

## ARTICLE III. - CROSS-CONNECTION CONTROL AND BACKFLOW PREVENTION

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### **Sec. 37-68. - Definitions.**

For the purposes of this article, the following words and phrases shall have the meanings respectively ascribed to them by this section:

*Air gap:* The unobstructed vertical distance through a free atmosphere between the lowest perimeter of a water outlet and the flood-level rim of any receptacle. This distance will be a minimum of two (2) times the diameter of the outlet. In case of near-walls, this distance will be three (3) times the diameter of the outlet.

*Auxiliary supply:* Any water source or system other than the public water supply that may be available in the building or premises.

*Backflow:* The reversal of flow from its intended direction as a result of backsiphonage or backpressure.

*Bureau:* The bureau of sanitary engineering of the state department of health.

*Contamination:* Any introduction into pure water of microorganisms, wastes, wastewater, undesirable chemicals or gases.

*Cross-connection:* Any physical connection between a potable water supply and any waste pipe, soil pipe, sewer, drain or any unapproved source or system; also, any potable water supply outlet which is submerged or can be submerged in waste or other source of contamination.

*Director:* The director of public utilities or his designee.

*Double-check valve assembly:* An assembly of two (2) internally loaded, specially designed and independently operating check valves with a tightly closing shut-off valve on the upstream and the downstream side of the check valves, equipped with properly placed female threaded test cocks.

*Existing ground level:* The level above which surface water will not accumulate under normal conditions.

*Flood-level rim:* The top edge of the receptacle over which water could overflow.

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*Hazard:* Any condition, device or practice in the water usage system and its operation which creates or, in the judgment of the director, may create a danger to the health and well-being of the water consumer.

*Owner:* The person in charge, care and control of the property and the tenant or customer who signed the water service agreement.

*Pollution:* The presence of any foreign substance (chemical, physical, radiological or biological) in water, which tends to degrade its quality so as to constitute an unnecessary risk or impair the usefulness of the water.

*Reduced pressure principle back flow preventer:* An assembly of differential valves and check valves, including an automatically opened spillage port to the atmosphere, designed to prevent backflow, incorporated with a tightly closing shut-off valve on the upstream and the downstream side of the check valves, equipped with properly placed female threaded test cocks.

*RP device:* A "reduced pressure principle backflow preventer," as defined above.

*Service connection:* The terminal end of a service line from the waterworks. If a meter is installed at the end of the service, then the service connection means the downstream end of the meter.

*Service line:* That portion of the water line from the consumer's side of the water meter to the first water outlet.

*Toxic:* Any substance of solids or liquids harmful for human consumption.

*Vacuum breaker, atmospheric:* A vacuum breaker designed so as not to be subjected to continuous static line pressure.

*Vacuum breaker, pressure type:* A vacuum breaker designed to operate under conditions of static line pressure.

(Code 1965, § 37-39; Ord. No. 2150, 6-23-92; Ord. No. 3182, 5-24-11)

**Sec. 37-69. - Objectives of article.**

The objectives of this article are to:

- (1) Protect the public health, safety, and welfare through a cross-connection control and backflow prevention program intended to prevent the potential or actual occurrence where a backflow, backpressure condition, or cross connection within piping or other portions of consumers' potable water systems could allow the entry of contaminants or pollutants into the public water system;
- (2) Eliminate or control existing cross-connections, actual or potential, at each water outlet from the consumer's service line;
- (3) Provide a continuing inspection program of cross-connection control which will systematically and effectively control all actual or potential cross-connections which may be installed in the future; and
- (4) Comply with all applicable regulations of the Commonwealth of Virginia pertaining to

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cross-connection control and backflow prevention.

(Code 1965, § 37-40; Ord. No. 3182, 5-24-11)

**Sec. 37-70. - Prohibited connections.**

(a) No person shall install or maintain a water service connection to any premises where cross-connections to a waterworks or a consumer's water system may exist, unless such cross-connections are in compliance with this article and approved by the director in accordance with the written policies of the department of public utilities.

(b) No person shall install or maintain any connection that may allow water from an auxiliary water system to enter a waterworks or consumer's water system, unless the auxiliary water system, the method of connection and the use of such system are in compliance with this article and approved by the director in accordance with the written policies of the department of public utilities.

(Ord. No. 3182, 5-24-11)

**Editor's note—** Ord. No. 3182, adopted May 24, 2011, repealed the former § 37-70, and enacted a new § 37-70 as set out herein. The former § 37-70 pertained to violations of article and derived from § 37-49 of the 1965 Code.

**Sec. 37-71. - Maintenance and inspection of backflow prevention devices.**

The consumer, at his own expense, shall install, operate, test and maintain approved backflow prevention devices, as directed by the department of public utilities. It shall be the duty of the consumer to have such devices inspected at least annually or at such greater frequency as the director may deem necessary. Such inspections shall be performed by a certified backflow prevention device worker or other qualified person approved by the director. The consumer shall maintain accurate records of tests and repairs made to backflow prevention devices and provide the director with copies of such records. The records shall be on forms approved or provided by the director. In the event of accidental pollution or contamination of the public or consumer's potable water system, due to backflow on or from the consumer's premises, the owner shall promptly take steps to confine further spread of the pollution or contamination within the consumer's premises, and shall immediately notify the director of the hazardous condition.

(Ord. No. 3182, 5-24-11)

**Editor's note—** Ord. No. 3182, adopted May 24, 2011, repealed the former § 37-71, and enacted a new § 37-71 as set out herein. The former § 37-71 pertained to general responsibilities of city and consumers as to protection of water supply and derived from § 37-42, 37-48 of the 1965 Code; Ord. No. 2150, 6-23-92.

**Sec. 37-72. - Inspections; notice to correct defects.**

(a) The director shall have the right of entry into any building, during reasonable hours, for the purpose of making inspections of the water distribution system installed in such building or premise. The owner or occupant may accompany the inspector while this inspection is being made.

(b) All new construction plans and specifications for commercial buildings shall be made available to the director and building codes administrator to determine the degree of hazard of possible cross-connections.

(c) An on-site inspection of all existing buildings will be made to determine the degree of hazard to the public water system. If an unauthorized cross-connection is found, either actual or potential, the director

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shall proceed in accordance with the provisions of Section 37-72.1

(Code 1965, § 37-43; Ord. No. 3182, 5-24-11)

**Sec. 37-72.1. - Violations.**

(a) Whenever the director determines that a violation of this article exists, he shall cause a notice of violation to be provided to the consumer at the premises at which the violation exists. Such notice may be mailed to the address of the consumer shown on the records of the department of public utilities or personally served upon the consumer. The notice shall be signed by the director, and may require any or all of the following actions to be completed by a date certain, which date shall, except in circumstances deemed by the director to constitute an imminent and substantial endangerment to public health, be not less than fourteen (14) calendar days from the date the notice was issued: (i) the cessation or correction of the violation; (ii) the acquisition and installation of additional material, equipment, supplies or personnel to ensure that the violation does not recur; (iii) the submission of a certified plan to prevent future violations, which plan shall be prepared by a professional engineer licensed to practice in the Commonwealth of Virginia; or (iv) any other corrective action deemed necessary for compliance with this article.

(b) In the event the owner or occupant fails to comply with the terms of a notice of violation, the director may cause water service to the premises to be terminated. Where a violation constitutes an imminent and substantial endangerment to public health, the director shall terminate water service. The cost of disconnection and reconnection shall be paid by the consumer prior to restoration of water service to the premises.

(c) In addition to disconnection of water service as set forth in this section, and not in lieu thereof, a violation of any of the provisions of this article shall be punishable by a fine in an amount not exceeding Two Thousand, Five Hundred Dollars (\$2,500.00) or may be enjoined by a court of competent jurisdiction upon application of the director, either or both.

(Ord. No. 3182, 5-24-11)

**Sec. 37-73. - General design, installation and maintenance standards for potable water supply system; cross-connection control and backflow prevention policy.**

Potable water supply systems shall conform to the standards and specifications of the Department of Public Utilities Cross-Connection Control and Backflow Prevention Policy (May 2011), which policy, including any future amendments thereto, is hereby adopted and incorporated by reference into this article. In the event of a conflict between the provisions of such policy and applicable provisions of the Virginia Uniform Statewide Building Code or Virginia Waterworks Regulations, the provisions of the building code or waterworks regulations, as the case may be, shall apply.

(Code 1965, § 37-44[a]; Ord. No. 3182, 5-24-11)

**Secs. 37-74—37-86. - Reserved.**

**Editor's note—** Ord. No. 3182, adopted May 24, 2011, repealed §§ 37-74—37-86, which pertained to required hazard and backflow prevention devices; cross connections; protective devices for fire systems; vacuum breakers; double-check valve assemblies and RP devices and derived from §§ 37-41, 37-44[table], [b]—[h], 37-45—37-47 of the 1965 Code.