COUNCIL BILL NO. 09-035
ORDINANCE NO. 4188

AN ORDINANCE AMENDING VARIOUS SECTIONS OF ARTICLE V OF CHAPTER 102 OF THE ARVADA CITY CODE PERTAINING TO THE CROSS CONNECTION CONTROL CLARIFICATIONS, DEFINITIONS, TIME LIMITS FOR ENFORCEMENT

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ARVADA, COLORADO:

Section 1. Article V, titled “Cross Connection Control Program” of Chapter 102 of the Arvada City Code is hereby amended to read as follows:

“ARTICLE V. CROSS CONNECTION CONTROL PROGRAM

DIVISION 1. GENERALLY

Sec. 102-271. Short title.

This article is known and may be cited as the "Arvada Cross Connection Control Ordinance."

Sec. 102-272. Legislative intent.

(a) It is the intent of the city council to protect the city water system from contamination or pollution by backflow from an owner's internal distribution system or private water system, and to provide for the maintenance of a continuing program of cross connection control, which will systematically prevent the contamination or pollution of the city's water system.

(b) The Colorado Cross-Connection Control Manual, endorsed by the Colorado Department of Public Health and Environment, and the International Plumbing Code are hereby adopted and incorporated by reference.

(c) In the event that this article, the International Plumbing Code, and the Colorado Cross-Connection Control Manual do not provide technical requirements, specifications, or standards applicable to a particular matter, the Colorado Plumbing Code shall apply. In the event that the technical requirements, specifications, or standards stated in this article, the International Plumbing Code, and the Colorado Cross-Connection Control Manual conflict each other or with those stated in the Colorado Plumbing Code, whichever technical requirement, specification, or standard is most restrictive shall apply. In the event that this article, the International Plumbing Code, the Colorado Cross-Connection Control Manual, and the Colorado Plumbing Code provide technical requirements, specifications, or standards on a single matter in terms so distinct that determining

which provision is more restrictive is not readily apparent, the Colorado Plumbing Code shall apply.

Sec. 102-273. Responsibility.

(a) The director of utilities is hereby delegated the responsibility for implementing a cross connection control program in accordance with this article and for enforcement thereof. If a backflow preventer is required at the city water service connection to any owner's premises for the protection of the city water system, the director of utilities shall give notice in writing to the owner to install an approved backflow preventer at each service connection to the premises. The owner shall install an approved backflow preventer at the owner's own expense.

(b) No provision of this article exempts the owner from the cross connection control provisions for internal water distribution systems as contained in the most recently adopted International Plumbing Code, which has been adopted by reference in chapter 26.

Sec. 102-274. Definitions.

The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Administrative authority means the individual official, board, department, or agency established and authorized by a state, county, city, or other political subdivision created by law to administer and enforce the provisions of the regulations and codes as adopted or amended. This definition shall include the administrative authority's duly authorized representative.

Approved means accepted or acceptable under an applicable specification or standard stated or cited as suitable for the proposed use under procedures and authority of the water supplier, administrative authority.

Approved backflow prevention assembly means an assembly listed or approved by any of the following:

(1) University of Southern California, Foundation for Cross-Connection Control and Hydraulic Research list of approved backflow prevention assemblies.

(2) An assembly listed and approved by the American Society of Sanitary Engineering.

(3) An assembly meeting the requirements of the American Water Works Association's standards C510 or C511, which are hereby adopted by reference in the present form as the city standard.

Approved testing agency means an organization primarily established for purposes of testing to approved standards and approved by The Administrative Authority

Auxiliary water supply means any water supply on or available to the premises other than the city approved public potable water supply. These auxiliary waters may include water from another purveyor's public potable water supply or any natural source such as a well, spring, river, stream, pond, lake, etc., or "used waters" or "industrial fluids." These waters may be polluted or contaminated or may be objectionable and constitute an unacceptable water source over which the city does not have sanitary control.

Backflow means the undesirable reversal of the direction of flow of the water or mixtures of water and other liquid, gases, or other substances into the distribution pipes of the potable water supply from any source or sources caused by backpressure and/or back-siphonage.

Backflow connection means any arrangement whereby backflow can occur.

Backflow prevention device means any device, assembly, method, or type of construction designed to prevent backflow into the public water supply by containing the owner's water system from the public water system, including any of the following:

(1) *Air-gap (AG)* means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet supplying water to a tank, plumbing fixture, or other device and the flood level rim of said vessel. An approved air-gap will be at least double the diameter of the supply pipe, measured vertically, above the top of the rim of the vessel; and, in no case, less than one inch. When an air-gap is used at the service connection to prevent the contamination or pollution of the public potable water system, an emergency bypass shall be installed around the air-gap system and an approved reduced pressure principle assembly will be installed in the bypass system.

(2) *Double check valve assembly (DC or DCVA)* means an assembly of two independently operating approved check valves with tightly closing shut-off valves on each side of the check valves, plus properly located test cocks for the testing of each check valve. The entire assembly shall be an approved backflow prevention assembly. The entire backflow preventer shall meet the design and performance specifications and approval of a recognized and city-approved testing agency for backflow preventers. To be approved, these backflow preventers must be readily accessible for in-line testing and maintenance.

(3) *Reduced pressure principle device (RP or RPPA)* means an assembly of two independently operating approved check valves with a hydraulic automatic operating differential relief valve between the two check valves. The assembly shall be located between two tightly closing (resilient seated) shut-off valves, and have four properly located test cocks for the testing of the check and relief valves.

The entire assembly shall be an approved backflow prevention assembly. The assembly will operate to maintain the pressure in the zone between the two check valves at a level less than the pressure on the public water supply side of the assembly. At cessation of normal flow, the pressure between the two check valves will be less than the pressure on the public water supply of the backflow preventer. In case of leakage of either of the check valves, the differential relief valve will operate to maintain the reduced pressure in the zone between the check valves by discharging to the atmosphere. When the inlet pressure is two pounds per square inch or less, the relief valve will open to the atmosphere. To be approved, these backflow preventers must be readily accessible for in-line testing and maintenance, and be installed in a location where no part of the backflow preventer will be submerged.

(4) *Spill-resistant vacuum breaker* means an assembly consisting of one check valve force-loaded closed and an air-inlet vent valve force-loaded open to atmosphere, positioned downstream of the check valve, and located between and including two tightly closing shutoff valves and a test cock.

(5) *Vacuum breaker, atmospheric non-pressure type* means a vacuum breaker consisting of an air inlet opening and a nonloaded floating check disk valve designed to prevent back-siphonage only. The assembly shall not be subjected to continuous static line pressure or backpressure or be installed where it would be under pressure for more than 12 continuous hours.

(6) *Vacuum breaker, pressure type* means a vacuum breaker, designed to prevent back-siphonage only, consisting of a spring loaded check valve, a spring-loaded air inlet opening, a tightly closing shut off valve on each side of the assembly, and two appropriately located test cocks. The assembly shall not be subjected to backpressure. The entire assembly shall be an approved backflow prevention assembly.

Back-pressure means the backflow of water or other contaminated fluids caused by a pump, elevated tank, boiler or other means that could create pressure within the owner's system greater than the city supply pressure.

Back-siphonage means the backflow of potentially contaminated water into the potable water supply as a result of the pressure in the potable water system falling below atmospheric pressure of the plumbing fixtures, pools, tanks, or vats connected to the potable water distribution piping.

Building supply means all piping and fittings carrying potable water from the water meter or other source of water supply to a building or other point of use or distribution on the lot. Building supply shall also mean water service.

Certified backflow preventer inspector and *tester* means a person who has passed a Colorado Department of Public Health and Environment approved or sponsored

inspection tester course, and who meets the requirements of the Colorado Primary Drinking Water Regulations under Article 12.2 Cross-Connection Control Technician Certification as a certified inspector/tester. The certified backflow prevention assembly inspector/tester shall show competence to test and maintain backflow prevention assemblies to the satisfaction of the administrative authority having jurisdiction.

Check valve means a self-closing device, which is designed to permit the flow of fluids in one direction and to close if there is a reversal of flow.

City means the City of Arvada.

Code or *"this Code,"* means these regulations, subsequent amendments thereto or any emergency rule or regulation which the administrative authority having jurisdiction may lawfully adopt.

Compliance period means the time between the receipt by the owner of a notice from the director of utilities or his designee thereof to install, test, or repair a backflow prevention assembly and the day upon which such installation, testing, or repair shall be completed or ready for inspection by the director of utilities or his designee thereof.

Containment protection means the installation of an approved backflow prevention assembly, or method, on the water service line serving any premises, location, facility or area immediately downstream from meter on main service line, or upstream from all other connections. Protection by containment shall be used when the potable water system may be contaminated or polluted by substances used or stored within a building or premises.

Contamination means any impairment of the quality of the potable water by pollution from sewage, industrial fluids or waste liquids, compounds or other materials to a degree, which creates an actual hazard to the public health through poisoning or through the spread of disease, any physical, chemical, biological, or radiological substance or matter that has an adverse effect on water.

Critical level means the critical level C-L or C/L marking on a backflow prevention assembly or vacuum breaker, which is a point conforming to approved standards and established by the testing laboratory (usually stamped on the assembly by the manufacturer), which determines the minimum elevation above the flood-level rim of the fixture or receptacle served at which the assembly may be installed. When a backflow preventer does not bear a critical level marking, the bottom of the vacuum breaker, combination valve, or the bottom of any such approved backflow preventer (valve body) shall constitute the critical level.

Cross connection means any physical arrangement whereby a public water supply is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other assembly which contains, or may contain, contaminated water, sewage, or other waste or liquid of unknown or unsafe

quality which may be capable of imparting contamination or pollution to the public water supply as a result of backflow. Bypass arrangements, jumper (swing) connections, removable sections, swivel or changeover devices, four-way valves, or other temporary or permanent devices through which, or because of which, backflow could occur are considered to be cross connections.

Cross connections, controlled means a connection between a potable water system and a nonpotable water system with an approved backflow preventer properly installed and tested in accordance with approved procedures that will demonstrate operational protection commensurate with the degree of hazard.

Department having jurisdiction means the administrative authority, including any other law enforcement agency affected by any provision of this Code, whether such agency is specifically named or not.

Director of utilities, or *director* means the person appointed by the city manager to supervise the operation of the municipal water utility and who is charged with certain duties and responsibilities by this article.

Flood-level rim means the edge of the receptacle from which water overflows.

Hazard, degree of is determined from an evaluation of the potential risk to public health and the adverse effect of the hazard upon the public potable water system and includes the following types:

Hazard, health means any condition, assembly, or practice in the water supply system and its operation, which could create, or in the judgment of the Director of Utilities, may create a danger to the health and the well being of the water consumer. An example of a health hazard is a structural defect, including cross connections, in a water supply system or a direct connection of a potable water supply line to a sanitary sewer.

Hazard, plumbing means a plumbing type cross connection in a consumer's potable water system that has not been properly protected by a vacuum breaker, air-gap separation or backflow preventer. Unprotected plumbing type cross connections are considered to be a health hazard.

Hazard, pollution means an actual or potential threat to the physical properties of the water system or to the potability of the public or the consumer's potable water system which would constitute a nuisance or be aesthetically objectionable or could cause damage to the system or its appurtenances, but would not be a threat to life or be dangerous to health.

Hazard, system means an actual or potential threat of severe damage to the physical properties of the public potable water system or the consumer's potable water system or of a pollution or contamination which would have a protracted effect on the quality of the potable water in the system caused by a cross-connection.

Industrial fluids system means any system containing a fluid or solution, which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, system, pollution or plumbing hazard if introduced into an approved water supply. This may include, but not be limited to, polluted or contaminated waters; all types of process water and "used waters" originating from the public water system which may have deteriorated in sanitary quality; chemicals in fluid form; cooling tower and/or cooling towers that are chemically or biologically treated or stabilized with toxic substances; contaminated natural waters such as from wells, springs, streams, rivers, lakes, dams, ponds, retention pits, irrigation canals or systems, etc.; oils, gases, glycerins, paraffins, caustic and acid solutions and other liquid and gaseous fluids used in industrial or other purposes or for firefighting purposes.

Isolation means the control of a cross connection within a building's plumbing system by the installation of approved backflow prevention assembly or method at or near the potential sources of pollution or contamination.

Main means the principal artery of any system of continuous piping to which branches may be connected.

Multifamily dwelling means a building containing two or more residential units. Multifamily dwelling includes apartment buildings, condominium buildings, townhouse buildings and lofts or other combination of residence/work space in a building or buildings that are primarily residential facilities.

Multistory building means any building having two or more levels, excluding the basement, or over 40 feet in height. Single-family units are excluded from this definition.

Nonpotable water means water that is not safe for human consumption or that does not meet the requirements set forth in the Colorado Primary Drinking Water Regulations. This includes water that is unsafe or unpalatable to drink because it contains pollutants, contaminants, minerals, or infectious agents.

Plumbing system means and includes all potable water supply and distribution pipes, all plumbing fixtures and traps, all drainage and vent pipes, all building drains, including their respective joints and connections, devices, receptacles, and appurtenances within the property lines of the premises and shall include potable water piping, potable water treating or using equipment, fuel gas piping, water heaters and vents for same.

Pollution means an impairment of the quality of the potable water to a degree which does not create a hazard to the public health, but which does adversely and unreasonably affect the aesthetic qualities of such potable water for domestic use.

Potable water means water free from impurities in amounts sufficient to cause disease or harmful physiological effects. The bacteriological, chemical, and radiological quality

shall conform to the Colorado Primary Drinking Water Regulations and be satisfactory for drinking, culinary, and domestic purposes.

Submerged inlet means a water pipe or extension thereto from the public water supply terminating in a tank, vessel, fixture or appliance, which may contain water of questionable quality, waste or other contaminant, and which is unprotected against backflow. *Vacuum* means any pressure less than atmospheric pressure.

Vacuum breaker - see Backflow Preventer.

Water-distributing pipe means a water-distributing pipe in a building or premises, which conveys potable water from the building supply pipe to the plumbing fixtures and other water outlets.

Water service connection means the terminal end of the city's service connection from the city water system, i.e., at the owner's stop box shut-off valve or meter. If a meter is installed at the end of the service connection, then the service connection means the downstream end of the meter. There will be no unprotected takeoffs from the service line ahead of any meter or backflow preventer located at the point of delivery to the owner's water system. This shall include irrigation systems and fire sprinkler systems. Service connection will also include water service connection from a fire hydrant and all other temporary or emergency water service connections from the public potable water system.

Water utility main means a water supply pipe or system of pipes, installed and maintained by the city, township, county, public utility company or other public entity, on public property, in the street or in an approved dedicated easement of public or community use.

Water supplier means any person or group owning and/or operating a public potable water supply.

Water supply system means the building supply pipe, the water distributing pipes and the necessary connecting pipes, fittings, control valves, and all appurtenances carrying or supplying potable water in or adjacent to the building or premises.

Secs. 102-275--102-299. Reserved.

DIVISION 2. REQUIREMENTS

Sec. 102-300. Noncity owned water systems.

(a) Any owner receiving water service from a non-city owned water system located entirely or partially within the city boundaries shall have all cross-connections controlled and backflow prevention that is comparable to that which is otherwise required in this article.

(b) No certificate of occupancy shall be issued for any new construction, or for substantial reconstruction of any existing building or structure, unless the owner presents evidence of compliance with this section. The term "substantial reconstruction" means any construction for which a building permit is required by the city. The director shall promulgate the form of, and require completion of, a certificate of compliance which the owner shall present to the city prior to, and as a condition of, issuance of a certificate of occupancy.

(c) In lieu of a certificate of compliance promulgated by the city, the director may accept a verified certificate of compliance or comparable document issued by the directors or managers of the noncity owned water system which document attests that a backflow prevention assembly acceptable to the owner of the water system has been duly installed. Provided said document is authentic and provides the information otherwise required by the city for issuance of a certificate of occupancy, the director may accept said alternate proof of compliance.

(d) In addition to examination of the written documentation of compliance, the director may require that any backflow prevention assembly be physically inspected by the city prior to issuance of a certificate of occupancy. The director may deny issuance of a certificate of occupancy if the backflow prevention assembly is not properly installed, tested and operational at the time of inspection. The owner shall be required to submit copies of any test of the backflow prevention assembly to the city's building inspection division for examination prior to issuance of a certificate of occupancy.

Sec. 102-301. Water system.

The city water system consists of the source and distribution facilities of the water system to the point of the water service connection. The source includes all components of the facilities utilized in the production, treatment, storage, and delivery of water to the distribution system. The distribution system includes the network of conduits used for the delivery of water from the source to the owner's system. The owner's system begins at the point where the water leaves the meter service connection.

Sec. 102-302. Installation.

(a) An approved backflow preventer shall be installed at or near the property line or immediately inside the structure being served; but, in all cases, before the first branch line leading off the service line wherever any of the following conditions exist:

(1) In the case of premises having an auxiliary water supply which is not or may not be of safe bacteriological or chemical quality and which is not acceptable as an additional source by the director of utilities, the public water system will be protected against backflow from the premises by

installing a backflow preventer in the service line appropriate to the degree of hazard.

(2) In the case of premises in which any industrial fluids or any other objectionable substance is handled in such a fashion as to create an actual or potential hazard to the public water system, the public water system shall be protected against backflow from the premises by installing a backflow preventer in the service line appropriate to the degree of hazard. This will include the handling of process waters and waters originating from the public water system which have been subject to deterioration in quality.

(3) In the case of premises having internal cross connections that cannot be permanently corrected and controlled, or having 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 dangerous cross connections exist, the public water system shall be protected against backflow from the premises by installing a backflow preventer in the service line.

(b) Backflow preventers shall be installed in an accessible location to facilitate inspection, testing, and maintenance. Adequate drainage area for the backflow preventer must be provided for in the event that water is discharged.

Sec. 102-303. Inspections, testing, and repair.

(a) It is the responsibility of the owner to have certified inspections and operational tests made on backflow preventers upon installation and at least once per year thereafter. All irrigation sprinkler systems must be tested within two weeks of start-up of the system in the spring .The director of utilities may require certified inspections at more frequent intervals.

(b) These inspections and tests shall be made at the expense of the owner and will be performed by a certified inspector/tester approved by the director of utilities. A backflow preventer will be repaired or replaced at the expense of the owner whenever a backflow preventer is found to be defective.

(c) All equipment used in the testing of backflow preventers shall be calibrated and checked for accuracy yearly, or more often, and proof of compliance shall be submitted to the director of utilities upon request.

(d) The director of utilities retains the right to test or otherwise check the installation and operation of any backflow preventer at anytime to assure proper installation and operation.

(e) Upon presentation of proper credentials, the director of utilities' representatives shall have the right to enter and inspect all buildings and premises for cross connections to determine whether hazards exist. This right of entry shall be a condition of water service in order to protect the health, safety, and welfare of the people of the city. Throughout the city's water distribution system, where building security is required, the backflow prevention assemblies shall be located in an area not subject to security. In the event that entry is denied, the director may seek a search warrant or terminate water service.

Sec. 102-304. Compliance.

(a) The compliance period for installation, inspection and testing, or repair of a backflow prevention device, including air-gap ("AG"), double check valve assembly ("DC"), pressure vacuum breaker (PVB) or reduced pressure principal device ("RP"), shall be as follows:

Type of Premises or Specific Application	Backflow Prevention Device	Compliance Period
Existing Facilities:		
Any establishment with a backflow incident (suspect occurrence or documented)	AG or RP	10 days from date of occurrence
Automotive service station or repair shop	AG or RP	45 days
Auxiliary water supply	AG or RP	45days
Boilers; nondomestic	AG or RP	45 days
Carbonators	AG or RP	45 days
Commercial service line greater than four-inch diameter	AG or RP	60 days
Carwash	AG or RP	45 days
Food processing and packing plant	AG or RP	45days
Greenhouse	AG or RP	45 days
Hair Salon	AG or RP	45 days
Hospital, outpatient care and long-term facility	AG or RP	45 days
Hotel or lodging facility	AG or RP	45 days
Irrigation--Lawn and Landscaping	AG, PVB or RP	45 days
Kennel--Boarding only	AG or RP	45 days
Laboratory--Clinical and chemical	AG or RP	45 days

Laundry or dry cleaning service	AG or RP	45 days
Manufacturing and industrial facility (to be determined on an individual basis)	AG or RP	45 days
Medical office	AG or RP	45 days
Morgue and mortuary	AG or RP	45 days
Multi-Family dwelling	AG or RP	45 days
Multi-storied buildings	AG or RP	45 days
Photographic studio and laboratory	AG or RP	45 days
Sewage treatment plant	AG or RP	45 days
School with laboratory	AG or RP	45 days
Shell business development space	AG or RP	45days
Solar heating system with make-up water	RP	45 days
Spa	AG or RP	45 days
Swimming pool	AG or RP	45 days
Veterinary office	AG or RP	45 days
Water treatment plant	AG or RP	45 days
New Construction:		
Fire line--No chemicals added	AG, RP, or DC	Prior to Certificate of Occupancy or final inspection by the building division
Fire line--Chemical added	AG or RP	
New Construction or Alteration Requiring a Building Permit:		
Any establishment with a backflow incident (suspect or occurrence documented)	AG or RP	10 days from date of occurrence
Automotive service station or shop	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Auxiliary water supply	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Boilers; nondomestic	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Carbonators	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division

Commercial service line greater than four-inch diameter	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Carwash	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Fire line--Chemicals added	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Fire line--No Chemicals added	AG or DC or RP	
Food processing and packing plant	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division.
Greenhouse	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Hospital, outpatient care and long-term facility	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Hotel and lodging	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Irrigation--Lawn and Landscaping	AG,PVB or RP	Prior to Certificate of Occupancy or final inspection by the building division
Kennel--Boarding only	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Laboratory--Clinical and chemical	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Laundry and cleaning service	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Manufacturing and industrial facility (to be determined on an individual basis)	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Medical office	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Morgue and mortuary	AG or RP	Prior to Certificate of Occupancy

		or final inspection by the building division
Multi-Family dwelling	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Multi-storied building	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Photographic studio and lab	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Sewage treatment plant	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
School with laboratory	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Shell business development space	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Solar heating system with make-up water system	RP	Prior to Certificate of Occupancy or final inspection by the building division
Spa	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Swimming pool	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Veterinary office	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division
Water treatment plant	AG or RP	Prior to Certificate of Occupancy or final inspection by the building division

Unless otherwise noted in this section, compliance periods are from the date this section becomes effective.

(b) The owner of any building or facility not listed in the foregoing table may be required by the director of utilities to install a backflow preventer as provided in section 102-214 if the director determines that the water supply system or

contaminants in the system present a hazard. The director will determine the compliance period and backflow preventers required.

Sec. 102-305. Reporting and record-keeping.

(a) The certified backflow prevention inspector will report on approved report forms the results of inspections, tests, and maintenance to the director of utilities and the water property owner. This report will be submitted to the director of utilities within five days following the completion of the inspection, test, or maintenance of the backflow preventer.

(b) The certified inspector/tester shall also, on a form approved by the city, attach a card or tag to the backflow preventers following each inspection, test, or maintenance activity to document and date the activities performed.

(c) The certified inspector, the property owner, and the director of utilities shall keep records of all inspections, tests, or maintenance activities, including materials and replacement parts, for a period of not less than three years.

Sec. 102-306. Variances.

(a) In the event that strict application of the requirements of this article would inflict an unnecessary and unreasonable hardship and unreasonable practical difficulty upon the owner, and other means of accomplishing the purposes of this article are available, then the owner may seek and be granted a variance from that portion of the regulations creating the hardship and unreasonable practical difficulty. Additional expense alone shall be insufficient to create a hardship and unreasonable practical difficulty for purposes of this section.

(b) The owner shall submit a request for a variance to the director on a form prescribed by the director. The director may submit the application to staff for review and comment. The director shall review the variance application for completeness and in light of the purposes of this article and departmental staff comments and recommendations. The director may grant the application, or may grant the application with conditions, or may deny the application. The grounds for denial shall be specified in a written denial.

(c) The director may approve the application for variance if he finds all of the following:

(1) Special circumstance (such as physical limitations on construction, or inaccessibility of utility lines) that are not common to the structures or buildings as they currently exist, and that strict compliance with this article as a consequence of the physical nature of the building or structure would be impractical; and

(2) There is an alternative identifiable, viable, and verifiable means to protect the city water system from contamination or pollution by backflow from the owners internal distribution system or water system; and

(3) The variance is not needed as a result of the actions of the owner, or because of the owner's failure to otherwise comply with the requirements of this article.

(d) A variance shall not be permanent, but shall lapse or be terminated under any of the following conditions:

(1) The building or structure to which the variance applies remains uncompleted or unoccupied for more than 180 consecutive days after issuance of the variance; or

(2) The building or structure is demolished, or undergoes a substantial remodeling that does or could alleviate the conditions giving rise to the original variance; or

(3) The owner fails to comply with the conditions or requirements of the variance, or fails to comply with any other requirement of this article not otherwise excused or abated by the variance; or

(4) The owner modifies or alters the owner's internal water or distribution system as approved by the city variance without first obtaining approval by the city.

(e) Except for the matters provided for in the variance, an owner shall not be otherwise excused from compliance with the requirements of this article as a consequence of grant of a variance.

Sec. 102-307. Backflow prevention assemblies.

(a) Only approved backflow prevention assemblies shall be used.

(b) A backflow prevention assembly shall have a unique serial number attached to the backflow preventer by the manufacturer.

(c) Any backflow prevention assembly already installed, which is not an approved backflow prevention assembly, shall be replaced with an approved backflow prevention assembly within 60 days after adoption of this article, unless the backflow prevention assembly fails an annual operational test. If the backflow prevention assembly fails any such test, it will be replaced with an approved backflow prevention assembly in accordance with sections 102-216 and 102-218.

(d) The following references have been approved by the director of utilities for testing, certifying and approving backflow prevention assemblies:

(1) The American Society of Sanitary Engineering 901 Canterbury, Suite A, Westlake, OH 44145.

(2) The University of Southern California Foundation for Cross Connection Control and Hydraulic Research, University of Southern California, KAP-200 University Park MC-2531, Los Angeles, CA 90089-2531.

(3) American Water Works Association Standards C510 and C511,6666 West Quincy Avenue, Denver, CO 80235.

The director of utilities may create a list of additional approved references.

(e) Backflow prevention assemblies that may be subjected to back-pressure or back-siphonage that have been fully tested and granted a seal of approval and are listed on the current list of "approved backflow prevention assemblies," and newly installed backflow prevention assemblies which have been inspected and installed to the satisfaction of the director of utilities, are deemed to be in compliance with this article.

DIVISION 3. ENFORCEMENT AND FEES

Sec. 102-331. Violation.

(a) Any person who violates any provision of this article shall be subject to the penalties set forth in section 1-5 of this Code. Each day that such violation occurs or continues shall constitute a separate offense.

(b) Failure of the customer to cooperate in the installation, maintenance, testing or inspection of backflow preventers required by this division, or who violates any provision of this article, shall be subject to the penalties set forth in section 1-5, and after notice and hearing, may be subject to termination of water service.

(c) Service of water to any premises may be discontinued if unprotected cross-connections exist on the premises. The water service may be discontinued if the backflow preventer has been removed or bypassed or when any defect is found in an installed backflow preventer. Service shall not be restored until such conditions or defects are corrected.

(d) Discontinuance of water service may be summary, immediate and without written notice whenever, in the judgment of the director of utilities, such action is necessary to protect the public potable water supply or the distribution system from an imminent threat to public health.

Secs. 102-332--102-350. Reserved."

Section 2. Except as amended herein, the remaining provisions and terms of Article V of Chapter 102 of the Arvada City Code shall remain unchanged, are ratified and affirmed, and shall remain in full force and effect.

Section 3. This ordinance shall be effective five days after publication following final passage.

INTRODUCED, READ AND ORDERED PUBLISHED THIS 16th day of November, 2009.

PASSED, ADOPTED AND APPROVED this 7th day of December, 2009

_____
Robert G. Frie, Mayor

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

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Christopher K. Daly, City Attorney

Publication Dates: November 19, 2009
December 10, 2009