

Chapter 13.09

CROSS-CONNECTION CONTROL

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13.09.010 Purpose.

A. The purpose of this chapter 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-connections in the future.

B. These regulations are adopted pursuant to the state of California Administrative Code, Title 17 - Public Health entitled "Regulations Relating to Cross- Connections."

C. 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 city water department 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 city and/or the service of water pipes or fixtures of any consumer of the city. (Ord. 435 § 1 (part), 1989)

13.09.020 Definitions.

For the purposes of this chapter, the words set out in this section shall have the following meanings:

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. "Approved backflow prevention assembly" means an assembly which has passed laboratory and field evaluation tests performed by a recognized testing organization which has demonstrated their competency to perform such tests to the California Department of Health Services.

C. "Approved water supply" means any water supply whose potability is regulated by a state or local health agency

D. "Auxiliary supply" means any water supply on or available to the premises other than the approved water supply.

E. "AWWA standard" means an official standard developed and approved by the American Water Works Association (AWWA).

F. "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.

G. "City" means the city of Ripon.

H. "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. "Cross-connection" 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 assemblies, or other assemblies through which backflow could occur, shall be considered to be cross-connections.

J. "Double check valve assembly" means an 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 watertightness of each check valve.

K. "Health agency" means the California Department of Health Services, or the local health agency with respect to a small water system.

L. "Local health agency" means the county or city health authority.

M. "Person" means an individual, corporation, company, association, partnership, municipality, public utility, or

other public body or institution.

N. "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" 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 twenty-five individuals daily at least sixty days out of the year.

P. "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" means an assembly incorporating two internally loaded, independently operating check valves and an automatically operating differential relief valve located between the two checks, 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" refers to the point of connection of a user's piping to the water supplier's facilities.

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

T. "Water user" means any person obtaining water from an approved water supply system. (Ord. 435 § I (part), 1989)

13.09.030 Cross-connection protection requirements.

A. General Provisions.

1. Unprotected cross-connections with the public water supply are prohibited.

2. Whenever backflow protection has been found necessary, the city will require the

water user to install an approved backflow prevention assembly by and at his expense for continued services or before a new service will be granted.

3. 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 city's 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.

B. Where Protection is Required.

1. Each service connection from the city water system for supplying water to premises having an auxiliary water supply shall be protected against backflow of water from the premises into the public water system unless the auxiliary water supply is accepted as an additional source by the city, and is approved by the public health agency having jurisdiction.

2. Each service connection from the city water system for supplying water to any 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 into the public system. This shall include the handling of process waters and waters originating from the city water system which have been subjected to deterioration in sanitary quality.

3. 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 state or local health department and the city; 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.

C. Type of Protection Required.

1. 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 consumer's premises. The type of protective assembly that may 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 city. The minimum types of backflow protection required to protect the approved water supply, at the user's water connection to premises with varying degrees of hazard shall be as shown in Table 1 of Section 7604, Title 17, of the current edition of

the California Administrative Code. Situations which are not covered in Table 1 shall be evaluated on a case by case basis and the appropriate backflow protection shall be determined by the city or health agency

2. Two 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 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 city's mains from pollution or contamination; in such cases the installation of approved backflow assemblies at such service connections shall be required. (Ord. 435 § 1 (part), 1989)

13.09.040 Backflow prevention assemblies.**A. Approved Backflow Prevention Assemblies.**

1. Only backflow prevention assemblies which have been approved by the city shall be acceptable for installation by a water user connected to the city's potable water system.

2. The city will provide, upon request, to any affected customer a list of approved backflow prevention assemblies.

B. Backflow Prevention Assembly Installation. Backflow prevention assemblies shall be installed in the manner prescribed in Section 7603, Title 22 of the current edition of the California Administrative Code. Location of the assemblies should be as close as practical to the user's connection. The city shall have the final authority in determining the required location of a backflow prevention assembly.

C. Backflow Prevention Assembly Testing and Maintenance.

1 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 city. Minimum qualifications for competency shall be (a) two years' experience in plumbing or pipe fitting or equivalent as judged by the city; and (b) possession of a valid certificate from the California- Nevada Section of the American Water Works Association, a county certification program, or in the city's opinion possesses equivalent training.

2. Backflow prevention assemblies must be tested at least annually and immediately after installation, relocation or repair. The city 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 city shall be filed with the city 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.

3. The city will supply affected water users with a list of persons acceptable to the city to test backflow prevention assemblies. The city will notify affected customers by mail when annual testing of an assembly is needed.

4. The city may, at its option, test a water user's backflow prevention assembly to fulfill the requirements of this chapter, at any time. The water user will be charged for the test and any maintenance found necessary to keep the assembly in working order.

D. Backflow Prevention Assembly Removal.

1. Approval must be obtained from the city before a backflow prevention assembly is removed, relocated, or replaced.

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

b. Relocation. An assembly may be relocated following confirmation by the city that the relocation will continue to provide the required protection and satisfy installation requirements. A retest will be required following the relocation of the assembly;

c. Repair. An assembly may be removed for repair, provided the water use is either discontinued until repair is completed and the assembly is returned to service, or the service

connection is equipped with other backflow protection approved by the city. A retest will be required following the repair of the assembly; and 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 city and must be commensurate with the degree of hazard involved. (Ord. 435 § 1 (part), 1989)

13.09.050 User supervisor.

At each premises where it is necessary, in the opinion of the city, a user supervisor shall be designated by and at the expense of the water user. This user supervisor shall be responsible for the monitoring of the backflow prevention assemblies and for avoidance of cross-connections. In the event of contamination or pollution of the drinking water system due to a cross-connection on the premises, the city shall be promptly notified by the user supervisor so that appropriate measures may be taken to overcome the contamination. The water user shall inform the city of the user supervisor's identity on, as a minimum, an annual basis and whenever a change occurs. (Ord. 435 § 1 (part), 1989)

13.09.060 Administrative procedures.

A. Water System Survey.

1. The city shall review all requests for new services to determine if backflow protection is needed. Plans and specifications must be submitted to the city 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.

2. The city may require an on-premise inspection to evaluate cross-connection hazards. The city 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-premise inspection of his piping system shall be required to install the backflow prevention assembly the city considers necessary.

3. The city may, at its discretion, require a reinspection for cross-connection hazards of any premises to which it serves water. The city 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-premise inspection of his piping system shall be required to install the backflow prevention assembly the city considers necessary.

B. Customer Notification -- Assembly Installation.

The city 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 of backflow prevention assemblies.

2. 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 within the two-week period, the city may terminate water service to the affected water user until the required corrective actions are taken.

C. Customer Notification -- Testing and Maintenance.

1. The city will notify each affected water user when it is time for the back-flow prevention assembly installed on their service connection to be tested. This written notice shall give the water user thirty days to have the assembly tested and supply the water user with the necessary form to be completed and resubmitted to the city.

2. A second notice shall be sent to each water user which does not have his/ her backflow prevention assembly tested as prescribed in the first notice within the thirty-day period allowed. The second notice will give the water user a two week period to have his/her backflow prevention assembly tested. If no action is taken within the two week period, the city may terminate water service to the affected water user until the subject assembly is tested. (Ord. 435 § I (part), 1989)

13.09.070 Water service termination.

A. General. When the city encounters water uses that represent a clear and immediate hazard to the potable water supply that cannot be immediately abated, the city shall institute the procedure for discontinuing the city water service.

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

1. Refusal to install a required back-flow prevention assembly;
2. Refusal to test a backflow prevention assembly;
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 contaminants;

7. Unprotected direct or indirect connection between the public water system and an auxiliary water system;

8. A situation which presents an immediate health hazard to the public water system.

C. Water Service Termination Procedures.

1. For conditions 1, 2, 3, or 4, the city 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 allowed time period, water service may be terminated.

2. For conditions 5, 6, 7, or 8, the city will take the following steps:

- a. Make reasonable effort to advise water user of intent to terminate, water service;
- b. Terminate water supply and lock service valve. The water service will remain inactive until correction of violations has been approved by the city. (Ord. 435 § 1 (part), 1989)

13.09.080 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 city council 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 be declared invalid. (Ord. 435 § 1 (part), 1989)

13.09.090 Violation—Penalty.

A. Any person, firm or corporation violating any of the provisions of this chapter shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be punishable by a fine not to exceed five hundred dollars or

by imprisonment in the city jail or the county jail, for a period not to exceed ninety days, or by both such fine and imprisonment.

B. Each separate day, or any portion thereof, during which any violation of this chapter is continued shall be deemed to constitute a separate offense, and upon conviction thereof, shall be punishable as provided in this section. (Ord. 435 § 1 (part), 1989)