can be used for both backpressure and backsiphonage situations. The double check valve should be installed above grade and protected from freezing. (See Attached)

REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER

The reduced pressure principle backflow prevention (RP) device consists of two internally loaded check valves separated by a reduced pressure zone with a relief port to vent water to atmosphere. The reduced pressure device can be used for high hazard installations under both backpressure and backsiphonage conditions. (See Attached)

Under either backpressure or backsiphonage, and under normal conditions, the first check valve should prevent backflow. However, if the first check valve fails or becomes fouled and backflow into the reduced pressure zone occurs, the relief port vents the backflow to atmosphere. The reduce pressure zone port opens anytime that the pressure in the zone comes within 2 psi of the supply pressure

All properties in the Weiss Estates Water System that have spas, swimming pools, or wells, must install an approved backflow prevention assembly. All underground sprinkler systems must have an anti-siphon device.

INSTALLATION REQUIREMENTS:

The cost of installation and yearly inspection of the back flow valve is the responsibility

of the homeowner.

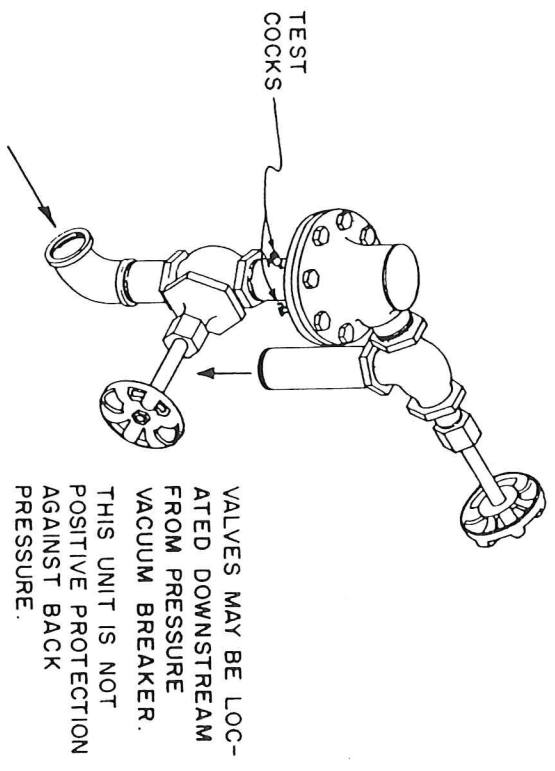
The homeowner will receive a yearly form to be filled out and returned to the water master regarding the inspection of the backflow valve.

NON-COMPLIANCE:

If the homeowner does not comply with the above requirement to install and maintain a yearly inspection, this could result in termination of water services to the property.

Figure 6-6

PRESSURE VACUUM BREAKER



VACUUM BREAKER CROSS SECTION (SHOWN OPEN TO ATMOSPHERE)

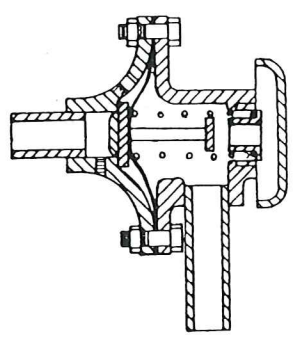
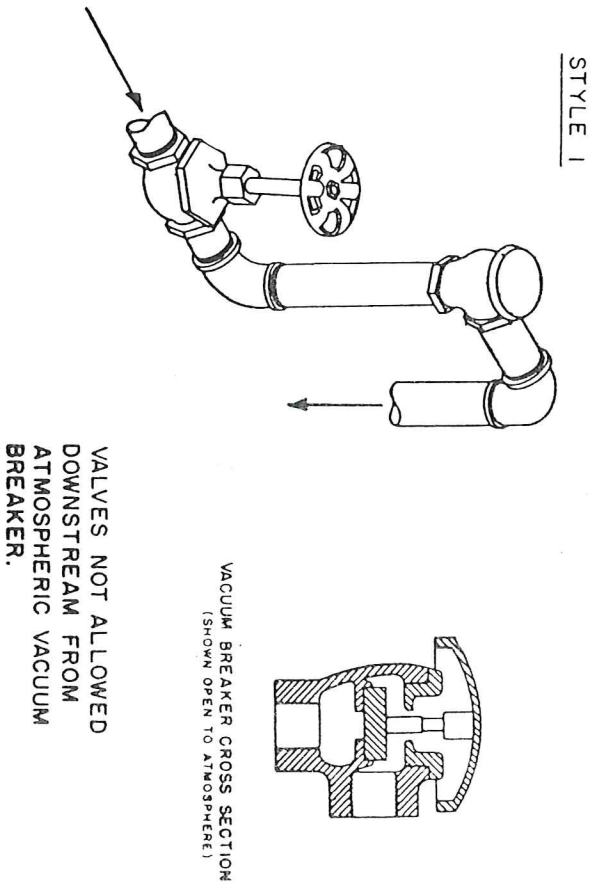
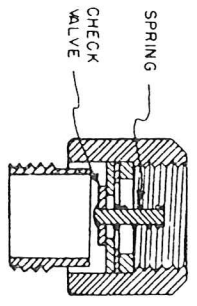
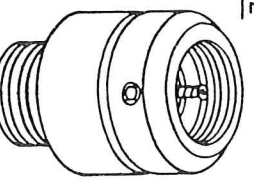


Figure 6-7

ATMOSPHERIC VACUUM BREAKER



VACUUM BREAKER CROSS SECTION (SHOWN OPEN TO ATMOSPHERE)

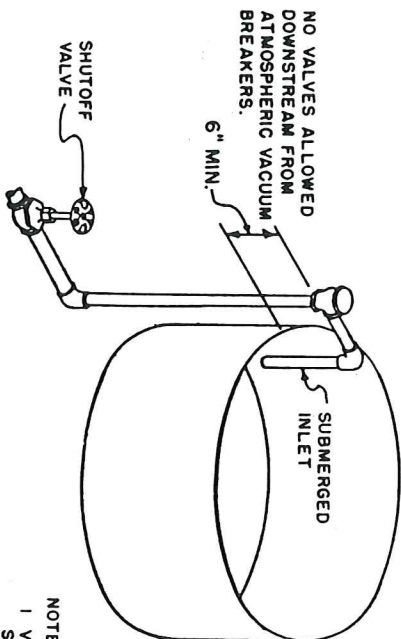


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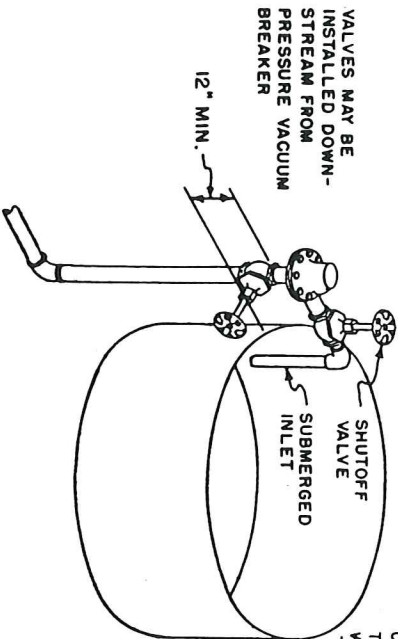
Figure 6-8

INSTALLATION OF VACUUM BREAKERS ON PROCESS TANKS (PROHIBITED IN SOME JURISDICTIONS)

ATMOSPHERIC VACUUM BREAKER



PRESSURE VACUUM BREAKER



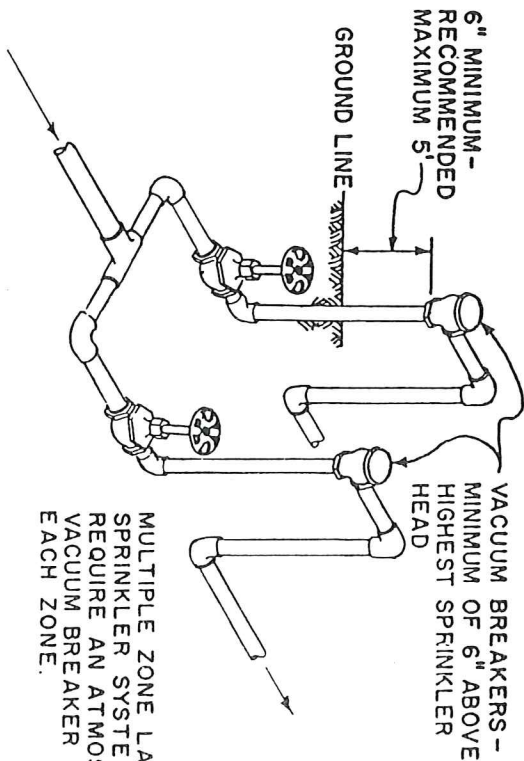
NOTES:

1. VACUUM BREAKERS SHOULD NOT BE USED IN DUSTY OR CORROSIVE ATMOSPHERE.
2. USE HOT WATER TYPE VACUUM BREAKERS ON HOT WATER LINES.
3. IF VACUUM BREAKERS ARE USED AS PROTECTION ON TANKS CONTAINING LIQUIDS WHICH ARE HAZARDOUS TO HEALTH, FURTHER PROTECTION SHOULD BE REQUIRED ON THE MAIN SERVICE LINE.

Figure 6-9

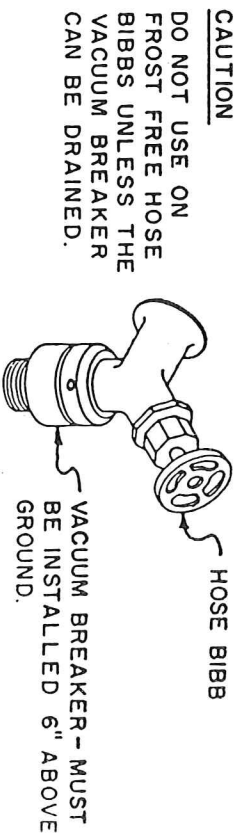
TYPICAL INSTALLATIONS OF ATMOSPHERIC VACUUM BREAKERS

SPRINKLER SYSTEM APPLICATION



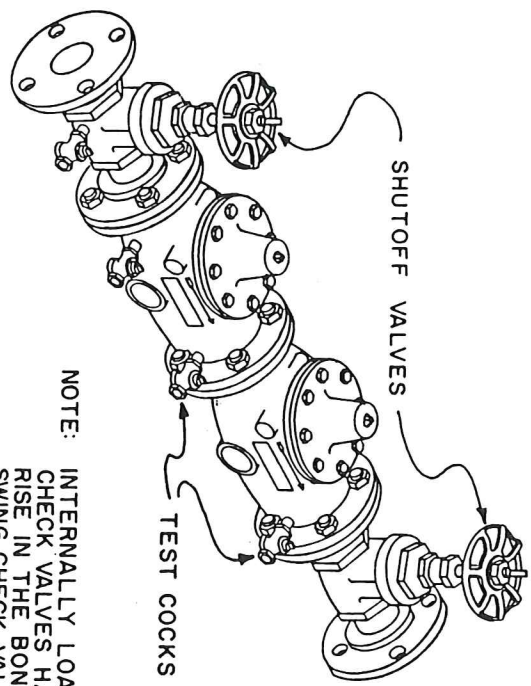
MULTIPLE ZONE LAWN SPRINKLER SYSTEMS REQUIRE AN ATMOSPHERIC VACUUM BREAKER ON EACH ZONE.

HOSE BIBB APPLICATION

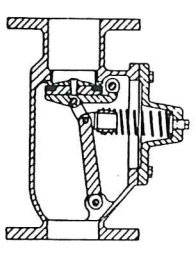


TYPICAL SPRING LOADED DOUBLE CHECK VALVE ASSEMBLY

Figure 6-10

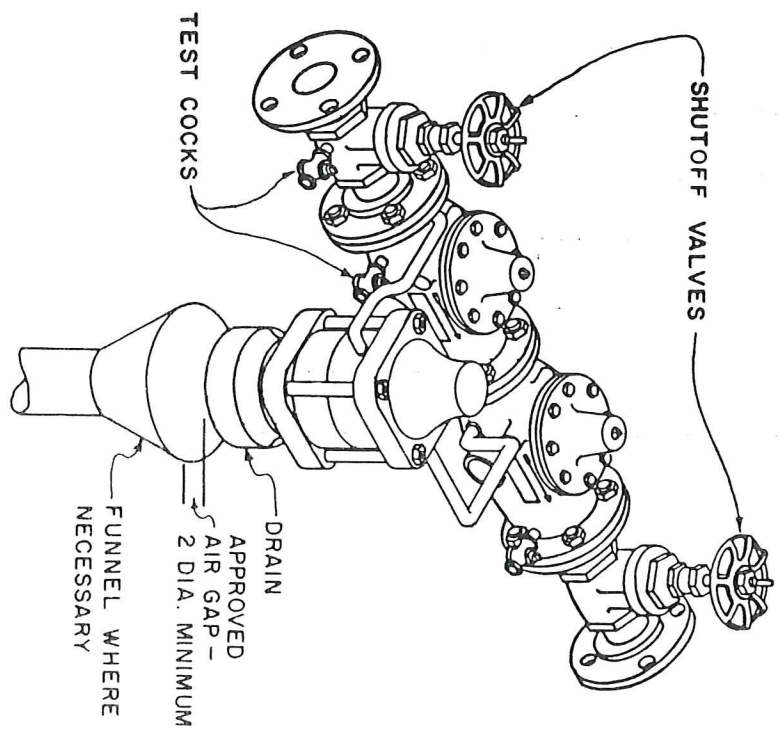


NOTE: INTERNALLY LOADED CHECK VALVES HAVE A RISE IN THE BONNET. SWINGING CHECK VALVES NORMALLY HAVE NO RISE IN THE BONNET.



TYPICAL REDUCED PRESSURE BACKFLOW PREVENTION DEVICE

Figure 6-11



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FORM A

SANITARY INSPECTION

DATE _____ TIME _____

NAME _____

ADDRESS _____ PHONE _____

PARTY CONTACTED _____ TITLE _____

TYPE OF BUSINESS _____

OTHER WATER SUPPLY _____ USE _____

FAULT

RECOMMENDED CORRECTION

INSPECTOR _____