

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

COMMISSION ADVISORY & COMPLIANCE DIVISION
Water Utilities Branch

RESOLUTION NO. W-3477
January 9, 1990

R E S O L U T I O N

(RES. W-3477) ALL WATER UTILITIES. ORDER
AUTHORIZING THE REVISION OF TARIFF RULE NO. 16,
SERVICE CONNECTIONS, METERS, AND CUSTOMER
FACILITIES, SECTION C., CROSS-CONNECTIONS.

The California Legislature amended Title 17 of the California Code of Regulations (Code) effective June 25, 1987, strengthening rules preventing cross-connections between public drinking water supply systems and possible sources of contamination. The amendment changed Sections 7583 through 7605, Regulations Relating to Cross-Connections.

Under the revised regulations, water suppliers must take certain actions to prevent the public water supply from being contaminated by possible cross-connections on customers' premises. Accordingly, Commission Tariff Rule No. 16, Service Connections, Meters, and Customer's Facilities, Section C., Cross-Connections, applicable to all water utilities subject to regulation by the Commission, must be revised.

The amendments to the Code require all public water utilities to:

- (a) Implement a cross-connection control program;
- (b) Conduct surveys to identify customer premises where cross-connections are likely to occur;
- (c) Provide backflow protection by the customer at the customer's connection or within the customer's premises or both;
- (d) Have the program carried out by at least one person trained in cross-connection control;
- (e) Establish a system or procedure for testing backflow preventers; and
- (f) Maintain records of locations, tests and repairs of backflow preventers.

The Department of Health Services (DHS) is the state agency with primary responsibility for administration of the provisions of the Code. The need to revise Tariff Rule No. 16 (Rule 16) was first brought to the attention of DHS by the regulated water utilities. That agency in turn contacted the Commission's Water Utilities Branch (Branch) requesting that Rule 16 be revised to bring it into conformance with the requirements of the amended Code. The request included DHS's suggested revisions to Rule 16.

After preparing its own proposed revisions to Rule 16, the Branch met with DHS and discussed the revision. The Branch and DHS subsequently came to tentative agreement regarding the needed revisions. The resulting agreed on

proposed revisions were then reviewed by the DHS's internal Cross-Connection Control Committee (Committee). Following approval by the Committee, the Branch sent the proposed revisions to all regulated water utilities and the California Water Association for review and comment.

After making appropriate changes suggested in the comments received and after review and agreement by DHS, the Branch again sent the proposed revisions to Rule 16 to all regulated water utilities and the California Water Association for review and comment. This change and review cycle was then repeated a third time.

The following comments were received:

- (a) Several utilities requested that Section C.6., Pumps And Boosters, be changed. In its current form and in the first proposed revision, this section would require that connection to the utility's system, where increasing the pressure of water would take place, must be done only from a sump, cistern or storage tank served through an air-gap connection, not a physical connection such as pipe to tank. The utilities' objection to such an arrangement came from the fact that such a requirement prevents the direct connection to the system of certain fire fighting equipment, and creates difficulties in serving customers at higher elevations. Several utilities requested that connections be permitted through a combination of anti-backflow and anti-suction devices, while one utility requested that the air gap requirement be kept for all connections with pressure increases except connections for fire fighting equipment. Although the Code has not and as amended does not require that an air gap be used in such situations, past policy of DHS has encouraged its use. The issue was resolved by including provisions allowing each utility the option of requiring an air-gap connection.
- (b) The new provisions of the Code require the utilities to be responsible for certain enforcement activities such as evaluating the potential of a cross-connection, and notifying customers when testing of backflow prevention devices is due. Three utilities suggested provisions in the revised Rule 16 that would allow the utility to delegate this responsibility to a designated representative or to a county agency having a cross-connection control program. The Branch and DHS agree that the amended Code is explicit regarding the enforcement responsibility of the utility, and that it precludes delegation of this responsibility. Further, while DHS and CPUC have regulatory authority in their respective areas over investor owned water utilities, neither has authority over private parties to whom such responsibility might be delegated.
- (c) One utility requested that provisions be made in the revised Rule 16 allowing utilities to charge engineering costs for recommending an acceptable type of backflow preventer to a customer. The revised Rule 16 provides for all direct costs of installation, testing and repair or replacement to be borne by the individual customer requiring the device. However, the administrative cost of premises inspection, keeping records, and notifying customers are to be included in the utilities' expense of operation. The Branch and DHS agree that there may be a nominal engineering expense to a utility in establishing and

maintaining a list of acceptable backflow preventers. The Branch believes this cost should be considered an operating expense, and no extra charge to individual customers for the information should be authorized.

- (d) Section C.2.(a) of the proposed revised Rule 16 requires that whenever a customer's premises has a fresh water supply from a well, spring, reservoir, or other source which has not been approved by DHS, a backflow preventer will be installed. It further provides that in the event such a customer agrees to abandon the other supply and agrees to remove all pumps and piping necessary for the utilization of this supply, the installation of a backflow preventer will not be required. One utility suggested that, because of the difficulty of enforcing the abandonment requirement of this section, it should be changed to require a backflow preventer for all premises where another source exists. The Branch and DHS agree that there will likely be isolated cases where customers will attempt to reutilize sources on their premises that have been abandoned in order to meet the requirements of this section; however, it is not considered to be enough of a problem to justify the suggested requirement. Routine inspection by the utility of premises that have been identified as having another water source is believed to be adequate to prevent this from occurring.
- (e) The first paragraph of Section C.2, Backflow Preventers Required, of the proposed revised Rule 16 requires the utility to evaluate the degree of potential health hazard to the public water supply which may be created as a result of conditions existing on a customer's premises. As a minimum, the evaluation is to 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. One utility suggested that this section be modified to provide that a utility be responsible only for protection of the public water supply, and not for the abatement of hazards which may exist to on-premises users. The Branch and DHS agree that the Code stresses the responsibility of the utility to evaluate potential hazards on customer premises, and the responsibility of the utility to ensure that measures are taken to protect the public. The Branch and DHS agree that this includes users on the customer's premises.

Revised Rule 16, is attached to this resolution as Appendix A.

Upon Commission approval of revised Rule 16 it will be necessary for all regulated water utilities to file it by advice letter, in accordance with the requirements of General Order 96-A, for inclusion in their respective filed tariff schedules. In order to ensure timely implementation of the provisions of revised Rule 16, the Branch requests authority from the Commission to file the revised Rule 16 on behalf of each of those utilities that have not filed the revised Rule within sixty (60) days of its approval by the Commission.

FINDINGS:

1. Rule 16, Section C., Cross Connections, should be revised to conform with revised portions of Sections 7583 - 7605, Title 17, California Code of Regulations, Regulations Relating to Cross-Connections.
2. The proposed revisions attached to this Resolution as Appendix A will bring Rule 16, Section C. into conformance with the Regulations Relating to Cross-Connections.
3. Each water utility regulated by this Commission is responsible for preventing contamination of its water supply by a cross-connection through diligent implementation of the cross-connection provisions of revised Rule No. 16.
4. The Regulations Relating to Cross-Connections do not require, or preclude, connections to a utility's system through an air gap, where the pressure of water taken will be increased by a booster pump.
5. Each utility should be allowed the option of including backflow preventers incorporating an air gap in its listing of approved devices.
6. A utility should not be allowed to delegate the enforcement responsibilities of revised Rule 16 to others.
7. A utility should not be allowed to charge a customer an engineering fee for designating acceptable backflow preventers for a customer's premises.
8. A backflow preventer is not needed where a customer's premises contain a fresh water supply not approved by DHS, and the customer has abandoned the unapproved supply in the manner required by revised Rule 16.
9. The Branch should be authorized to file revised Rule 16 on behalf of those utilities who have not filed it within sixty (60) days of the effective date of this resolution.

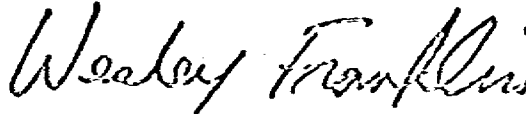
IT IS ORDERED that:

1. Each water utility regulated by this Commission shall, within sixty (60) days of the effective date of this resolution, file an advice letter incorporating revised Tariff Rule No. 16, Service Connections, Meters, and Customer's Facilities, attached to this resolution as Appendix A, in its filed tariffs. Its filing shall comply with General Order 96-A. The effective date of revised Tariff Rule No. 16 is the effective date of this resolution.
2. The Water Utilities Branch shall make the required filing on behalf of those utilities who have not filed within sixty (60) days of the effective date of this resolution.
3. This resolution is effective today.

I certify that this resolution was adopted by the Public Utilities Commission at its regular meeting on January 9, 1990. The following commissioners approved it:

G. MITCHELL WILK
President
FREDERICK R. DUDA
JOHN B. OHANIAN
PATRICIA M. ECKERT
Commissioners

Commissioner Stanley W. Hulett,
being necessarily absent, did
not participate.



WESLEY FRANKLIN
Acting Executive Director

Resolution W-3477

APPENDIX A

RULE NO. 16

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

Rule No. 16

SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

A. General

1. Utility's Responsibility

- a. (1) In urban areas with dedicated front streets, rear service roads, or public utility easements the utility will furnish and install the service pipe, curb stop, meter and meter box at its own expense for the purpose of connecting its distribution system to the customer's piping, except for temporary services and as otherwise provided in Rule No. 15, Main Extensions. The service connection, curb stop, meter and meter box will be installed at a convenient place between the property line and the curb, or inside the customer's property line where necessary.
- (2) In areas which do not have dedicated front streets, rear service roads, or public utility easements the utility will furnish and install the service pipe, curb stop, meter and meter box as above provided but at a convenient point on or near the customer's property except for service beyond the service area.
- b. The service connection will determine the point of delivery of water service to the customer.

2. Customer's Responsibility

a. Condition Precedent to Receiving Service

The customer as a condition precedent to receiving service shall:

- (1) Furnish and lay the necessary piping to make the connection from the service connection to the place of consumption and shall keep such piping in good repair in accordance with such reasonable requirements of the utility as may be incorporated in its rules herein.
- (2) Provide a main valve on the piping between the service connection and the point of customer use.
- (3) Where service is rendered at or near the service area boundary for use beyond the service area, install, operate and maintain the facilities necessary to provide service.

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(To be inserted by utility)

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A. 2. b. The customer's piping shall extend to that point on the curb line or property line of easiest access to the utility from its existing distribution system or requiring the least extension of the existing distribution main. The utility shall be consulted before installation thereof and its approval of location secured.

3. Ownership and Absence of Rental Obligation Where Facilities Are on Premises of Customer.

- a. The service pipe, curb stop, meter, and meter box furnished by the utility at its own expense and located wholly or partially upon a customer's premises are the property of the utility.
- b. No rent or other charge will be paid by the utility where the utility-owned service facilities are located on a customer's premises.

4. Access to Premises of Customer

- a. The utility shall at all reasonable hours have access to meters, service connections and other property owned by it which may be located on customer's premises for purposes of installation, maintenance, operation or removal of the property at the time service is to be terminated. The customer's system should be open for inspection at all reasonable times to authorized representatives of the utility.
- b. Any inspection work or recommendations made by the utility or its agents in connection with plumbing or appliances or any use of water on the customer's premises, either as a result of a complaint or otherwise, will be made without charge.

5. Responsibility for Loss or Damage

- a. The utility will not be responsible for any loss or damage caused by any negligence or wrongful act of a customer or of a customer's authorized representatives in installing, maintaining, operating or using any or all appliances, facilities or equipment for which service is supplied.

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(To be inserted by utility)

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SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

A. 5. b. The customer will be held responsible for damage to utility's meters and other property resulting from the use or operation of appliances and facilities on customer's premises, including but not limited to damage caused by steam, hot water, or chemicals.

B. Services

1. Charge for Service Connections

The utility shall make no charge to a customer for making a service connection except in case of connections for private fire protection service, connections for temporary service, changes made at the request and for the convenience of the customer, where additional connections are requested because of divisions of land ownership when the land before division was receiving service, and as otherwise provided in the utility's main extension rules.

2. Size of Service Pipe

- a. The minimum size of service pipe installed by the utility will not be less than 3/4-inch nominal size.
- b. The utility may require the customer to provide such data as may be necessary for the utility properly to size a service larger than 3/4-inch nominal size consistent with pressure requirements.

3. Installation

Only duly authorized employees or agents of the utility will be permitted to install a service pipe from the utility's main to the customer's premises and to make the connection to the customer's piping.

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C. Cross-Connections

1. Protective Regulation

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| No physical connection between the potable water supply system of the public utility and that of any other water supply or source of actual or potential contamination will be permitted except in compliance with the regulations of the State Department of Public Health contained in Title 17, Sections 7583-7605 of the California Code of Regulations under "Regulations Relating to Cross-Connections." | (N) |
| | (N) |
| | (T) |
| | (T) |

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| 2. Backflow Preventers Required | (T) |
|---------------------------------|-----|

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| The utility will 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. As a minimum, the evaluation will 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. | (N) |
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| The utility will require the installation of approved backflow preventers of required type under any of the following conditions: | (T) |
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| a. Where a fresh water supply which has not been approved by the State Department of Health Services is already available from a well, spring, reservoir or other source. (If the customer agrees to abandon this other supply and agrees to remove all pumps and piping necessary for the utilization of this supply, the installation of backflow preventers will not be required.) | (T) |
| | (T) |

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| b. Where salt water, or water otherwise contaminated, is available for industrial or fire protection purposes at the same premises. | (T) |
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- c. 2. c. Where the premises are or may be engaged in industrial processes using or producing process waters or liquid industrial wastes, or where the premises are or may be engaged in handling sewage or any other dangerous substances.
- d. Where fresh water hydrants or other outlets are or may be installed on piers or docks.
- e. Where the circumstances are such that there is special danger of backflow of sewage or other contaminated liquids through plumbing fixtures or water-using or treating equipment, or storage tanks and reservoirs.
- f. Premises that have internal cross-connections that are not abated to the satisfaction of the utility or the health agency. (N)
- g. 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.
- h. Premises having a repeated history of cross-connections being established or re-established. (N)

3. Type and Expense of Backflow Preventers (T)

Any backflow preventer utilized shall be of the type and design specified and approved for the circumstances in Section 7604, Title 17 of the California Code of Regulations, except that a customer may utilize an approved backflow preventer providing greater protection than required by Section 7604. Such backflow preventers shall be installed by and at the expense of the customer, in a manner approved by the utility and the public health agency having jurisdiction. Backflow preventers shall be installed as close as practical to the customer's connection to the utility and in a location which is readily available for periodic inspection. (N)

Backflow preventers shall be tested, repaired or replaced at the expense of the customer. (N)

(Continued)

(To be inserted by utility)

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SERVICE CONNECTIONS, METERS, AND CUSTOMER'S FACILITIES

C. 4. Periodic Testing of Backflow Preventers (T)

Whenever a backflow preventer is installed, relocated, or repaired the customer shall have it tested by persons who have demonstrated their competency in testing of these preventers to the utility or health agency. Backflow preventers shall be tested at least annually or more frequently if determined to be necessary by the health agency or utility. The utility shall notify the customer when testing of backflow preventers is needed. The notice shall give the date when the test must be completed. Reports of testing and maintenance shall be maintained by the utility for a minimum of three years. (D) (N)

5. Refusal to Serve or Discontinuance of Service (D)

The utility may refuse or discontinue service: (D)

a. Until there has been installed on the customer's piping an approved backflow preventer of the required type, if one is required. (T)

b. Where the utility has been denied access to the customer's premises to make an evaluation. (N)

c. Where the customer refuses to test a backflow preventer, or to repair or replace a faulty backflow preventer.

d. Where there is a direct or indirect connection between the public water system and a sewer line.

e. Where there is an unprotected direct or indirect connection between the public water system and a system or equipment containing contaminants.

f. Where there is an unprotected direct or indirect connection between the public water system and auxiliary water system.

g. When there is a situation which presents an immediate health hazard to the public water system. (N)

(Continued)

(To be inserted by utility)

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C. 6. Pumps and Boosters

When a customer receiving service at the utility's main or service connection must, by means of a pump of any kind, increase the pressure of the water received, the pump shall not be attached to any pipe directly connected to the utility's main or service pipe. Such pumping or boosting of pressure shall be done, at the option of the utility, either:

(N)
(N)

a. From a sump, cistern or storage tank which must be served through an air gap connection, or

(T)
(T)

b. From a combination of an approved backflow preventer plus a device approved by the water utility to prevent the booster pump from drawing the utility's system pressure below 20 psig.

(N)

This requirement shall not apply to American Water Works Association (AWWA) Class 2 Fire Protection systems, except as provided for in the Information Bulletin issued by the Office of State Fire Marshal on December 10, 1984.

AWWA Class 2 fire protection systems have direct connections from public water mains only; no pumps, tanks or reservoirs, except that booster pumps may be installed in the connections from the street mains to the fire protection systems; no physical connection from other water supplies; no antifreeze or other additives of any kind; all sprinkler drains discharging to atmosphere, dry wells, or other safe outlets.

(N)

(To be inserted by utility)

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