



Lassen Pines Mutual Water Co., Inc

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Policy on Control of Backflow and Cross-Connections

A policy of the Lassen Pines Mutual Water Co., Inc. instituting a Cross-Connection Control Program to Protect the Mutual Water System.

Lassen Pines Mutual Water Co., Inc. is implementing this policy as follows:

SECTION I - PURPOSE

The purpose of this policy is to protect the mutual water system from contamination due to potential and actual cross-connections. This shall be accomplished by the establishment of a cross-connection control program as required by State regulations. This policy is adopted pursuant to Title 17, Section 7583-7605, inclusive, of the California Code of Regulations, entitled "Regulations Relating to Cross-Connections".

SECTION II - RESPONSIBILITY

The (Board of Directors of Lassen Pines Mutual Water Co., Inc.) shall be responsible for implementing and enforcing the cross-connection control program. An appropriate backflow prevention assembly shall be installed by and at the expense of the water user at each user connection where required to prevent backflow from the water user's premises to the mutual water system. It shall be the water user's responsibility to comply with Lassen Pines Mutual Water Co., Inc. requirements.

SECTION III - CROSS-CONNECTION PROTECTION REQUIREMENTS

The type of protection that shall be provided to prevent backflow into the mutual water supply system shall be commensurate with the degree of hazard, actual or potential, that exists on the water user's premises. Unprotected cross-connections with the mutual water supply are prohibited. The type of backflow prevention assembly that may be required (listed in decreasing level of protection) includes: Air-gap separation (AG), Reduced Pressure Principle Backflow Prevention Assembly (RP), and a Double Check Valve Assembly (DC). The water user may choose a higher level of protection than required by the water supplier. The minimum types of backflow protection required to protect the approved water supply at the user's water connection to premises with varying degrees of hazard are listed in Table 1 of Section 7604, Title 17. Situations which are not covered in Table 1 shall be evaluated on a case-by-case basis and the appropriate backflow protection shall be determined by the water supplier or health agency.

SECTION IV - BACKFLOW PREVENTION ASSEMBLIES

Only backflow prevention assemblies which have been approved by Lassen Pines Mutual Water Co., Inc. shall be acceptable for installation by a water user. A list of approved backflow prevention assemblies will be provided upon request to any affected customer. Backflow prevention assemblies shall be installed in a manner prescribed in Section 7603, Title 17. Location of the assemblies shall be as close as practical to the user's connection. Lassen Pines Mutual Water Co., Inc. shall have the final authority in determining the required location of a backflow prevention assembly.

Testing of backflow assemblies shall be conducted only by qualified testers and testing will be the responsibility of the water user. Backflow prevention assemblies must be tested at least annually and immediately after installation, relocation, or repair. More frequent testing may be required if deemed necessary by Lassen Pines Mutual Water Co., Inc. No assembly shall be placed back in service unless it is functioning as required. These assemblies shall be serviced, overhauled, or replaced whenever they are found to be defective and all costs of testing, repair, and maintenance shall be borne by the water user. Approval must be obtained from Lassen Pines Mutual Water Co., Inc. prior to removing, relocating, or replacing a backflow prevention assembly.

SECTION V – ADMINISTRATION

The cross-connection control program shall be administered by the (Board of Directors of Lassen Pines Mutual Water Co., Inc.). Lassen Pines Mutual Water Co., Inc. will establish and maintain a list of approved backflow prevention assemblies as well as a list of approved backflow prevention assembly testers. Lassen Pines Mutual Water Co., Inc. shall conduct necessary surveys of water user premises to evaluate the degree of potential health hazards. Lassen Pines Mutual Water Co., Inc. shall notify users when an assembly needs to be tested. The notice shall contain the date when the test must be completed.

SECTION VI – WATER SERVICE TERMINATION

When Lassen Pines Mutual Water Co., Inc. encounters water users that represent a clear and immediate hazard to the potable water supply that cannot be immediately abated, the procedure for terminating water service shall be instituted. Conditions or water users that create a basis for water service termination shall include, but are not limited to, the following:

1. Refusal to install or to test a backflow prevention assembly, or to repair or replace a faulty backflow prevention assembly.
2. Direct or indirect connection between the mutual water system and a sewer line.
3. Unprotected direct or indirect connection between the mutual water system and a system or equipment containing contaminants.
4. Unprotected direct or indirect connection between the mutual water system and an auxiliary water system.

For condition 1, Lassen Pines Mutual Water Co., Inc. will terminate service to a water user's premises after proper notification has been sent. If no action is taken within the allowed time period water service shall be terminated.

For conditions 2, 3, or 4, Lassen Pines Mutual Water Co., Inc. shall take the following steps:

1. Make reasonable effort to advise the water user of intent to terminate water service.
2. Terminate water service and lock service valve. The water service shall remain inactive until correction of violations has been approved by Lassen Pines Mutual Water Co., Inc.

SECTION VII – EFFECTIVE DATE

This policy shall supersede all previous cross-connection control policies and shall take effect thirty (30) days from the date of adoption.



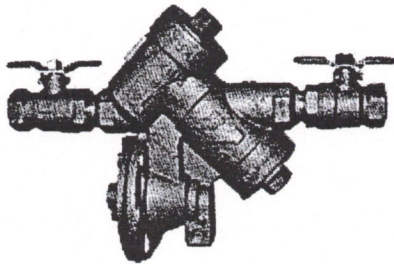
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Approved Devices for Cross Connection Control

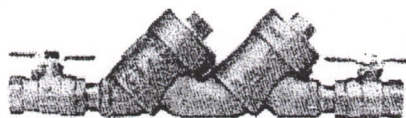
Reduced Pressure Valve
Wilkins XLTU975

well



Double Check Valve
Wilkins XLT2950

Sprinklers



Lassen Pines Mutual Water Company
Cross-Connection Control Program Survey

Frequently Asked Questions

What is a cross-connection?

Any physical or potential connection between a potable water supply and a hazardous material or one of questionable quality. There shall be no such connection without the installation of an approved backflow prevention assembly in accordance to the degree of hazard of the substance involved.

What is backflow?

Backflow is the undesirable reversal of flow of non-potable water or other substances through a cross-connection and into the piping of a public water system or consumer's potable water system. There are two types of backflow--back pressure and back siphonage.

What is back pressure backflow?

Back pressure backflow is backflow caused by a downstream pressure that is greater than the upstream or supply pressure in a public water system or consumer's potable water system. Back pressure (i.e., downstream pressure that is greater than the potable water supply pressure) can result from an increase in downstream pressure, a reduction in the potable water supply pressure, or a combination of both. Increases in downstream pressure can be created by pumps, temperature increases in boilers, etc. Reductions in potable water supply pressure occur whenever the amount of water being used exceeds that amount of water being supplied, such as during water line flushing, fire fighting, or breaks in water mains.

What is back siphonage?

Back siphonage is backflow caused by a negative pressure (i.e., a vacuum or partial vacuum) in a public water system or consumer's potable water system. The effect is similar to drinking water through a straw. Back siphonage can occur when there is a stoppage of water supply due to nearby fire fighting, a break in a water main, etc.

Why do water suppliers need to control cross-connections and protect their public water systems against backflow?

Backflow into a public water system can pollute or contaminate the potable water in that system (i.e., backflow into a public water system can make the water in that system unusable or unsafe to drink), and each water supplier has a responsibility to provide water that is usable and safe to drink under all foreseeable circumstances. Furthermore, consumers generally have absolute faith that water delivered to them through a public water system is always safe to drink. For these reasons, each water supplier must take reasonable precautions to protect its public water system against backflow.

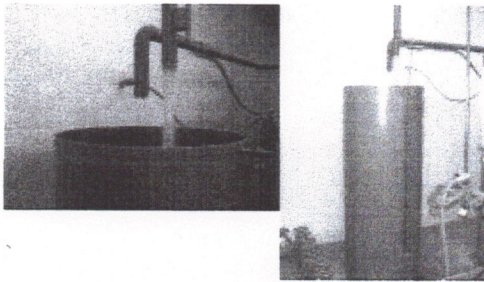
How can backflow be prevented?

By installing an approved backflow preventer. A backflow preventer is a means or mechanism to prevent backflow. The basic means of preventing backflow is an air gap which either eliminates a cross-connection or provides a barrier to backflow. The basic mechanism for preventing backflow is a mechanical backflow preventer, which provides a physical barrier to backflow. The principal types of mechanical backflow preventer are the reduced-pressure principle assembly, the pressure vacuum breaker assembly, and the double check valve assembly.

A LPMWC approved backflow preventer means one of the following:

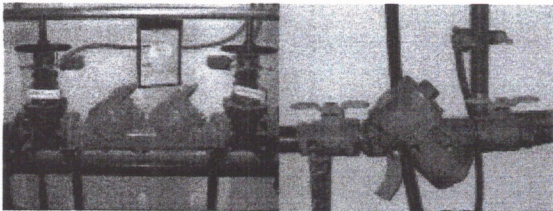
Approved air gap

An air gap is a vertical, physical separation between the end of a water supply outlet and the flood-level rim of a receiving vessel. This separation must be at least twice the diameter of the water supply outlet and never less than one inch. An air gap is considered the maximum protection available against back pressure backflow or back siphonage, but is not always practical and can easily be bypassed.



Double check backflow assembly (DC)

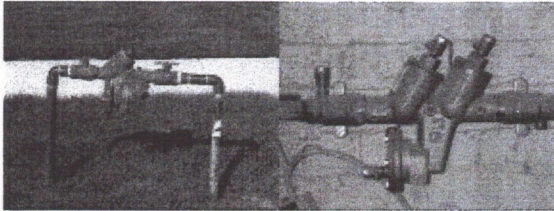
A DC is a testable mechanical backflow preventer that consists of two independently acting, spring-loaded check valves. It includes shutoff valves at each end of the assembly and is equipped with test cocks (required to be tested annually by a certified tester against back pressure backflow and back siphonage, but should be used only on non-health hazards).



Reduced pressure principle backflow assembly (RP)

An RP is a testable mechanical backflow preventer that consists of two independently acting, spring-loaded check valves with a hydraulically operating, mechanically independent, spring-loaded pressure differential relief valve between the check valves and below the first check valve. It includes shutoff valves at each end of the assembly and is equipped with test cocks (required to be tested

annually by a certified tester. An RP is effective against back pressure backflow and back siphonage, and may be used on health or non-health hazards.



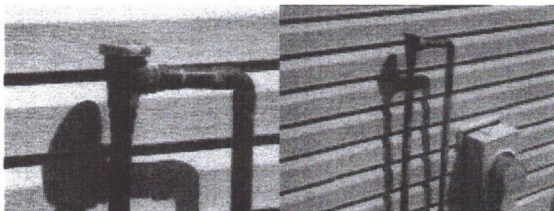
Pressure vacuum breaker assembly (PVB)

A PVB is a testable mechanical backflow preventer that consists of an independently acting, spring-loaded check valve and an independently acting, spring-loaded air inlet valve on the discharge side of the check valve. It includes shutoff valves at each end of the assembly and is equipped with test cocks. A PVB may be used to isolate health or non-health hazards, and is to be installed 12-inches above highest downstream water discharge. It is effective against back siphonage only and is most commonly used on lawn sprinkler systems.



Atmospheric Vacuum Breaker (AVB)

An AVB is a non-testable mechanical backflow preventer with a gravity opening poppet air opening, designed to admit atmosphere into the downstream sides of the unit under a no flow condition to prevent back siphonage. It must be installed 6-inches above highest downstream water discharge. There shall be no valves or reduction of pipe size on its downstream side. (Note: This device is installed on certain equipment that uses potable water by the manufacturer or contracted installer. Examples of this equipment are dishwashers, soap dispensers, faucets and deep sinks, etc.) It is up to the LPMWC that has jurisdiction to determine which type of backflow protection is required based on the degree of hazard that the property represents to the potable water supply.



Why do backflow preventers have to be tested at least once annually?

Mechanical backflow preventers have internal seals, springs, and moving parts that are subject to fouling, wear, or fatigue. Also, mechanical backflow preventers and air gaps can be bypassed. Therefore, all backflow preventers have to be tested periodically to ensure that they are functioning properly. A visual check of air gaps is sufficient, but mechanical backflow preventers have to be

tested by a Certified Backflow Prevention Assembly Tester, with properly calibrated gauge equipment.

How do I know if I need a backflow prevention assembly?

A member of the cross-connection control staff will send a questionnaire and/or visit your property to perform a premise survey for backflow requirements. You will receive a letter providing you with the guidelines and what action you need to take to ensure compliance with the LPMWC requirements.

What is potable water?

Water which is safe for human consumption, free from harmful or objectionable materials as described by the State Water Resources Control Board.



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Lassen Pines Mutual Water Co., Inc. Customers

Title 17, Section 7584 of the California Code of regulations requires Lassen Pines Mutual Water Co., Inc. to protect the mutual water supply from contamination by implementing a cross-connection control program. In order to update our records and ensure that we are aware of all potential cross-connections, we are conducting a survey of our customers to help identify premises where cross-connections may exist.

While a cross-connection program cannot ensure that our water system will never encounter a bacteriological contamination event, it will significantly reduce the possibility of such a contamination happening in the future. Your participation in this survey will have a direct and positive impact on the quality of water provided to you by Lassen Pines Mutual Water Co., Inc. Thank you for your time in participating in this survey.

Please fill out the survey below and mail it back in the envelope provided.

CROSS – CONNECTION SURVEY

Customer Name: _____

Address: _____

Phone Number: _____

Are any of the following on your property?

	<u>Yes</u>	<u>No</u>
1. Pond	_____	_____
2. Water Trough	_____	_____
3. Swimming Pool	_____	_____
4. Irrigation System	_____	_____
5. Fire Protection Sprinkler System	_____	_____
6. Well	_____	_____
7. Spring	_____	_____
8. Water Storage Tank	_____	_____
9. Water Boiler	_____	_____
10. Gardens	_____	_____