

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

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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 [Cross – Connection Control Policy Handbook](#). 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 ADMINISTRATION OF PROGRAM

3.1 Authority

Chester Public Utility District (CPUD), in accordance with the [Cross – Connection Control Policy Handbook](#), CPUD code: Article 5-3.2 and [Uniform Plumbing Code](#) 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.

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

3.3 Service Connections

CPUD requires all new and existing service connections have a RP at the point of service. The designated CCCP may authorize other points of connection if needed. **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.**

- 3.3 New Construction
Backflow prevention devices is required on all new construction sites and all new connections to the Water System at the discretion of the CPUD. 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.

3.4 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 and a list of CPUD approved devices. 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.

4.0 SURVEYS

4.1 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.

4.2 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.

4.3

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 [Cross – Connection Control Policy Handbook](#).

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.

5.0 INSTALLATION OF BACKFLOW ASSEMBLIES

Backflow prevention assemblies shall be installed in accordance with [Cross – Connection Control Policy Handbook](#) approved policies, any deviation from these codes and policies require CPUD's written approval.

5.1 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.

5.2 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.

6.0 TESTING

6.1 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 [Cross – Connection Control Policy Handbook](#).

6.2 Responsibility for Testing

As per [Cross – Connection Control Policy Handbook](#) the consumer of record is responsible for the installation, testing, and maintenance of the backflow prevention assembly. CPUD may assume the role testing of devices and or contract out licensed testers. And upon and through the notification process may charge consumers to be reimbursed for said services.

6.3 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.

6.4 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.

6.5 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.

6.6 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>

7.0 TERMINATION OF SERVICE

7.1 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.

7.2 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.

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" Chester Public Utility 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.

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.

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 Softener

8.0

Article 5-3.2: Cross Connections

5-3.2.1 Health Regulations: Regulations of the Plumas County Health Department, California State Department of Public Health and the Drinking Water Standards of the United States Public Health Service prohibit unprotected cross connections between the public water supply and any unapproved source of water.

5-3.2.2 District Requirements: To comply with the regulations of these health agencies, the District will require the installation of approved backflow protection devices by and at the expense of the customer before service will be granted under any of the following conditions:

(a) Where an unapproved fresh water supply is already available from a well, spring, reservoir or other source. If the customer agrees to abandon this other supply and agrees to remove all pumps and piping necessary for the utilization of this supply, the installation of backflow protective devices will not be required.

(b) Where salt water, or water otherwise polluted, is available for industrial or fire protection purposes.

(c) Where the premises are or may be engaged in industrial processes using or producing process waters or liquid industrial wastes, or where the premises are or may be engaged in handling sewage or any other dangerous substance.

(d) Where the circumstances are such that there is special danger of backflow of sewage or other contaminated liquids through plumbing fixtures or water-using or treating equipment, or storage tanks and reservoirs.

5-3.2.3 Plumbing Changes Required: In special circumstances, when the customer is engaged in the handling of especially dangerous or corrosive liquids or industrial process waters, the District may require the customer to eliminate certain plumbing or piping connections as an additional precaution and as a protection to the backflow preventative devices.

5-3.2.4 Relief Valve Required: As a protection to the customer's plumbing system, a suitable pressure relief valve must be installed and maintained by the customer, at his or her expense, when check valves or other protective devices are used. The relief valve shall be installed between the check valves and the water heater.

5-3.2.5 Backflow Protection on Additional Water Supply Lines: Whenever backflow protection has been found necessary on a water supply line entering a customer's premises, then any and all water supply lines from the District's mains entering such premises, buildings or structures shall be protected by an approved backflow device, regardless of the use of the additional water supply lines.

5-3.2.6 Protection Against Interstreet Main Flow: Two (2) or more services supplying water from different street mains to the same building structure or premises through which an interstreet main flow may occur, shall have a standard check valve on each water service to be located adjacent to and on the property side of the respective meters.

Such check valves shall not be considered adequate if backflow protection is deemed necessary to protect the District's mains from pollution or contamination, but the installation of an approved backflow prevention device at such meters shall take the place of, and satisfy the requirements for, standard check valves.

5-3.2.7 Inspection Backflow Prevention Assembly Testing and Maintenance:

(a) The owners of any premises on which, or on account of which, backflow prevention assemblies are installed, shall have the assemblies tested by a person who has demonstrated their competency in testing of these assemblies to the District. Backflow prevention assemblies must be tested at least annually and immediately after installation, relocation or repair. The District may require a more frequent testing schedule if it is determined to be necessary. No assembly shall be placed back in service unless it is functioning as required. A report in a form acceptable to the District shall be filed with the District each time an assembly is tested, relocated, or repaired. 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.

(b) The District will notify affected customers by mail when annual testing of an assembly is needed and also supply users with the necessary forms which must be filled out each time an assembly is tested or repaired.

(c) Upon request the District will test a water user's backflow prevention assembly to fulfill the requirements of this title. The water user will be charged for the test. The District will not make any repairs to, or replace, any backflow prevention device. The owner must make his or her own arrangements to have such repairs or replacements made.

[Resolution No. 145 adopted February 24, 1994, provided at Exhibit A, item L 16.: " The charge for testing of a water user's backflow prevention assembly pursuant to 5-3.2 7(c) will be calculated at 1 hour labor, based on the maintenance foreman's wages (including benefits factor). "J

15 per backflow

5*3.2.8 Backflow Prevention Assembly Removal:

(a) Approval must be obtained from the District before a backflow prevention assembly is removed, relocated or replaced.

(l) Removal: The use of an assembly may be discontinued and the assembly removed from service upon presentation of sufficient evidence to the District to verify that a hazard no longer exists or is not likely to be created in the future.

(2) Relocation: An assembly may be relocated, following confirmation by the District, that the relocation will continue to provide the required protection and satisfy installation requirements. A retest at customer expense will be required following the relocation of the assembly.

(3) Repair: An assembly may be removed for repair, provided the water use is either discontinued or the service connection is equipped with other backflow protection approved by the District. A retest will be required following the repair of the assembly.

(4) Replacement: An assembly may be removed and replaced, provided the water use is discontinued until the replacement assembly is installed. All replacement assemblies must be approved by the District and must be commensurate with the degree of hazard involved.

[Source: "Guidance Manual for Cross Connection Control Programs, " California Department of Health Services, Public Supply Branch, September 1988, Appendix B, Section IV, C and D.]

Discontinuance of Service for Defective Apparatus: The service of water to any premises may be immediately discontinued by the District if any defect is found in the check valve installations or other protective devices, or if it is found that dangerous unprotected cross connections exist. Service will not be restored until such defects are corrected.

