

1.2.22 Cross-Connection Control (BP)

Adopted: November 8, 1995

Revised: 03/08/2022

SECTIONS:

1.0 - Protection of public water supply.

In making plumbing connections, the AMWC's shareholder (i.e. property owner) is required to comply with the regulations of the California State Department of Public Health and the United States Public Health Service. Such regulations prohibit: (1) unprotected cross-connections between a public water supply and any unapproved source of water, and (2) unprotected water service connections to premises where there is a possibility of contaminated water backflowing into the public water system.

Accordingly, AMWC requires the installation of approved double-check valves or other protective devices by and at the expense of the shareholder before granting or continuing service under such conditions as listed below. *Service to any premises may be immediately discontinued if it is found that dangerous unprotected cross-connections exist or if any defect is found in the check valve installation or other protective devices. Services shall not be restored until such defects are corrected.*

- A. Where another source of water is in use or is available for use unless the alternate supply has been certified for domestic use by the county health department or the State Department of Public Health.
- B. Where contaminated liquid or soluble substances of any kind are used, produced, or processed.
- C. Services that utilize any system for the injection of chemicals into the shareholder's plumbing system. Shareholders using such systems shall notify AMWC in advance of their intention to commence such practice and to arrange for the installation of an approved backflow prevention device before performing such injection. In special cases, AMWC may require the shareholder to eliminate certain plumbing or piping connections as an additional precaution to prevent backflow. Double-check valve or pressure reducing valve installations and other protective devices may be inspected and tested for water tightness by AMWC.

As a protection to the shareholder's plumbing system, a suitable pressure relief valve must be installed and maintained by him at his expense when check valves or other protective devices are used. The relief valve shall be installed between the check valves and the water heater.

The regulations of the California State Department of Public Health also requires that the owner of any premises on or for which check valves or other protective devices are installed shall inspect these devices for water tightness and reliability at least once per year. All defective devices shall be serviced, overhauled, or replaced at the shareholder's expense. A written report on this annual inspection shall be made available to AMWC.

2.0 - Statutory authority.

- A. Title 17, Chapter V, Sections 7583 through 7622, inclusive of the California Administrative Code, entitled "Regulations Relating to Cross-Connections," sets forth rules and regulations governing cross-connections.
- B. Title 17, Section 7583 of the California Administrative Code, states among other things, "The water purveyor has primary responsibility to prevent water from unapproved sources, or any other substance, entering the public water supply system." AMWC is a water purveyor within the meaning of Title 17.
- C. To provide for an orderly and adequate means of protection of Atascadero Mutual Water Company's ("AMWC") water distribution system from backflow, the requirements set forth in this policy are reasonable and necessary. AMWC adopts these requirements for the protection of

AMWC's water distribution system from backflow. New water service connections shall be installed, and existing water connections shall be modified to conform to these requirements as set forth in this policy.

3.0 - Adoption of state statutes.

The regulations of the California Department of Health, Title 17, California Administrative Code, Sections 7583 through 7622, inclusive, referred to in this policy as Title 17, are adopted, incorporated by reference and made a part of this policy, insofar as the same are applicable to the protection to AMWC's water distribution system.

4.0 - Definitions.

Words used in this policy, unless the context requires otherwise, are defined as follows:

- A. "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 the top rim of the vessel, in no case less than one inch.
- B. "AMWC" means the Atascadero Mutual Water Company, Atascadero, California.
- C. "AMWC's water distribution system" means the water distribution system owned and operated by AMWC including the service connection to a water main.
- D. "Approved double check valve assembly" means an assembly of at least two independently acting approved check valves including tightly closing shut-off valves on each side of the check valve assembly and suitable leak detector drains plus connections available for testing the water tightness of each valve. The entire assembly shall be made in the factory of the manufacturer and shall meet the specifications and approval of a recognized, approved testing agency for backflow prevention devices. To be approved, these devices must be readily accessible for maintenance testing.
- E. "Approved reduced pressure principal backflow prevention device" means a device approved by a recognized and approved testing agency for backflow prevention devices. The entire assembly shall be made in the factory of the manufacturer and shall incorporate two or more check valves and an automatically operating differential relief valve located between the two checks, two shut-off valves, and equipped with necessary appurtenances for testing. The device shall operate to maintain the pressure in the zone between the two check valves less than the pressure on the public supply side of the device. At cessation of normal flow, the pressure between check valves shall be less than the supplied pressure. In case of leakage of either check valve, the differential relief valve shall operate to maintain this reduced pressure by discharging to the atmosphere. When the inlet pressure is two pounds per square inch or less, the relief valve shall open to the atmosphere, thereby providing an air-gap in the device. To be approved, these devices must be readily accessible for maintenance and testing and installed in a location where no part of the valve will be submerged.
- F. "Auxiliary water supply" means any water supply on or available to the premises other than the approved public potable water supply. These auxiliary waters may include, but are not limited to, water from another purveyor's public potable water supply or any natural source such as a well, spring, river, stream, harbor, etc., or "used water" or "industrial fluids".
- G. "Approved backflow prevention device" means a device identified in AMWC's current Standard Specifications for use at the service connection which will prevent backflow into AMWC's distribution system.

- H. "Backflow" means the reverse flow of water or any other fluid or substance or any combination or any mixture thereof from the shareholder's system into AMWC's water distribution system.
- I. "Certified tester" means a person who is certified as a backflow prevention device tester by American Water Works Association, American Backflow Prevention Association, or equally recognized association that certifies persons to test approved backflow prevention devices in the has demonstrated their competency to the Environmental Health Services Division of the County of San Luis Obispo.
- J. "Chief Operator" means the chief water treatment operator for AMWC or their designate.
- K. "County health department" means the Environmental Health Department of the County of San Luis Obispo.
- L. "Cross-connection" or "cross-connected" as used in these regulations means any real or potential connection between any part of a public water system or other water system supplying potable water to members of the public and any auxiliary water supply or any source or system containing water or any substance that is not or cannot be approved as safe, wholesome, and potable for human consumption.
- M. "Health hazard" means an actual or potential threat of contamination of a physical or toxic nature to the public potable water system to such a degree of intensity that there would be a danger to health.
- N. "Industrial fluids" means any fluid or solution which may be chemically, biologically, or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollution, or plumbing hazard if introduced into the water supply. This may include, but is not limited to polluted or contaminated used waters; all types of processed waters and "used waters" originating from the public potable water system which may deteriorate in sanitary quality; chemicals in fluid form; acids and alkalis; circulating cooling waters connected to an open cooling tower and/or cooling waters that are chemically or biologically treated or stabilized with toxic substances; contaminated natural waters such as from wells, springs, streams, rivers, bays, harbors, seas, irrigation canals or systems, etc.; oils; gases; glycerin; paraffines; caustic and acid solutions; and other liquid and gaseous fluids used in industrial or other processes or for fire-fighting purposes.
- O. "Plumbing hazard" means a plumbing type cross-connection in a shareholder's potable water system that has not been properly protected by a vacuum breaker, air-gap separation, or other device. The term "plumbing hazard" includes but is not limited to cross-connections to toilets, sinks, lavatories, wash trays, domestic washing machines and lawn sprinkling systems.
- P. "Pollution" means an impairment of the quality of the water to a degree which does not create an actual hazard to the public health, but which does adversely affect such waters for domestic use.
- Q. "Pollution hazard" means an actual or potential threat to the physical properties of the public water system or the potability of the public water supply, but which would not constitute a health or system hazard, as defined.
- R. "Purveyor" means any person, corporation, public utility, municipality, district, mutual water company, or other agency or institution furnishing or supplying water for domestic purposes.
- S. "Premises" means a piece of land together with such buildings and appurtenances located thereon.
- T. "Service connection" means the terminal end of a service connection from the public potable water system, i.e., where the water purveyor loses jurisdiction and sanitary control over the water at its point of delivery to the consumer's water system. If a meter is installed, then the service connection shall mean the downstream end of the meter, unless a fire sprinkler system is designed to be supplied after the meter in which case AMWC's Standard Specifications define

the point of delineation where AMWC loses control over the water at that point of delivery therein defined. There should be no unprotected take-offs from the service line ahead of any meter or backflow prevention device located at the point of delivery to the consumer's water system. Commercial fire sprinkler systems are separate and distinct service connections, and their point of connection is at AMWC's valve at AMWC's water main. The appropriate backflow prevention device for these service connections is defined in AMWC's Standard Specifications.

- U. "Shareholder" means any person or organization who is a property owner within the service area of AMWC.
- V. "Shareholder's plumbing system" means the water piping system located immediately downstream from a meter, or in the case of a fire sprinkler system, the point in the system as defined and identified in AMWC's Standard Specifications.
- W. "System hazard" means an actual or potential threat of severe damage to the physical properties of the public potable water system.
- X. "Water supervisor" means the consumer or a person on the premises appointed by the consumer who is charged by the consumer with the responsibility to the consumer of maintaining the consumer's water system free from cross-connections and other sanitary defects, as required by regulations and laws. A certified backflow prevention device tester may not act as a water supervisor unless he is a full-time employee of the consumer, and has the day-to-day responsibility for the installation and use of pipelines and equipment on the premises and for the avoidance of cross-connections

5.0 - General requirements.

- A. Where conditions, as set forth in Section 2.0.C, require a backflow prevention device such as double-check valve or a pressure-reducing valve, the installation shall be by the shareholder. AMWC shall be notified of the installation, which will be inspected by AMWC or its designate before being placed in service.
- B. Backflow prevention devices shall be required at the service connection per AMWC Standard Specifications (current edition), or at a location approved by the Chief Operator, for premises in the following described categories:
 - 1. Premises having an auxiliary water supply.
 - 2. Industrial/commercial premises on which any substance is handled under pressure in such a fashion as to permit possible entry into AMWC's distribution system, including water originating from AMWC's system which is boosted in pressure.
 - 3. Industrial/commercial premises where shareholder's system has more than one service connection.
 - 4. Industrial/commercial premises which, in the opinion of the Chief Operator, contain cross-connections or the potential for cross-connections which could result in the pollution or contamination of AMWC's water system in the event of backflow.
 - 5. Premises which have Class 1 or Class 2 fire sprinkler systems as defined by the American Water Works Association Manual, M-14, Section 6.3, where in the opinion of AMWC and the fire department, said system is inadequate to protect against backflow due to special conditions found to exist. Special conditions are defined as those conditions which exist to cause an actual or potential for contamination to AMWC's domestic water supply from the user's connection. Special conditions include but are not limited to the following:

- i. Underground fire sprinkler pipelines parallel to and within ten feet horizontally of sewer pipelines or other pipelines carrying significantly toxic materials or when non-potable pipe is used to construct the fire sprinkler system.
 - ii. Water being supplied to a site or an area from two or more services of a water utility, or from two different water utilities.
 - iii. Occupancies (or changes in occupancies) which involve the use, storage or handling of types and quantities of materials in a manner which could present a significant health hazard to the domestic water supply.
 - iv. Premises with unusually complex piping systems where no approved backflow prevention device exists on their domestic service piping.
- C. Backflow prevention devices shall be of a type and manufacture approved by AMWC.

6.0 - New service connections—Installation conditions.

- A. At the time an application for a new water service is made by a shareholder, the Chief Operator will review such application to determine the need for a backflow prevention device on the shareholder's service. If a backflow prevention device is determined to be required, it shall be the shareholder's responsibility at the shareholder's expense to provide for installation of the device in accordance with AMWC standards and at a location approved by AMWC.
- B. Installation of a backflow prevention device, where required by AMWC, shall be a condition of water service and meter installation.
- C. Backflow devices installed on dedicated fire lines shall incorporate detector meters. Maintenance and repair of the detector meter is the responsibility of the shareholder.

7.0 - Existing service connections—Installation conditions.

- A. AMWC will inspect the premises of existing service connections which in the opinion of the Chief Operator may require backflow prevention. If it is determined that a backflow prevention device is required, the installation of a backflow prevention device shall be a condition of continued water service.
- B. If a shareholder fails to provide for the installation of the backflow prevention device within a reasonable time limit set forth in a written notification from AMWC, AMWC may suspend water service to the property being served.
- C. Backflow devices installed on dedicated fire lines shall incorporate detector meters. Maintenance and repair of the detector meter is the responsibility of the shareholder.

8.0 - Upgrading existing devices.

- A. An existing backflow prevention device which, in the opinion of the Chief Operator, is a type that does not provide adequate protection for the degree of potential hazard from backflow shall be upgraded at shareholder expense.
- B. Upgrading may include complete replacement of the backflow prevention device, installation of additional devices, or correction of on-site cross-connection hazards.

9.0 - Ownership of installed or upgraded devices.

Backflow prevention devices installed or upgraded shall be and remain the property of the shareholder.

10.0 - Inspection and testing.

The shareholder is responsible to provide for an annual testing and inspection of the backflow prevention device.

- A. Testing by Certified Testers. Shareholders must use a certified tester to inspect and test a backflow prevention device. AMWC will provide a list of certified testers to the shareholder. The test shall be performed, and results reported to AMWC within thirty days of written notice by AMWC.
- B. Devices which fail to pass inspection and testing by a certified testers shall be maintained and repaired in accordance with Sections 11.0, 12.0, and 13.0 of this policy. AMWC reserves the right to require more frequent testing or to perform additional testing with AMWC personnel when AMWC determines it to be in the public interest. The shareholder shall bear the cost of additional tests if their device fails a test.

11.0 - Maintenance and repair—Time limitations.

The shareholder shall be responsible for maintenance and repair of the backflow prevention device. The shareholder shall at all times maintain the device in proper working order as a condition of continued water service. If a backflow prevention device should fail to pass inspection and testing pursuant to Section 10.0 of this policy, the shareholder shall, within thirty days after notification of test results, provide for repair and retesting of the device as set out in Sections 12.0 of this policy.

12.0 - Maintenance and repair—Work performed by private parties.

Backflow prevention devices may be repaired by private personnel. Repairs and satisfactory retest of devices by a certified tester shall be documented and submitted on a form provided by AMWC. Failure by the shareholder to repair a backflow prevention device within the time period allowed by AMWC shall result in termination of water service.

13.0 - Right to enter property.

As a condition of water service for new shareholders and as a condition of continued water service for existing shareholders, the shareholder may be required to have a backflow prevention device installed on the private property of the shareholder. The shareholder shall permit AMWC to enter upon the shareholder's property within the normal working hours of AMWC, or in case of emergency, at any time to inspect the backflow prevention device.

14.0 - Termination of water service—Conditions.

In addition to the rights granted AMWC in this policy, AMWC may terminate water services to any premises served if a required backflow prevention device is removed by the shareholder or if AMWC finds evidence that an installed backflow prevention device has been bypassed, modified, or altered in a manner or allowed to remain ineffective.

15.0 - Violation.

It is unlawful for any person or persons, company, corporation, or association to willfully fail to install or to willfully bypass, alter, or refuse to maintain a backflow prevention device. In the event AMWC determines any person or persons, company, corporation, or association willfully fail to install or willfully bypass, alter, or refuse to maintain a backflow prevention device AMWC will terminate water service and take appropriate actions to the full extent of the law.