

Article IV — Backflow & Cross-Connection Control

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Article IV — Backflow & Cross-Connection Control

§ 64-401 Purpose.

The purpose of this Article is to—

- (a) Protect the public water supply system from contamination or pollution by isolating within the consumer's water system contaminants or pollutants which could backflow through the service connection into the public water supply system;
- (b) Promote the elimination or control of existing cross-connections, actual or potential, between the public or consumer potable water system and nonpotable water systems, plumbing fixtures, and sources or systems containing process fluids; and
- (c) Provide for the maintenance of a continuing program of cross-connection control which will systematically and effectively prevent the contamination or pollution of the public and consumer's potable water system.

§ 64-402 Scope.

This Article shall apply to all premises served by the public water supply system of the Borough of Alburtis.

§ 64-403 Policy.

The public water supplier and the consumer have the joint responsibility for protection of the public water supply system from contamination due to backflow of contaminants through the water service connection. If, in the judgment of the public water supplier or his authorized representative, an approved backflow-prevention device is required, the supplier shall give notice to the consumer to install such approved backflow-prevention device at each service connection to his premises. The consumer shall immediately install such approved device or devices at his own expense, and failure, refusal, or inability on the part of the consumer to install such device or devices shall constitute grounds for discontinuing water service to the premises until such device or devices have been installed. (*See* § 64-701(d) and § 64-706(b).)

§ 64-404 Water System Definitions.

For purposes of this Article—

- (a) The “public water supply system” shall mean the Borough’s water system.
- (b) The “public water supplier” shall mean the Borough.
- (c) The “water system” shall be considered as made up of two (2) parts: the public water supply system and the consumer’s water system.
- (d) The “public water supply system” shall consist of the source facilities and the distribution system and shall include all of those facilities of the public water supply system under the control of the public water supplier up to the point where the consumer’s water system begins.
- (e) The “source” shall include all components of the facilities utilized in the production, treatment, storage, and delivery of water to the public distribution system.
- (f) The “public distribution system” shall include the network of conduits used for delivery of water from the source to the consumer’s water system.
- (g) The “consumer’s water system” shall include all facilities beyond the service connection which are utilized in conveying water from the public distribution system to points of use.

§ 64-405 Cross-Connections Prohibited.

(a) **In General.** No water service connection shall be installed or maintained to any premises where actual or potential cross-connections to the public water supply system or consumer’s water system may exist unless such actual or potential cross-connections are abated or controlled to the satisfaction of the public water supplier.

(b) **Auxiliary Water Supply.** No connection shall be installed or maintained whereby water from an auxiliary water supply may enter a public or consumer’s water system unless such auxiliary water supply and the method of connection and use of such supply shall have been approved.

§ 64-406 Survey and Investigations.

(a) **Access to Consumer's Premises.** The consumer's premises shall be open at all reasonable times to the public water supplier, or his authorized representative, for the purposes of conducting surveys and investigations of water use practices within the consumer's premises to determine whether there are actual or potential cross-connections to the consumer's water system through which contaminants or pollutants could backflow into the public potable water system.

(b) **Information from Consumer.** On request by the public water supplier, the consumer shall furnish information on water use practices within his premises.

(c) **Surveys by Consumer.** It shall be the responsibility of the water consumer to conduct periodic surveys of water use practices on his premises to determine whether there are actual or potential cross-connections to his water system through which contaminants or pollutants could backflow into the public water supply system.

§ 64-407 Where Protection is Required.

(a) **Branch Line.** An approved backflow prevention device shall be installed prior to the first branch line leading off each service line to a consumer's water system where, in the judgment of the public water supplier, an actual or potential hazard to the public water supply system exists.

(b) **Service Line—Certain Conditions.** An approved backflow-prevention device shall be installed on each service line to a consumer's water system where the following conditions exist:

(1) Systems having an auxiliary water supply, unless such auxiliary supply is accepted as an additional source by the public water supplier and approved by the Department of Environmental Protection.

(2) Systems where any substance is handled in such a fashion as to create an actual or potential hazard to the public water supply system. This shall include systems having sources or auxiliary systems containing process fluids or waters originating from the public water supply system which are no longer under the sanitary control of the water purveyor.

(3) Systems having internal cross-connections that, in the judgment of the public water supplier, are not correctable, or intricate plumbing arrangements which make it impractical to determine whether or not cross-connections exist.

(4) Systems where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete cross-connection survey.

(5) Systems having a repeated history of cross-connections being established or reestablished.

(6) Others specified by the public water supplier.

(c) **Service Line—Certain Facilities.** An approved backflow-prevention device shall be installed on each service line to a consumer's water system serving, but not necessarily limited to, the following types of facilities, unless the public water supplier determines that no actual or potential hazard to the public water supply system exists:

- (1) Hospitals, mortuaries, clinics and nursing homes.
- (2) Laboratories.
- (3) Piers, docks and waterfront facilities.
- (4) Sewage treatment plants, sewage pumping stations, or stormwater pumping stations.
- (5) Food or beverage processing plants.
- (6) Chemical plants.
- (7) Metal plating industries.
- (8) Petroleum processing or storage plants.
- (9) Radioactive material processing plants.
- (10) Car washes or truck washes.
- (11) Others specified by the water purveyor.

§ 64-408 Type of Protection Required.

The type of protection required under § 64-407 shall depend on the degree of hazard which exists as follows:

(a) An approved air-gap separation shall be installed where the public water supply system may be contaminated with substances that are dangerous to the public health and could cause a severe health hazard.

(b) An approved air-gap separation or an approved reduced-pressure-zone backflow-prevention device shall be installed where the public water supply system may be contaminated with a substance that could cause a system or health hazard.

(c) An approved air-gap separation or an approved reduced-pressure-zone-backflow-prevention device or an approved double-check-valve assembly shall be installed where the public water supply system may be polluted with substances that would be objectionable but not dangerous to health.

§ 64-409 Backflow-Prevention Devices.

(a) **In General.** Any backflow-prevention device required by this Article shall be of a model or construction approved by the public water supplier and shall comply with the following:

(1) Air-gap separation to be approved shall be at least twice the diameter of the supply pipe, measured vertically above the top rim of the vessel, but in no case less than one (1) inch.

(2) A double-check-valve assembly or a reduced-pressure-zone backflow-prevention device shall be approved by the public water supplier and shall mean a device that has been manufactured in full conformance with standards established by the American Water Works Association, entitled "AWWA C506 Standards For Reduced Pressure Principle and Double Check Valve Backflow Prevention Devices." Said American Water Works Association standards are herein adopted by the public water supplier. Final approval, however, of the reduced-pressure-principle backflow preventer and the double-check-valve assembly shall be evidenced by a certificate of full approval issued by an approved testing laboratory certifying full compliance with said American Water Works Association standards.

(3) An interchangeable connection to be approved shall be either a swing-type connector or a four-way valve of the lubricated-plug type that operates through a mechanism which unseats the plug, turns it ninety degrees (90°) and reseats the plug. Four-way valves shall not be used as stop valves but must have separate stop valves on each pipe connected to the valve. The telltale port on the four-way valve shall have no piping connected and the threads or flange on this port shall be destroyed so that a connection cannot be made.

(b) **Existing Devices.** Existing backflow-prevention devices approved by the public water supplier at the time of installation and properly maintained shall, except for inspection and maintenance requirements, be excluded from the requirement of subsection (a), *provided* that the public water supplier is assured that they will satisfactorily protect the public potable supply system. Whenever the existing device is moved from the present location or requires more than minimum maintenance or when the public water supplier finds that the maintenance of the device constitutes a hazard to health, the device shall be replaced by a backflow-prevention device meeting the requirements of subsection (a).

§ 64-410 Installation of Devices.

(a) Backflow-prevention devices required by this Article shall be installed at a location and in a manner approved by the Maintenance Department.

(b) Backflow-prevention devices installed on the service line to a consumer's water system shall be located on the consumer's side of the water meter, as close to the meter as is reasonably practical, and prior to any other connection.

(c) Pits or vaults shall be of watertight construction, be so located and constructed as to prevent flooding, and shall be maintained free from standing water by means of either a sump and pump or a suitable drain. Such sump pump or drain shall not connect to a sanitary sewer nor permit flooding of the pit or vault by reverse flow from its point of discharge. An access ladder and adequate natural or artificial lighting shall be provided to permit maintenance inspection and testing of the backflow-prevention device.

§ 64-411 Inspection and Maintenance.

(a) **Inspection Schedule.** It shall be the duty of the consumer at any premises on which backflow-prevention devices required by this Article are installed to have inspections, tests, and

overhaul made in accordance with the following schedule or more often where inspections indicate a need:

(1) Air separation shall be inspected at time of installation and at least every twelve (12) months thereafter.

(2) Double-check-valve assemblies shall be inspected and tested for tightness at the time of installation and at least every twelve (12) months thereafter. They shall be dismantled, inspected internally, cleaned, and repaired whenever needed and at least every thirty (30) months.

(3) Reduced-pressure-zone backflow-prevention devices shall be inspected and tested for tightness at the time of installation and at least every twelve (12) months thereafter. They shall be dismantled, inspected internally, cleaned, and repaired whenever needed and at least every five (5) years.

(4) Interchangeable connections shall be inspected at the time of installation and at least every twelve (12) months thereafter.

(b) Performance of Inspection. Inspections, tests, and overhaul of backflow-prevention devices shall be made at the expense of the water consumer and shall be performed by the public water supplier or a person certified to inspect, test, and overhaul backflow-prevention devices.

(c) Records. The water consumer must maintain a complete record of each backflow-prevention device from purchase to retirement. This shall include a comprehensive listing that includes a record of all tests, inspections, and repairs. Records of inspections, tests, repairs, and overhaul shall be submitted to the public water supplier.

(d) Devices May Not Be Made Ineffective. Backflow-prevention devices shall not be bypassed, made inoperative, removed, or otherwise made ineffective without specific authorization by the water purveyor.

§ 64-412 Booster Pumps.

(a) Cutoff Device Required. Where a booster pump has been installed on the service line to or within any premises, such pump shall be equipped with a low-pressure cutoff device designed to shut off the booster pump when the pressure in the service line on the suction side of the pump drops to ten (10) pounds per square inch gauge or less for a period of thirty (30) seconds or longer.

(b) Maintenance and Certification. It shall be the duty of the water consumer to maintain the low-pressure cutoff device in proper working order and to certify to the public water supplier, at least once a year, that the device is operating properly.

§ 64-413 Violations of This Article.

(a) Termination of Service. The public water supplier shall deny or discontinue, after reasonable notice to the occupants thereof and in accordance with the procedures set forth in Ar-

ticle VII, the water service to any premises wherein any backflow-prevention device required by this Article is not installed, tested, and maintained in a manner acceptable to the public water supplier, or if it is found that the backflow-prevention device has been removed or bypassed, or if an unprotected cross-connection exists on the premises, or if a low-pressure cutoff device required by this Article is not installed and maintained in working order.

(b) Restoration of Service. Water service to such premises shall not be restored until the consumer has corrected or eliminated such conditions or defects in conformance with these regulations and to the satisfaction of the public water supplier.

(c) Civil Penalties. In addition to the other remedies provided in this Section, each person who violates any provision of this Article shall be subject to the penalties provided in § 64-110.