Title 17, Californa Code of Regulations – Excerpts containing Sections 7583-7605 Updated October 2024

- Cross-Connection Control Program: Water suppliers are required to implement a crossconnection control program to protect the public water system from contamination caused by backflow.
- Backflow Prevention: The regulations mandate the use of backflow prevention devices, tested and approved by recognized organizations such as the University of Southern California's Foundation for Cross-Connection Control and Hydraulic Research, at service connections where cross-connections are likely to occur or where the degree of hazard warrants it.
- Backflow Prevention Assembly Testing and Maintenance:
- Annual Testing: Backflow prevention assemblies must be tested at least annually, or more frequently if deemed necessary by the water supplier or health agency.
- Competent Testers: Testing must be performed by individuals who have demonstrated competency in testing these devices to the water supplier or health agency.
- Immediate Testing: Backflow preventers must be tested immediately after installation, relocation, or repair and not placed in service unless they are functioning properly.
- Water User Responsibility: The water user is responsible for providing adequate maintenance and periodic testing of backflow prevention assemblies.
- Notification and Reporting: The water supplier notifies the water user when testing is due, and reports of testing and maintenance must be maintained for a minimum of three years.
- Definition of Terms: Section 7583 provides definitions relevant to the regulations, including "Cross-Connection" and "Double Check Valve Assembly (DC)".
- Updated Regulations: The October 2024 revisions reflect the adoption of updated water loss performance standards and hexavalent chromium MCL rulemakings

California Regulations Related to Drinking Water October 2024

Sections amended, adopted, repealed, or not included in the previous compilation of these regulations (July 2021) are highlighted in yellow. This revision reflects adoption of the water loss performance standards and hexavalent chromium MCL rulemakings, effective April 1, 2023, and October 1, 2024, respectively. In general, if the text in a section, subsection, or paragraph is highlighted, it is new. If only the section/paragraph number is highlighted, it was amended or repealed. Nonsubstantive revisions may not be shown. Water recycling regulations may be viewed in the "Recycled Water-Related Statutes and Regulations" section on the State Water Board's California Drinking Water-Related Laws webpage.

Regulation text and dollar amounts pertaining to operator examination fees in chapter 13, article 5, section 63850 and to public water system annual fees in chapter 14.5, article 1, are current as of October 1, 2023. Current fee schedules can be verified by consulting the latest print or <u>online version</u> of Title 22 of the California Code of Regulations (CCR) and at https://www.waterboards.ca.gov/resources/fees/stakeholder/ and

https://www.waterboards.ca.gov/drinking_water/certlic/occupations/documents/opcert/feeslist.pdf.

Policy handbooks have been adopted in lieu of regulations for the following:

- Drinking Water State Revolving Fund
- Microplastics
- Cross-Connection Control

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CALIFORNIA CODE OF REGULATIONS

Title 17. Public Health

Division 1. State Department of Health Services
Chapter 5. Sanitation (Environmental)
Subchapter 1. Engineering (Sanitary)
Group 4. Drinking Water Supplies

Article 1. General

§ 7583. Definitions.

In addition to the definitions in Section 116275 of the Health and Safety Code, the following terms are defined for the purpose of this Chapter:

- (a) "Approved Water Supply" is a water supply whose potability is regulated by a State of local health agency.
- (b) "Auxiliary Water Supply" is any water supply other than that received from a public water system.
- (c) "Air-gap Separation (AG)" is a physical break between the supply line and a receiving vessel.
- (d) "AWWA Standard" is an official standard developed and approved by the American Water Works Association (AWWA).
- (e) "Cross-Connection" is an 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 to be cross-connections.
- (f) "Double Check Valve Assembly (DC)" is an assembly of at least two independently acting check valves including tightly closing shut-off valves on each side of the check valve assembly and test cocks available for testing the water tightness of each check valve.
- (g) "Health Agency" means the State Water Resources Control Board, or the local health officer with respect to a small water system.
 - (h) "Local Health Agency" means the county or city health authority.
- (i) "Reclaimed Water" is a wastewater which as a result of treatment is suitable for uses other than potable use.
- (j) "Reduced Pressure Principle Backflow Prevention Device (RP)" is a backflow preventer incorporating not less than two check valves, an automatically operated differential relief valve located between the two check valves, a tightly closing shut-off

valve on each side of the check valve assembly, and equipped with necessary test cocks for testing.

- (k) "User Connection" is the point of connection of a user's piping to the water supplier's facilities.
 - (I) "Water Supplier" is the person who owns or operates the public water system.
 - (m) "Water User" is any person obtaining water from a public water supply.

§ 7584. Responsibility and Scope of Program.

The water supplier shall protect the public water supply from contamination by implementation of a cross-connection control program. The program, or any portion thereof, may be implemented directly by the water supplier or by means of a contract with the local health agency, or with another agency approved by the health agency. The water supplier's cross-connection control program shall for the purpose of addressing the requirements of Sections 7585 through 7605 include, but not be limited to, the following elements:

- (a) The adoption of operating rules or ordinances to implement the cross-connection program.
- (b) The conducting of surveys to identify water user premises where cross-connections are likely to occur,
- (c) The provisions of backflow protection by the water user at the user's connection or within the user's premises or both,
- (d) The provision of at least one person trained in cross-connection control to carry out the cross-connection program,
 - (e) The establishment of a procedure or system for testing backflow preventers, and
 - (f) The maintenance of records of locations, tests, and repairs of backflow preventers.

§ 7585. Evaluation of Hazard.

The water supplier shall evaluate the degree of potential health hazard to the public water supply which may be created as a result of conditions existing on a user's premises. The water supplier, however, shall not be responsible for abatement of cross-connections which may exist within a user's premises. As a minimum, the evaluation should consider: the existence of cross-connections, the nature of materials handled on the property, the probability of a backflow occurring, the degree of piping system complexity and the potential for piping system modification. Special consideration shall be given to the premises of the following types of water users:

- (a) Premises where substances harmful to health are handled under pressure in a manner which could permit their entry into the public water system. This includes chemical or biological process waters and water from public water supplies which have deteriorated in sanitary quality.
- (b) Premises having an auxiliary water supply, unless the auxiliary supply is accepted as an additional source by the water supplier and is approved by the health agency.
- (c) Premises that have internal cross-connections that are not abated to the satisfaction of the water supplier or the health agency.
- (d) Premises where cross-connections are likely to occur and entry is restricted so that cross-connection inspections cannot be made with sufficient frequency or at sufficiently short notice to assure that cross-connections do not exist.

(e) Premises having a repeated history of cross-connections being established or reestablished.

§ 7586. User Supervisor.

The health agency and water supplier may, at their discretion, require an industrial water user to designate a user supervisor when the water user's premises has a multipiping system that convey various types of fluids, some of which may be hazardous and where changes in the piping system are frequently made. The user supervisor shall be responsible for the avoidance of cross-connections during the installation, operation and maintenance of the water user's pipelines and equipment.

Article 2. Protection of Water System

§ 7601. Approval of Backflow Preventers.

Backflow preventers required by this Chapter shall have passed laboratory and field evaluation tests performed by a recognized testing organization which has demonstrated their competency to perform such tests to the State Water Resources Control Board.

§ 7602. Construction of Backflow Preventers.

- (a) Air-gap Separation. An Air-gap separation (AG) shall be at least double the diameter of the supply pipe, measured vertically from the flood rim of the receiving vessel to the supply pipe; however, in no case shall this separation be less than one inch.
- (b) Double Check Valve Assembly. A required double check valve assembly (DC) shall, as a minimum, conform to the AWWA Standard C506-78 (R83) adopted on January 28, 1978 for Double Check Valve Type Backflow Preventive Devices which is herein incorporated by reference.
- (c) Reduced Pressure Principle Backflow Prevention Device. A required reduced pressure principle backflow prevention device (RP) shall, as a minimum, conform to the AWWA Standard C506-78 (R83) adopted on January 28, 1978 for Reduced Pressure Principle Type Backflow Prevention Devices which is herein incorporated by reference.

§ 7603. Location of Backflow Preventers.

- (a) Air-gap Separation. An 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 in writing by the water supplier and the health agency.
- (b) Double Check Valve Assembly. 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.
- (c) Reduced Pressure Principle Backflow Prevention Device. A reduced pressure principle backflow prevention device shall be located as close as practical to the user's connection 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.

§ 7604. Type of Protection Required.

The type of protection that shall be provided to prevent backflow into the public water supply shall be commensurate with the degree of hazard that exists on the consumer's premises. The type of protective device that may be required (listed in an increasing level of protection) includes: Double check Valve Assembly-(DC), Reduced Pressure Principle Backflow Prevention Device-(RP) and an Air gap Separation-(AG). The water user may choose a higher level of protection than required by the water supplier. The minimum types of backflow protection required to protect the public water supply, at the water user's connection to premises with various degrees of hazard, are given in Table 1. Situations not covered in Table 1 shall be evaluated on a case-by-case basis and the appropriate backflow protection shall be determined by the water supplier or health agency.

TABLE 1

TYPE OF BACKFLOW PROTECTION REQUIRED

Degree of Hazard	Minimum Type of Backflow Prevention
(a) Sewage and Hazardous Substances	
(1) Premises where there are waste water pumping and/or treatment plants and there is no interconnection with the potable water system. This does not include a single-family residence that has a sewage lift pump. A RP may be provided in lieu of an AG if approved by the health agency and water supplier.	AG
(2) Premises where hazardous substances are handled in any manner in which the substances may enter the potable water system. This does not include a single-family residence that has a sewage lift pump. A RP may be provided in lieu of an AG if approved by the health agency and water supplier.	AG
(3) Premises where there are irrigation systems into which fertilizers, herbicides, or pesticides are, or can be, injected.	RP
(b) Auxiliary Water Supplies	
(1) Premises where there is an unapproved auxiliary water supply which is interconnected with the public water system. A RP or DC may be provided in lieu of an AG if approved by the health agency and water supplier	AG
(2) Premises where there is an unapproved auxiliary water supply and there are no interconnections with the public water system. A DC may be	RP

provided in lieu of a RP if approved by the health agency and water supplier.

- (c) Recycled water
- (1) Premises where the public water system is used to supplement the recycled water supply.

AG

(2) Premises where recycled water is used, other than as allowed in paragraph (3), and there is no interconnection with the potable water system.

RP

(3) Residences using recycled water for landscape irrigation as part of an approved dual plumbed use area established pursuant to sections 60313 through 60316 unless the recycled water supplier obtains approval of the local public water supplier, or the State Water Resources Control Board if the water supplier is also the supplier of the recycled water, to utilize an alternative backflow protection plan that includes an annual inspection and annual shutdown test of the recycled water and potable water systems pursuant to subsection 60316(a).

DC

- (d) Fire Protection Systems
- (1) Premises where the fire system is directly supplied from the public water system and there is an unapproved auxiliary water supply on or to the premises (not interconnected).

DC

(2) Premises where the fire system is supplied from the public water system and interconnected with an unapproved auxiliary water supply. A RP may be provided in lieu of an AG if approved by the health agency and water supplier.

AG

(3) Premises where the fire system is supplied from the public water system and where either elevated storage tanks or fire pumps which take suction from private reservoirs or tanks are used.

DC

(4) Premises where the fire system is supplied from the public water system and where recycled water is used in a separate piping system within the same building.

DC

- (e) Dockside Watering Points and Marine Facilities
- (1) Pier hydrants for supplying water to vessels for any purpose.

RP

(2) Premises where there are marine facilities.

RP

(f) Premises where entry is restricted so that inspections for crossconnections cannot be made with sufficient frequency or at sufficiently short notice to assure that do not exist. RP

(g) Premises where there is a repeated history of cross-connections being established or re-established.

RP

§ 7605. Testing and Maintenance of Backflow Preventers.

(a) The water supplier shall assure that adequate maintenance and periodic testing are provided by the water user to ensure their proper operation.