Chapter 3.28

CROSS-CONNECTION CONTROL

Sections:

3.28.010 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; and

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; and

3. To eliminate cross-connections between drinking water systems and sources of contamination; and

4. To prevent the making of cross-connections in the future.

B. These regulations are adopted pursuant to the California Code of Regulations, Title 17, Public Health, and 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 district 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 district. (Amended during 3-02 supplement: Ord. 5 (part), 1988)

3.28.020 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 district will require the water user to install an approved backflow prevention device by and at his expense for continued service 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 district's mains entering such premises, buildings, or structures shall be protected by an approved backflow prevention device. The type of device to be installed will be in accordance with the requirements of this chapter.

B. Where protection is required.

1. 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 into the public water system unless the auxiliary water supply is accepted as an additional source by the district, and is approved by the public health agency having jurisdiction.

2. Each service connection from the district 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 district water system which have been subjected to deterioration in sanitary quality.

3. Backflow prevention devices 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 district, or (b) intricate plumbing and piping arrangements or (c) 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 water user's premises. The types of protective devices that may be required (listed in an increasing level of protection) include: 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 district. 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 of 17 California Code of Regulations 7604, a copy of which is attached and incorporated herein by this reference. 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 district or health agency.

2. Two or more services supplying water from different street mains to the same building, structure, or premises through which an inter-street 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 district's mains from pollution or contamination; in such cases the installation of approved backflow devices at such service connections shall be required. (Amended during 3-02 supplement: Ord. 5 (part), 1988)

3.28.030 Backflow prevention devices.

A. Approved backflow prevention devices.

1. Only backflow prevention devices which have been approved by the district shall be acceptable for installation by a water user connected to the district's potable water system. Backflow prevention devices approved by AWWA and/or the University of Southern California (USC) shall be deemed acceptable for installation.

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

B. Backflow prevention device installation.

1. Backflow prevention devices shall be installed in the manner prescribed in Section 7603, Title 17 of the California Code of Regulations and in accordance with district standard details. Location of the devices should be as close as practical to the water user's connection. The district shall have the final author-

ity in determining the required location of a backflow prevention device.

a. AG: The air-gap separation shall be located on the water 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 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 at a distance of at least two pipe diameters of the supply inlet, but in no case less than two inches above the overflow rim of the receiving tank.

b. RP: The approved reduced pressure principle backflow prevention device shall be installed on the water user's side of and as close to the service connection as is practical. The device 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 device and with a minimum of twelve inches side clearance. The device 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 device shall be protected in a manner approved by the district.

c. DC: The approved double check valve assembly shall be located as close as practical to the water user's connection and 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 device, so that the top of the device is no more than a maximum of eight inches below grade, so there is a minimum of twelve inches of clearance between the side of the device 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 device and the side of the vault. Special consideration must be given to double check valve assemblies of the "Y" type. These devices 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 device. Vaults which do not have an integrated bottom must be placed on a six-inch layer of gravel.

2. All backflow prevention devices for which any portion of the device exceeds twelve inches in height from the adjacent finish grade shall be fully screened from view from the public right-of-way. However, this subsection shall not require any screening in a front yard to exceed forty-two inches in height from the adjacent finished grade. Landscaping shall compose one component of all screening, which is not otherwise accomplished by a building(s) on the site.

C. Backflow prevention device testing and maintenance.

1. The owners of any premises on which, or on account of which, backflow prevention devices are installed, shall have the devices tested by a person who has demonstrated his or her competency in testing of these devices to the district. Persons who have current certification issued by AWWA or USC as backflow prevention device testers shall be deemed to have demonstrated such compe-tency. Backflow prevention devices 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 device 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 a device is tested, relocated, or repaired. These devices 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.

2. The district will supply affected water users with a list of persons acceptable to the district to test backflow prevention devices. The district will notify affected customers by mail when annual testing of a device is needed and also supply users with the necessary forms which must be filled out each time a device is tested or repaired.

D. Backflow prevention device removal.

Approval must be obtained from the district before a backflow prevention device is removed, relocated, or replaced:

1. Removal. The use of a device may be discontinued and the device 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. A device may be relocated following confirmation by the district that the relocation will continue to provide the required protection and satisfy installation requirements. A retest will be required following the relocation of the device;

3. Repair. A device may be removed for repair, provided the water use is either discontinued until repair is completed and the device is 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 device; and

4. Replacement. A device may be removed and replaced provided the water use is discontinued until the replacement device is installed. All replacement devices must be approved by the district and must be commensurate with the degree of hazard involved. (Amended during 3-02 supplement: Ord. 8 Art. I, 1989; Ord. 5 (part), 1988)

3.28.040 User supervisor.

The district and/or health agency may, at their discretion, require an industrial water user to designate a user supervisor, at the water user's expense, when the water user's premises has a multipiping system that conveys 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. (Amended during 3-02 supplement: Ord. 5 (part), 1988)

3.28.050 Administrative procedures.

A. Water system survey.

1. The district shall review all requests for new service 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 device is necessary to protect the public water system, the required device must be installed before service will be granted.

2. The district may require an on-premise preliminary inspection (screening) 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-premise inspection of his piping system shall be required to install the backflow prevention device the district considers necessary.

3. If the preliminary inspection reveals that cross-connection hazards do exist on any premises, the district and/or the health agency shall conduct a detailed inspection to evaluate the existing hazards. The district will transmit a written notice requesting an inspection appointment to each affected water user.

4. Any water user who cannot or will not allow an on-premise inspection of water user's piping system shall be required to install the backflow prevention device the district or health agency considers necessary.

5. Based on findings of the detailed inspection, the district will prepare a report outlining the defect found and the manner in which it is to be corrected.

B. Customer notification—Device installation.

1. The district will notify the water user of the inspection findings, listing the corrective actions to be taken. A period of sixty days will be given to complete all required corrective actions, including installation of backflow prevention devices. In the event the water user installs a mechanical backflow prevention assembly, the water user may elect to have the district perform the initial testing of the assembly.

2. The district will reinspect the premises at the end of that time period to verify compliance or noncompliance. Findings of this inspection will be given to the health agency.

3. If the water user does not comply within the time period allowed, the district and/or the health agency will issue a second notice. The second notice will give the water user fourteen days to take the required corrective action.

4. If the water user fails to comply within the fourteen day period, the district may terminate water service to the affected water user until compliance is obtained.

C. Customer notification—Testing and maintenance.

1. The district will notify each affected water user when it is time for the backflow prevention device installed on their service connection to be tested. This written notice shall give the water user thirty days to have the device tested and supply the water user with the necessary form to be completed and submitted to the district.

2. A second notice shall be sent to each water user who fails to have the backflow prevention device tested as prescribed in the first notice within the thirty day period allowed. The second notice will give the water user fourteen days to comply. If no action is taken within this time period, the district may terminate water service to that water user until the subject device is tested.

3. Reports of testing and maintenance shall be maintained by the district for a minimum of three years. (Amended during 3-02 supplement: Ord. 5 (part), 1988)

3.28.060 Water service termination.

A. General. When the district encounters water uses that represent clear and immediate hazards to the potable water supply that cannot be immediately abated, the district shall discontinue water service as described in subsection C of this section.

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:

1. Refusal to install a required backflow prevention device;

2. Refusal to test a backflow prevention device;

3. Refusal to repair a faulty backflow prevention device;

4. Refusal to replace a faulty backflow prevention device;

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; and

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

C. Water service termination procedures.

1. For conditions of subsections (B)(1), (2), (3), or (4) of this section, 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 taken. If no action is taken within the time period allowed, the district may terminate water service.

2. For conditions of subsections (B)(5), (6), (7), or (8) of this section, the district will take the following steps:

a. Make reasonable efforts to advise the water user of its intent to terminate water service;

b. Immediately terminate water service and lock the service valve. The water service will remain inactive until the condition has been corrected to the satisfaction of the district. (Amended during 3-02 supplement: Ord. 5 (part), 1988)