

Sierra County Water Works District #1 - Calpine

Cross-Connection Control Ordinance

1.010 Purpose.

The purpose of this ordinance is (1) to protect the public water supply against actual or potential contamination through cross-connections by isolating sources of contamination that may occur within a water user's premises because of some undiscovered or unauthorized cross-connection on the premises; (2) to eliminate existing connections between drinking water systems and other sources of water that are not approved as safe and potable for human consumption; (3) to eliminate cross-connections between drinking water systems and sources of contamination; (4) to prevent the making of cross-connection in the future.

1.020 Definitions.

- A. Board. "Board" means the board of the Sierra County Water Works District #1 - Calpine.
- B. Air-gap separation, (AG). "Air gap separation" means a physical break between a supply pipe and a receiving vessel. The air-gap shall be at least double the diameter of the supply pipe measured vertically above from the top rim of the vessel, but in no case less than one inch.
- C. Approved backflow prevention assembly. "Approved backflow prevention assembly" means an assembly that has been manufactured in full conformance with the standards established by the American Water Works Association, entitled: AWWA C506. (Current Revision) Standards for Reduced Pressure Principle and Double Check Valve Backflow Prevention Reduced Pressure Principle and Double Check Valve Backflow Prevention Devices, and have passed laboratory and field evaluation tests.
- D. Approved water supply. "Approved water supply" means any water supply whose potability is regulated by a state or local health agency.
- E. Auxiliary supply. "Auxiliary supply" means any water supply available to the premises other than the approved water supply.
- F. AWWA standard. "AWWA standard" means an official standard developed and approved by the American Water Works Association (AWWA).

G. Backflow. "Backflow" means a flow condition caused by a differential in pressure that causes the flow of water or other liquids, 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.

H. Contamination. "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.

I. Cost. "Cost" means the cost of labor, material, transportation, supervision, engineering and all other necessary overhead expenses.

J. District. "District" means the Sierra County Water Works District #1 - Calpine.

K. Cross-connections. "Cross-connection," as used in this chapter means any unprotected actual or potential connection between a potable water system used to supply water for drinking purposes and any source of system containing unapproved water or substances that is not or cannot be approved as safe, wholesome and potable. By-pass arrangements, jumper connection, removable sections, swivel or changeover assemblies, or other assemblies through which backflow could occur, shall be considered to be cross-connections.

L. Double check valve assembly, (DC). "Double check valve assembly" means an approved backflow prevention assembly of two internally loaded, independently acting check valves, including resilient seated shut-off valves on each end of the assembly and test cocks for testing the water tightness of each check valve.

M. Person. "Person" means any individual, corporation, company, association, partnership, municipality, public utility, or other public body or institution.

N. Premises. "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.

O. Public water system. "Public water system" means a system for the provision of piped water to the public for human consumption that has fifteen or more service connections or regularly serves an average of twenty-five individuals daily at least sixty days out of the year.

P. Reclaimed water. "Reclaimed water" means a wastewater, which, as a result of treatment, is suitable for uses other than potable use.

Q. Reduced pressure principle backflow prevention assembly. "Reduced pressure principle backflow prevention assembly" means an approved backflow prevention assembly incorporating two internally loaded check valves and an automatically operating differential relief valve located between the two check valves, including resilient seated shut-off valves on each end of the assembly, and equipped with necessary test cocks for testing the assembly.

R. Service connection. "Service connection" refers to the point of connection of a user's piping to the water supplier's facilities.

S. Water supplier. "Water supplier" means the person who owns or operates an approved water supply system.

T. Water user. "Water user" means any person obtaining water from an approved water supply system.

1.030 Cross-connection protection requirements.

General provisions: Unprotected cross-connections with the public water supply are prohibited. Whenever backflow protection has been found necessary, the District will require the water user to install an approved backflow prevention assembly by, and at, the user's expense for continued services or before new service will be granted. For new water meter sets, the required backflow assembly shall be installed, inspected, approved and certified test results provided to the District within five days of meter set unless the Board or designee approves otherwise. The service will be locked off if inspections and certifications are not completed as specified above.

Wherever backflow protection has been found necessary on a water supply line entering a water user's premises, then any and all water supply lines from the District mains entering such premises, buildings, or structures shall be protected by an approved backflow prevention assembly. The type of assembly to be installed will be in accordance with the requirements of this chapter.

Where protection is required:

A. Each service connection from the District water system for supplying water to premises having an auxiliary water supply shall be protected against backflow of water from the premises in the public water system unless the auxiliary water supply is an approved water supply.

B. Each service connection from the District water system for supplying water to premises on which any substance is handled in such fashion as may allow its entry into the water system shall be protected against backflow of the water from the premises in the public system. This shall include the handling of

process waters and waters originating from the District water system which have been subjected to deterioration on sanitary quality.

C. Backflow prevention assemblies shall be installed on the service connection to any premises having (a) internal cross-connections that cannot be permanently corrected and controlled to the satisfaction of the District, or (b) intricate plumbing and piping arrangements or where entry to all portions of the premises is not readily accessible for inspection purposes, making it impracticable or impossible to ascertain whether or not cross-connections exist.

D. Freeze Protection. Customer shall maintain protective freeze cover on the Backflow Prevention Assembly. Damaged covers will be replaced at Customer's expense upon notification by the District. Any means used by the Customer to secure the cover from theft or weather must provide access by the District for inspection, testing, and maintenance.

Type of protection required: The type of protection that shall be provided to prevent backflow into the approved water supply shall be commensurate with the degree of hazard that exists on the water user's premises. The type of protective assembly that shall be required (listing in an increasing level of protection) includes: double check valve assembly (DC), reduced pressure principle backflow prevention assembly (RP), and an air-gap separation (AG). The water user may choose a higher level of protection than required by the District.

A. When two or more services supply water from different street mains to the same building, structure, or premises through which an inter-street main flow may occur, there shall be at least a standard check valve on each water service to be located adjacent to and on the property side of the respective meters. Such check valve shall not be considered adequate if backflow protection is deemed necessary to protect the mains from pollution or contamination. In such cases the installation of approved backflow assemblies at such service connections shall be required.

1.040 Backflow prevention assemblies.

A. Approved backflow prevention assemblies. Only backflow prevention assemblies which have been approved by the District shall be acceptable for installation by a water user connected to the District's potable water system. The District will provide upon request, to any affected user, a list of approved backflow prevention assemblies.

B. Backflow prevention assembly installations. Backflow prevention assemblies shall be installed in a manner prescribed in Uniform Plumbing Code. Location of the assemblies shall be as close as practical to the user's service connection. The District shall have the final authority in determining the required location of a backflow prevention assembly.

1. Air-gap separation (AG). The air-gap separation shall be located on the user's side of and as close to the service connection as is practical. All piping from the service connection to the receiving tank shall be above grade and be entirely visible. No water use shall be provided from any point between the service connection and the air-gap separation. The water inlet piping shall terminate a distance of at least two pipe diameters of the supply inlet, but in no case less than one inch above the overflow rim of the receiving tank.

2. Reduced pressure principle backflow prevention assembly (RP). The approved reduced pressure principle assembly shall be installed on the user's side of and as close to the service connection as is practical. The assembly shall be installed a minimum of twelve inches above grade and not more than thirty-six inches above grade, measured from the bottom of the assembly, and with a minimum of twelve inches side clearance. The assembly shall be installed so that it is readily accessible for maintenance and testing. Water supplied from any point between the service connection and the RP assembly shall be protected in a manner approved by the District.

3. Double check valve assembly (DC). The approved double check valve assembly shall be installed on the user's side of and as close to the service connection as is practical. The DC shall be installed above grade, if possible, and in a manner where it is readily accessible for testing and maintenance. If a double check valve assembly is put below grade it must be installed in a vault such that there is a minimum of six inches between the bottom of the vault and the bottom of the assembly so that the top of the assembly is a maximum of eight inches below grade so there is a minimum of twenty-four inches of clearance between the side of the assembly with the test cocks and the side of the vault and so there is a minimum of twelve inches clearance between the other side of the assembly and the side of the vault. Special consideration must be given to double check valve assemblies of the "Y" type. These assemblies must be installed on their "side" with the test cocks in a vertical position so that either check valve may be removed for service without removing the assembly. Vaults that do not have an integrated bottom must be placed on a three-inch layer of gravel.

C. Backflow prevention assembly testing and maintenance. The owner of any premises on which, or on account of which, backflow prevention assemblies are installed, shall have the assemblies tested by a person who possess a valid Backflow Assembly Tester certification issues by the Cal-Nevada AWWA. 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.

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

E. Backflow prevention assembly removals. Approval must be obtained from the District before a backflow prevention assembly is removed, relocated, or replaced.

1. 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 requirement. A retest 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 until repair is completed and the assembly is tested and returned to service, 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 and tested. All replacement assemblies must be approved by the District and must be commensurate with the degree of hazard involved. A retest will be required following the replacement of the assembly.

1.050 Administrative procedures.

A. Water system survey. The District shall review all requests for new services to determine if backflow protection is needed. Plans and specifications must be submitted to the District upon request for review of possible cross-connection hazards as a condition of service for new service connections. If it is determined that a backflow prevention assembly is necessary to protect the public water system, the required assembly must be installed before service will be granted.

B. The District may require an on-site inspection to evaluate cross-connection hazards. The District will transmit a written notice requesting an inspection appointment to each affected water user. Any water

user who cannot or will not allow an on-premises inspection of premises piping systems shall be required to install the backflow prevention assembly or air-gap that the District considers necessary.

C. The District may, at its discretion, require a re-inspection for cross-connection hazards of any premises to which it serves water. The District will transmit a written notice requesting an inspection appointment to each affected water user. Any water user who cannot or will not allow an on-premises inspection of premises piping systems shall be required to install the backflow prevention assembly or air-gap the District considers necessary.

D. Customer notification--Assembly installation. The District will notify the water user of the survey findings, listing the corrective actions to be taken if any are required. A period of sixty days will be given to complete all corrective actions required, including installation and testing of approved backflow prevention assemblies or air-gap, unless a written extension is granted. A second notice will be sent to each water user who does not take the required corrective actions prescribed in the first notice, within the sixty-day period allowed. The second notice will give the water user a two-week period to take the required corrective action. If no action is taken with the two-week period, the District may terminate water service to the affected water user until the required corrective actions are taken.

E. **Testing and maintenance.** All backflow devices within the district must be tested annually, or at any time, as determined by the District. When such device is due to be tested the District shall contract with a licensed backflow testing company of the District's choice to test and maintain, or repair, each customer's backflow device. The cost of such test and all required maintenance and repairs shall be paid by the District and passed on to the customer through a billing mechanism attached to the customer's water bill. Failure to allow such testing, or payment of testing, maintenance, or repairs by the customer, will be grounds for termination of water service.

1.060 Water service termination.

When the District encounters water users that represent a clear and immediate hazard to the water supply that cannot be immediately abated, the District shall institute the procedure for discontinuing the District water service.

A. Basis for termination. Conditions or water uses that create a basis for water service termination shall include, but are not limited to, any one of the following items:

1. Refusal to install a required backflow prevention assembly or air-gap separation;
2. Refusal to test a backflow prevention assembly or inspect an air-gap separation;

3. Refusal to repair a faulty backflow prevention assembly;
4. Refusal to replace a faulty backflow prevention assembly;
5. Direct or indirect connection between the public water system and a sewer line;
6. Unprotected direct or indirect connection between the public water system and a system or equipment containing contamination;
7. Unprotected direct or indirect connection between the public water system and an auxiliary water system;
8. A situation that presents an immediate health hazard to the public water system.

B. Water service termination procedures. For conditions 1, 2, 3, or 4 the District will terminate service to a customer's premises after two written notices have been sent specifying the corrective action needed and the time period in which it must be done. If no action is taken within the allotted time period, water service may be terminated. For conditions 5, 6, 7, or 8 the District will take the following steps:

1. Make a reasonable effort to advise the water user of intent to terminate water service;
2. Terminate the water supply and lock the service valve. The water service will remain inactive until corrections of violations have been approved by the District.

1.070 Enforcement.

The District or its designee has the authority to enforce this ordinance. It is unlawful for any person, firm, or corporation at any time to make or maintain or cause to be made or maintained, temporarily or permanently, for any period of time whatsoever, any cross-connection between plumbing pipes or water fixtures being served with water by the District water system and any other source of water supply or to maintain any sanitary fixture or other appurtenances or fixtures which, by reason of their construction, may cause or allow backflow of water or other substances into the water supply system of the District and/or the service of water pipes or fixtures of any customer of the District.

1.080 Severability.

If any section, subsection, subdivision, paragraph, sentence, clause, or phrase of this chapter, or any part thereof, is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this chapter or any part thereof. The board declares that it would have passed each section, subsection, subdivision, paragraph, sentence, clause, or phrase thereof, irrespective of the fact that any

one or more sections, subsections, subdivisions, paragraphs, sentences, clauses, or phrases is declared invalid.