**Chester Public Utility District**

251 Chester Airport Rd.

Chester, Ca 96020

**CROSS-CONNECTION CONTROL PROGRAM**

Air Gap Backflow Prevention Double Check Valve Assembly



Reduced Pressure Principal Device

TABLE OF CONTENTS

|  |  |  |
| --- | --- | --- |
| 1.0 | Purpose | 3 |
| 2.0 | Scope | 3 |
| 3.0 | Definitions | 3 |
| 4.0 | Administration of Program | 6 |
| 5.0 | Surveys | 7 |
| 6.0 | Installation of Backflow Assemblies | 8 |
| 7.0 | Testing | 8 |
| 8.0 | Termination of Service | 9 |
| 9.0 | Reporting | 10 |
| 10.0 | Training of Personnel | 11 |
| 11.0 | Maintenance of Records | 11 |
| 12.0 | Selection and Installation of approved Assemblies | 11 |
| 13.0 | Employee and Contractor Policy | 17 |
| 14.0 | FAQ | 19 |

Attachments & Forms

**1.0 PURPOSE**

The purpose of the Cross-Connection Control Program implemented by Chester Public Utility District (CPUD) is to reduce the hazard of contamination of the public water system by identifying actual and potential cross-connections and taking action to protect the system from these hazards. This is accomplished by installing backflow prevention assemblies where hazards are identified.

**2.0 SCOPE**

The scope of the Cross-Connection Control Program includes all of the elements necessary to ensure compliance with the California Code of Regulations, Title 17, and the State Water Resources Control Board Sections §7583 through §7605. The scope of the program encompasses the administration of employee training to meet state requirements, the surveying of residential and commercial properties for potential cross-connection hazards, designation of appropriate backflow prevention, testing of devices, maintenance of records, and overall program administration.

**3.0 DEFINITIONS**

The following definitions describe those terms and phrases that are pertinent to the vari­ous elements of a cross-connection control program:

3.1 **Air-Gap Separation**

The term “air-gap separation” shall mean a physical break between the free-flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel. An “approved air-gap separation” shall be at least double the diameter of the supply pipe measured vertically above the overflow rim of the vessel, in no case less than 1 inch.

3.2 **Approved Backflow Prevention Assembly**

Must include isolation valves and test cocks to facilitate in-line testing and repair. The assembly must appear on a current approval list from the American Society of Sanitary Engineering (A.S.S.E.) or on an approval list from the Foundation of Cross-Connection Control and Hydraulic Research at the University of Southern California (FCCC & HR @ USC).

<http://www.asse-plumbing.org/> <https://fccchr.usc.edu/list.html>

3.3 **Approved Water Supply**

The term “approved water supply” means any local water supply whose potability is regulated by a State or Local health agency.

3.4 **Auxiliary Water Supply**

The term “auxiliary water supply” means any water supply on or available to the premises other than the approved water supply as delivered by the water pur­veyor to the service connection.

3.5 **AWWA Standard**

The term “AWWA Standard” means an official standard developed and approved by the American Water Works Association (AWWA).

3.6 **Backflow**

The term “backflow” shall mean a flow condition, caused by a differential in pressure that causes the flow of water or other liquid, gases, mixtures or substances into the distributing pipes of a potable supply of water from any source or sources other than an approved water supply source. Back siphonage is one cause of backflow. Back pressure is the other cause.

3.7 **Confined Space**

Means a space that:

1. Is large enough and so configured that an employee can bodily enter and perform assigned work; and
2. Has limited or restricted means for entry or exit (for example, tanks vessels, silos, storage bins, hoppers, vaults and pits are spaces that may have limited means of entry.); and
3. Is not designed for continuous employee occupancy.

This definition is given because backflow assemblies are often found in these types of spaces.

3.8 **Consumer of Record**

The consumer of record is the person, business, or owners that have applied for service from CPUD. This may be, but is not limited to, the tenant, landlord, resi­dent, business, or property owner.

* 1. **Contamination**

The term “contamination” means a degradation of the quality of the potable water by any foreign substance which creates a hazard to the public health, or which may impair the usefulness or quality of the water.

3.10 **Pollution**

The term “pollution” shall mean an impairment of the quality of the water to a degree which does not create a hazard to the public health, but, which does adversely and unreasonably affect the aesthetic qualities of such waters for domestic use.

3.11 **Cross-Connection**

The term “cross-connection” as used in this document means any unprotected actual or potential connection between a potable water system used to supply water for drinking purposes and any source or system containing unapproved water or a substance that is not or cannot be approved as safe, wholesome, and potable.

By-pass arrangements, jumper connections, removable sections, swivel or changeover devices, or other devices through which backflow could occur, shall be considered cross-connections.

3.12 **Double Check Valve Assembly**

The term “double check valve assembly” means an assembly of at least two independently acting check valves including tightly closing, resilient seated, shut­off valves on each side of the check valve assembly and test cocks available for testing the water tightness of each check valve.

3.13 **Health Agency**

The term “health agency” means the State Water Resources Control Board-Division of Drinking Water, or the local health agency with respect to a small water system.

3.14 **Local Health Agency**

The term “local health agency” means the County of Mono, Department of Environmental Health Services.

3.15 **Person**

The term “person” means an individual, corporation, company, association, part­nership, municipality, public utility, or other public body or institution.

3.16 **Premises**

The term “premises” means any and all areas on a water user’s property which are served or have the potential to be served by the public water system.

3.17 **Public Water System**

The term “public water system” means a system for the provision of piped water to the public for human consumption that has five or more service connections or regularly serves an average of 25 individuals daily at least 60 days out of the year.

3.18 **Reclaimed Water**

The term “reclaimed water” means a wastewater which, as a result of treatment, is suitable for uses other than direct potable use.

3.19 **Reduced Pressure Principle Backflow Prevention Assembly**

The term “reduced pressure principle backflow prevention assembly” means an assembly incorporating two or more check valves and an automatically operating differential relief valve located between the two checks, a tightly closing, resilient seated, shut-off valve on each side of the check valve assembly, and equipped with the necessary test cocks for testing.

3.20 **Service Connection**

The term “service connection” refers to the point of connection of a user’s piping to the water supplier’s facilities.

3.21 **Water Supplier**

The term “water supplier” means the person who owns or operates the approved water supply system.

3.22 **Water User**

The term “water user” means any person obtaining water from an approved water supply system.

**4.0 ADMINISTRATION OF PROGRAM**

4.1 **Authority**

**Chester Public Utility District (CPUD)**, in accordance with the California Code of Regulations Title 17, §§7584-7605, is instituting a policy of backflow prevention/protection of the Water System, and hereby adopts this Cross-Connection Control Program that supersedes all other backflow or Cross-Connection Control Programs.

4.2 Authorized Cross-Connection Control (CCCP) Person(s)

The authorized CCCP person is the person sufficiently trained and designated by the Board of Directors of MMMWC to administer the program in accordance with the written policies and procedures of CPUD and of the Cross-Connection Control Program.

4.3 New Construction

Backflow prevention devices may be required on all new construction sites

and all new connections to the Water System at the discretion of the Mono County Building Department Code Enforcement or at the discretion of the

MMMWC. **The owner of the parcel will be responsible for the costs associated with acquiring, installing, initial testing, maintaining, and annual certification of required backflow prevention devices.**

When the new service line is installed it shall be locked off and no service shall be provided until installation of the backflow prevention assembly is complete. Upon installation of the backflow prevention assembly, CPUD, or assigned party, shall inspect the installation. Upon successful inspection and testing, water service may be provided.

4.4 Existing Consumers

When it is determined by the survey of the authorized CCCP person that an actual or potential cross-connection or backflow condition is present in an exist­ing facility, the installation of an approved backflow prevention assembly com­mensurate with the actual or potential hazard shall be required.

A series of four letters to the consumer of record shall begin outlining the results of the survey, and the actions needed to comply with the CPUD CCCP. The first letter shall provide information as to the type of backflow prevention assembly needed, a list of approved assemblies, a schematic of the installation, and a list of companies that do this type of work in the area. The remaining three letters shall be reminders sequentially leading up to possible termination of service for non-compliance.

Should an existing backflow assembly be in place that does not meet CPUD installation requirements, or is not commensurate with the degree of hazard found on site, the device shall be repaired or upgraded as required by CPUD.

**5.0 SURVEYS**

5.1 Identification of Survey Candidates

CPUD has determined specific types of hazards that may pose an actual or potential backflow hazard to the public water supply. These hazards are identified from lists of activities at residences and commercial connections where cross-connections are likely to be found, as provided by the State of California, and the University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research. From these lists, specific consumers in the CPUD service area shall be identified by consumer applications for service, directories, mailing lists, associations, & business licenses.

5.2 Survey

When possible, a request to survey the premises shall be made and a date and time agreed upon. Should the request to survey be denied, letters shall be sent directing installation of the appropriate backflow assembly based on knowledge of the specific premises or business activity. Due to the resources that may be necessary to implement this required program, CPUD may utilize the services of a professional Cross-Connection Specialist or Company to accomplish portions of, or the entire Cross-Connection Control Plan and Surveys.

During the survey many factors are considered to determine if the consumer is or could be a potential hazard to the public water supply.

These include:

1. Sources of water on site.
2. Types of water on site.
3. Uses of water on site.
4. Types of water using equipment.
5. Condition of water using equipment.
6. Complexity of plumbing on site, and the potential for alterations of that system.
7. Storage and use of hazardous materials on site.

All the factors found and recorded during the survey shall be considered in the determination of backflow prevention requirements.

Each consumer requiring a backflow prevention assembly shall be notified by let­ter. The consumer shall be informed of their responsibility to provide backflow protection and the type of backflow assembly required in accordance with Title 17 of the California Administrative Code.

Should it be determined that the consumer does not require a backflow preven­tion device, they shall be notified in person that no such assembly is required at this time.

**6.0 INSTALLATION OF BACKFLOW ASSEMBLIES**

Backflow prevention assemblies shall be installed in accordance with section 7603, Title 17 of the California Administrative Code and CPUD’s approved policies, any deviation from these codes and policies require CPUD’s written approval.

6.1 Air-Gap Separation (AG)

The Air-gap separation shall be located as close as practical to the user's con­nection and all piping between the user's connection and the receiving tank shall be entirely visible unless otherwise approved by CPUD.

6.2 Double Check Valve Assembly (DC)

A double check valve assembly, if approval is given by CPUD for installation, a double check valve assembly shall be located as close as practical to the user's connection and shall be installed above grade, if possible, and in a manner where it is readily accessible for testing and maintenance unless otherwise approved by CPUD.

6.3 Reduced Pressure Principle Backflow Prevention Assembly (RPP)

A Reduced pressure principal backflow prevention assembly shall be located directly behind the meter or curb stop and shall be installed a minimum of twelve inches (12") above grade and not more than thirty-six inches (36") above grade measured from the bottom of the device and with a minimum of twelve inches (12") side clearance in a manner where the assembly is readily accessible for testing and maintenance unless otherwise approved by the CPUD.

In no case shall a cut, tee, or tap be made between the user's meter or curb stop and the backflow prevention assembly.

Any deviation of installation from the codes and policies shall have approval of CPUD prior to installation.

All backflow prevention assembly installations shall be inspected by CPUD to ensure compliance with the requirements of Siskiyou County Building code, SWRCB-DDW, and CPUD.

**7.0 TESTING**

7.1 Frequency of Testing

All backflow prevention assemblies shall be tested at least annually, and immedi­ately after installation, relocation, or repair, by an AWWA or ABA certified test person in accordance with Title 17 of the California Administrative Code.

7.2 Responsibility for Testing

As per Title 17 of the California Administrative Code the consumer of record is responsible for the installation, testing, and maintenance of the backflow pre­vention assembly. CPUD may assume the role of installation and testing of devices. And upon and through the notification process may charge consumers to be reimbursed for said services.

7.3 Testing

If the consumer of record:

1. Does not give permission for a shut down, or
2. Denies access to the device, or if the
3. Device is in an unsafe location (i.e. confined space)

then letters shall be sent requesting the consumer contract a certified tester, at their own expense, and direct the results be sent to CPUD.

7.4 Failure of Backflow Assembly

Should an existing assembly fail the annual test a series of letters shall be sent directing the consumer to contract an approved qualified repair person and have the assembly repaired and tested. The passing results are to be directed to CPUD to clear the account and avoid termination of service.

7.5 Enclosures

CPUD shall supply each affected consumer of record with a list of persons on file with CPUD and certified by AWWA or ABA to test backflow prevention assemblies, and the list of State of California approved backflow prevention assemblies.

7.6 Procedures for Testing and Inspection

CPUD has accepted the certification and procedures of the AWWA. These pro­cedures have been adopted from the USC Foundation for Cross-Connection Control and Hydraulic Research, “Manual of Cross Connection Control” Tenth Edition.

<https://fccchr.usc.edu/tools.html#TenthEdition>

**8.0 TERMINATION OF SERVICE**

8.1 Basis for Termination

When CPUD encounters a water use that represents a clear and immediate hazard to the potable water supply that cannot be immediately abated, CPUD shall initiate the procedure for discontinuing water service.

Conditions or water uses that create a basis for water termination shall include, but are not limited to, the following items:

1. Refusal to install a required backflow prevention assembly.
2. Refusal to test a backflow prevention assembly.
3. Refusal to repair a faulty backflow prevention assembly.
4. Refusal to upgrade a backflow prevention assembly to the necessary level of protection.
5. A situation which presents an immediate health hazard to the public water system.

8.2 Service Termination Procedures

For condition 1, 2, 3, or 4, outlined above, CPUD shall terminate service to a consumer's premises after four (4) written notices have been sent specifying the corrective action needed and the time period in which it must be done.

The first notice is an information letter which outlines the requirements and a specific period of time to comply (30 days). If no response is received in the specified time period, a second letter will be sent.

The second notice gives a 15 day period to comply. Also, the consumer is noti­fied that water service will be terminated if no response is received after a specific period of time and that the Siskiyou County Health Department, and the SWRCB-Division of Drinking Water will be notified.

The third (or final) notice gives the consumer an additional 10 days to comply and restates the consequences of not complying.

The fourth (or termination) notice gives the consumer another 10 days to comply and sets the actual date that service will be terminated.

For condition “5” Callahan Water District shall take the following steps:

1. Make a reasonable effort to advise the water user of intent to termi­nate water service.
2. Attempt to contact the responsible party listed on the account by tele­phone and follow-up letter and also notify the Siskiyou County Health Department, and the SWRCB-Division of Drinking Water.
3. Terminate water supply and lock service valve. The water service will remain inactive until corrective action is taken or a backflow preven­tion assembly is installed and tested.

**9.0 REPORTING**

All reporting required by the CCCP at CPUD shall be the responsibility of the Authorized Cross-Connection Control (CCCP) Person(s) . This includes any reports to local, state, and federal regulatory or health agencies such as:

1. Annual Report to the SWRCB-Division of Drinking Water.
2. Copies of all Termination Letters to the Siskiyou County Health Department, and the SWRCB-Division of Drinking Water.

**10.0 TRAINING OF PERSONNEL**

10.1 Cross-Connection Control Program Manager

The Authorized Cross-Connection Control (CCCP) Person(s) of CPUD shall be the Cross-Connection Control Program Manager for the District. He or She shall have completed a minimum of 40 hours in house training in the field of cross- connection control. This training shall consist of a combination of office and field training so that he or she can better assist consumers and outside agencies.

10.2 Cross-Connection Inspector

The CPUD employee(s) or independent contractor(s) assigned to the inspection and testing of assemblies and the survey of consumers to determine if backflow prevention is warranted shall have received training adequate to competently inspect cross-connection hazards and have a general knowledge of the Cross-Connection Control Specialist responsibilities. For any survey(s) or inspections that require a licensed Cross-Connection Control Specialist, CPUD will use the services of a contractor with that specialized license.

**11.0 MAINTENANCE OF RECORDS**

11.1 Assembly Records

Records of assembly type, size, manufacturer, installation date, location, account number, consumer of record, and repair history shall be kept electronically.

11.2 Testing Records

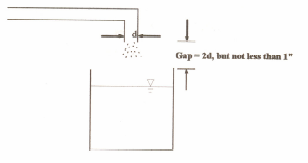
Test results on all assemblies shall be kept both electronically and in hard copy form.

11.3 Life of Records

Assembly records shall be kept for the life of the assembly. Test results shall be kept for the mandatory three (3) years (as per Title 17), plus 2 years per CPUD policy.

**12.0 Selection and Installation of Approved Backflow Prevention Assemblies**

**Air Gap (AG)**



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 backpressure backflow or back-siphonage but is not always practical and can easily be bypassed.

An air gap is measured vertically from the lowest end of the supply pipe to the flood level rim or highest possible water level of the fixture or tank into which it discharges. In general, the separation must be twice the supply pipe inside diameter, but never less than one inch. The close proximity of walls or obstructions will necessitate the use of a larger air gap. A larger air gap will also be required if foaming materials are added to the reservoir so that foam does not back up into the supply pipe.

Advantages:

* Very safe and reliable if properly installed and maintained
* Provide maximum protection due to physical separation of potable and

non-potable water

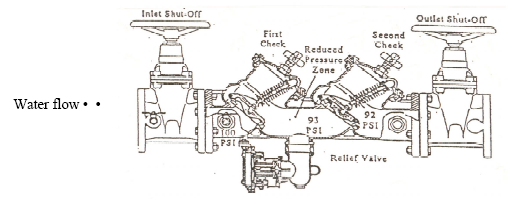
* Easy to inspect

Limitations:

* Easy to bypass or defeat with funnels or hoses
* Supply pressure is lost, requiring reservoir and additional pumping equipment
* Undesirable splashing may occur
* Incoming water may be exposed to airborne contaminants or lose residual

chlorine

**Reduced Pressure Principle Backflow Preventer (RP)**



A Reduced Pressure Backflow Prevention Assembly may be used to isolate health hazards in place of an Air Gap. It consists of two independently acting check valves, an automatically operated pressure differential relief valve located between the two check valves, and watertight valves located at each end of the assembly, together with four properly located test cocks for testing the operation of the device. This assembly will indicate leakage through one or both check valves or the relief valve by the discharge of water from the relief valve port. During normal operation, both check valves remain closed until there is a demand for water. The differential relief valve remains closed because the inlet pressure is higher than the pressure in the intermediate zone. The second check remains open as water flows through the device. In opening and closing the check valves, the water pressure may be reduced by 4 to 20 psi depending upon the assembly design.

During a backpressure condition, pressure increases downstream of the assembly and both check valves close to prevent backflow. If the second check valve is prevented from closing tightly, leakage back into the zone between the check valves will increase the pressure in the zone and cause the relief valve to open. Water in the zone will then be discharged.

During back-siphonage, the supply pressure drops and the relief valve opens automatically and drains enough water from the zone to maintain pressure in the zone lower than the supply pressure. The second check valve closes to prevent downstream water from draining through the relief valve.

Advantages:

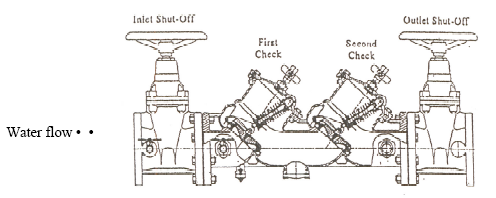
* Protects against both backpressure and back-siphonage
* Can be used under constant pressure
* An RP is effective against backpressure backflow and back-siphonage
* Malfunctioning is easily indicated by discharge of water from the relief valve.

Limitations:

- Pressure loss of 6-12 psi across the assembly and must be installed above

grade.

**Double Check Valve Assembly (DCVA)**



A Dual Check Valve is effective against backpressure backflow and back-siphonage but should be used to isolate only non-health hazards.

A Double Check Valve Assembly consists of two single independently acting check valves with watertight valves located at each end of the assembly, and four properly located test cocks for testing the water tightness of each check valve. During normal operation, both check valves remain closed until there is a demand for water. In the event of backflow, both check valves close preventing reversal of flow.

Two standard plumbing check valves in series may not be used in place of the double check valve assembly due to the necessity for testing. The Double Check Valve Assembly is an integral assembly designed specifically for backflow prevention.

Advantages:

- Protect against backflow due to both backpressure and back-siphonage

- May be used under continuous pressure

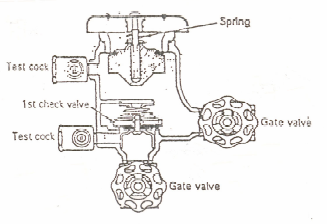
- Little pressure loss occurs across the device

Limitations:

- No external indication of failure

* May only be used in low hazard situations

**Pressure Vacuum Breaker (PVB)**



A PVB may be used to isolate high or low hazards but is effective against back-siphonage only. This assembly is intended to be used under constant pressure conditions.

It is a mechanical backflow preventer that consists of an independently acting, spring-loaded check valve and an independently acting, 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.

The pressure vacuum breaker uses loading to actuate the atmospheric vent only when back-siphonage occurs or when the line is depressurized. Two gate valves, test cocks and an additional check are also added. This assembly differs from the atmospheric vacuum breaker in that a spring has been added to the check valve.

Advantages:

* Sometimes less expensive than alternatives

Limitations:

- Does not protect against backflow due to backpressure.

* May only be used in non-health or low hazard situations
* Cannot be installed if chemicals are used.

**Spill-Resistant Vacuum Breaker (SVB)**



Spill-Resistant Vacuum Breakers are a style of pressure vacuum breaker that does not discharge water when water starts to flow through the valve. SVB’s are specifically designed for installation indoors. A floor drain or other drainage means is not required for installation. SVB’s also have test cocks and require testing as a pressure vacuum breaker.

Designed for installation on indoor and outdoor point of use applications to protect against back-siphonage of contaminated water into the potable water supply. During start-up and operation a separate diaphragm seals the air inlet from the water supply preventing spillage. The assembly is designed for use under constant pressure and provides protection where a potential health hazard exists.

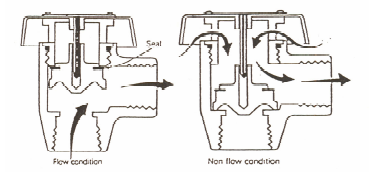
Advantages:

* Does protect against back-siphonage.
* Can be used in non-health and low hazard situations.
* Can be installed if chemicals are used.
* Designed for indoor installation.

Limitations:

- Designed for use in on-site applications not for protection of the public water supply.

**Atmospheric Vacuum Breaker (APV)**



The device usually consists of a float which is free to travel on a shaft and seal in the uppermost position against atmosphere with a disc. Water flow lifts the float, which then causes the disc to seal. When the water supply pressure drops below atmospheric pressure (14.7 psi) the disc will drop down venting the unit to atmosphere and opening the downstream piping to atmospheric pressure, thus preventing back-siphonage. The device is designed to be installed downstream of the last valve in the system and to be operated under pressure for no more than twelve hours in any twenty-four-hour period.

Advantages:

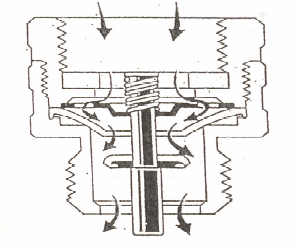
* Inexpensive

Limitations:

- Does not protect against backflow due to backpressure.

* May only be used in non-health or low hazard situations
* It is a single fixture device

**Hose Bibb Vacuum Breaker (Isolation)**



Hose bibb Vacuum Breakers are not approved for health or high hazard situations but provide an inexpensive means of isolating potential back-siphonage situation caused by connections of hoses to outside spigots.

The device consists of a spring-loaded check valve that seals against an atmospheric outlet when water is flowing. When the water supply is turned off, the device vents to atmosphere, thus protecting against back-siphonage.

These assemblies are suitable only for isolation in situations where outside spigots may be used to connect hoses. Hoses pose both non-health and health threats. Health threats are introduced when water pressure is used in combination with a hose to apply fertilizers or herbicides. Hoses may also be unintentionally submerged in toxic or microbially contaminated liquids that can back-siphon under the right conditions.

Advantages:

* Inexpensive method of isolating hoses
* Isolation of hose problems resolves most customer complaints

Limitations:

* Does not protect against backflow due to backpressure.
* May only be used in for isolation and is not acceptable for protection against

health or high hazards.

- Will fail to operate properly if there is a shut-off valve installed downstream.

**13.0 Water System Employees and Contractors**

All employees/operators of the Callahan Water District shall read and understand this Cross-Connection Control Program.

All employees of the water system shall be sensitive to cross-connection hazards and potential hazards. All employees of the water system will be instructed in cross-connection control and will be required to be on the alert for potential cross-connections in the course of their daily work activities.

**Listing of Plumbing Connections that Can Potentially Cause Cross-Connections**

The following is a partial list of the types of fixtures that can have cross-connections and could pose a hazard to the potable water supply.

1. Agricultural mixing tanks
2. Auxiliary water supply
3. Dialysis equipment
4. Dishwashers
5. Garden hoses
6. Fire Protection Systems
7. Lawn Irrigation Systems
8. Photographic developers
9. Sinks
10. Solar Energy Systems
11. Swimming Pools
12. Toilet Flush Valves
13. Watering Troughs
14. Water Softeners

**13.0 Frequently Asked Questions**

Where can I find the list of approved testers?

* CPUD will provide a list of certified operators.

What is a cross-connection?

* Any temporary or permanent connection between a public water system or consumer's potable (i.e., drinking) water system and a source or system containing non-potable water or other substances. An example is the piping between a public water system or consumer's potable water system and an auxiliary water system, cooling system or irrigation system.

What is backflow?

* The reversal of flow of water or other substances through a cross-connection into the public water system or consumer's potable water system.
* Backflow into a public water system can pollute or contaminate the water in that system making it unsafe to drink.

What is backpressure backflow?

* 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.
* Backpressure can result from an increase in downstream pressure, a reduction in the potable water supply pressure, or a combination of both.

What is back-siphonage?

* Backflow caused by a negative pressure (i.e., a vacuum or partial vacuum) in a Public water system or consumer's potable water system.
* Back-siphonage can occur when there is a stoppage of water supply due to a nearby fire fighting, a break in a water main, etc.

Why does CPUD need to control cross-connections and protect its public water system against backflow?

* Because backflows can contaminate the drinking water in the public water system, California Code of Regulation, Title 17, requires each Water Supplier to protect the public water supply from contamination by implementing a State approved cross-connection control program.

How does CPUD implement the Cross-Connection Control Program?

* The Program requires all new service connections and certain existing service connections to install an approved backflow prevention device.

What is a backflow prevention device?

* A means or device which prevents pollutants and contaminants from back flowing into the public water system.

Why do backflow preventers have to be tested annually?

* To ensure the proper operation of a backflow prevention device, it must be tested and certified upon installation and annually thereafter as required by State code.
* Laboratory tests on all approved backflow prevention devices indicate that some components may fail in time, and periodic testing is the only method to ensure that the backflow prevention device is functioning properly and protecting the public water system.