

ORDINANCE NO. 2011-22

AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE CITY OF PEORIA, ARIZONA AMENDING CHAPTER 5 OF THE PEORIA CITY CODE (1992) BY AMENDING SECTION 5-101 PERTAINING TO DEFINITIONS; AMENDING SECTION 5-102 PERTAINING TO PURPOSE; AMENDING SECTION 5-111 PERTAINING TO GENERAL REQUIREMENTS; AMENDING SECTION 5-112 PERTAINING TO CROSS-CONNECTION PROHIBITED; AMENDING SECTION 5-113 PERTAINING TO TESTING AND RECORDS; AMENDING SECTION 5-114 PERTAINING TO WHERE PROTECTION REQUIRED; AMENDING SECTION 5-115 PERTAINING TO TYPE OF PROTECTION; AMENDING SECTION 5-116 PERTAINING TO BACKFLOW PREVENTION DEVICES; AMENDING SECTION 5-117 PERTAINING TO INSPECTION AND MAINTENANCE; AND PROVIDING FOR SEVERABILITY AND PROVIDING FOR AN EFFECTIVE DATE.

THEREFORE, it is ordained by the Mayor and Council of the City of Peoria as follows:

SECTION 1. Chapter 5 of the Peoria City Code (1992) is amended by amending Section 5-101 pertaining to Definitions and which shall read as follows:

Sec. 5-101. Definitions.

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

Agency means the state department of environmental quality.

Air-gap separation or *A.G.* means a physical separation between the free flowing discharge end of a potable water supply pipeline and an open or nonpressure receiving vessel.

Approved means backflow prevention assembly or methods approved by the department as either meeting an applicable specification stated or cited in this division, or suitable for the proposed use.

Approved air-gap separation means an air-gap separation that is at least double the diameter of the supply pipe measured vertically above the overflow rim

of the vessel, but in no case less than one (1) inch (two and one-half (2.5) centimeters).

Assembly means any system for backflow protection consisting of more than one (1) component and having been tested as one (1) unit, and approved as one (1) unit.

Atmospheric vacuum breaker or A.V.B. (also known as the "nonpressure type vacuum breaker") means an assembly containing a float check, a check seat and an air inlet port. The flow of water into the body causes the float to close the air inlet port. When the flow of water stops, the float falls and forms a check valve against backsiphonage and at the same time opens the inlet port to allow air to enter and satisfy the vacuum. A shutoff valve immediately upstream may be an integral part of the assembly. An atmospheric vacuum breaker is designed to protect against a health hazard (i.e. contaminant) under a backsiphonage condition only.

Auxiliary water system means a source of water outside of the city's public water supply system. No connection to the city's public water supply system shall be made with any other water system without the approval of the local authority.

Backflow means the flow of water or other liquids, mixtures, or substances into the distribution pipes of a potable water system from any source other than the intended source of the potable water supply.

Backflow prevention assembly means any assembly, method, or type of construction intended to prevent backflow into a potable water system.

Backpressure means the flow of water or other liquids, mixtures, or substances under pressure into the distribution pipes of a potable water supply system from any source or sources other than the intended source.

Backsiphonage means the flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply from any source other than its intended source, caused by the reduction of pressure in the potable water supply system.

Consumer or customer means the owner, official custodian or person in control of any premises supplied by or in any manner connected to a public water system.

Consumer's or customer's water system means any water system serving the premises, commencing at the discharge side of the service pipe shutoff valve location.

Department means the building safety department of the city.

Double check valve assembly or D.C. means an assembly composed of two (2) independently acting, approved check valves, including tightly closing shutoff valves located at each end of the assembly and fitted with properly located test cocks.

Contamination means an impairment of quality of the potable water, such as through the introduction into water of microorganisms, chemicals, wastes, or wastewater, in concentration that makes water unfit for its intended use industrial discharges, or other materials to a degree which creates an actual or potential hazard to the public health.

Cross-connection means any connection through which a supply of potable water could be contaminated or polluted through backflow.

Double check-detector check valve assembly or D.C.D.C. means a specially designed assembly composed of a line-size approved double check valve assembly with a specific bypass five-eighths-inch by three-fourths-inch, or three-fourths-inch water meter and a three-fourths-inch approved double check valve assembly. The meter shall register all rates of flow.

Fixed air gap means the unobstructed vertical distance through the free atmosphere between the water discharge point and the flood level rim of the receptacle.

Foundation means Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California.

Hazard or Health hazard means any condition, device or practice in a water system or its operation resulting from a real or potential danger to the health and well-being of consumers. "Severe" as used to qualify "health hazard" means a hazard to the health of the user that could be expected to result in death or significant reduction in the quality of life.

Inspection means a plumbing inspection to examine carefully and critically all materials, fixtures, piping and appurtenances, appliances and installations of a plumbing system for compliance with requirements of the Uniform Building Code and this division.

Installation means the installation of backflow prevention assembly.

Nonpotable water means water not safe for drinking, personal or culinary use as determined by the requirements of Safe Drinking Water Act of 1974, and this division.

Officer means the person appointed by the city manager to enforce the provisions of this division.

Plumbing means the actual installation, repair, maintenance, alteration or extension of a plumbing system by any person. "Plumbing" includes all piping, fixtures, appurtenances and appliances for a supply of water for all purposes, including without limitation lawn sprinkler systems from the source of a private water supply on the premises or from the main in the street, alley or at the curb to within and about any building or buildings where a person lives, works or assembles. "Plumbing" includes all piping from discharge of pumping units to and including pressure tanks in water supply systems. "Plumbing" includes all piping, fixtures, appurtenances and appliances for a building drain and a sanitary drainage and related ventilation system of any building or buildings where a person or persons live, work or assemble from the point of connection of such building drain to the building sewer or private sewage disposal system two (2) feet beyond the foundation walls.

Pollution means the presence of any foreign substance (organic, inorganic, radiological, or biological) in water that tends to degrade its quality so as to constitute a hazard or impair the usefulness of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably affect such waters for domestic use.

Potable water means water which meets the requirement of the state health department for drinking, culinary, and domestic purposes.

Potential cross-connection means a fixture or appurtenance with threaded hose connection, tapered spout, or other connection which would facilitate extension of the water supply line beyond its legal termination point.

Pressure vacuum breaker or P.V.B. means an assembly containing an independently operating loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve. The assembly is to be equipped with properly located test cocks and tightly closing shutoff valves located at each end of the assembly. This assembly is designed to protect against a health hazard (i.e. contaminant) under a backsiphonage condition only.

Process fluid means any fluid or solution which may be chemically, biologically or otherwise contaminated or polluted in a form or concentration such as would constitute a health, pollution, or system hazard if introduced into the public or a consumer's potable water system. This includes but is not limited to:

- (1) Polluted or contaminated waters.
- (2) Process waters.
- (3) Used waters originating from the public water supply system which may have deteriorated in sanitary quality.

- (4) Cooling waters.
- (5) Questionable or contaminated natural waters taken from wells, lakes, streams, or irrigation systems.
- (6) Chemicals in solution or suspension.
- (7) Oils, gases, acids, alkalis and other liquid and gaseous fluids used in industrial or other processes, or for firefighting purposes.

Public water supply system means all mains, pipes and structures owned and/or maintained by the city, or any connected to such public water supply system, supplying potable water to the citizens of the city, through which water is obtained and distributed to the public, including wells and well structures, intakes and cribs, pumping stations, treatment plants, reservoirs, storage tanks and appurtenances, collectively or severally, actually used or intended for use for the purpose of furnishing potable water.

Reduced pressure zone principle backflow prevention assembly or RP means an assembly containing a minimum of two (2) independently acting check valves together with an automatically operated pressure differential relief valve located between the two (2) check valves. During normal flow and at the cessation of normal flow, the pressure between these two (2) checks shall be less than the supply pressure. In case of leakage of either check valve, the differential relief valve, by discharging to the atmosphere, shall operate to maintain the pressure between the check valves at less than the supply pressure. The unit must include tightly closing shutoff valves located at end of the assembly, and each assembly shall be fitted with properly-located test cocks.

Service connection means the physical connection to the water main including all fittings and appurtenances, through which water is supplied to the consumer.

Survey means the collection of information pertaining to a customer's piping system regarding the location of all connections to the public water supply system and must include the location, type and most recent inspection and testing date of all cross-connection assemblies and methods located within that customer's piping system.

SECTION 2. Chapter 5 of the Peoria City Code (1992) is amended by amending Section 5-102 pertaining to Purpose and which shall read as follows:

Sec. 5-102. Purpose.

The purpose of this division is:

- (1) To protect the public water supply system from contamination or pollution by isolating within the customer's water system at each piece of equipment or hazard where contaminants or pollutants could backflow through the service connection into the public water supply system.
- (2) To promote the elimination or control of existing cross-connections, actual or potential, between the public or consumer's potable water system and nonpotable water systems, plumbing fixtures and sources or systems containing substances of unknown or questionable quality.
- (3) To provide for the maintenance of a continuing program of cross-connection control which will prevent the contamination or pollution of the public and consumer's potable water systems.

SECTION 3. Chapter 5 of the Peoria City Code (1992) is amended by amending Section 5-111 pertaining to General requirements and which shall read as follows:

Sec. 5-111. General requirements.

(a) The owner or official custodian shall be responsible for protection of the public water supply system from contamination due to backflow or back-siphonage of contaminants through the customer's water service connection. If, in the judgement of the officer or his authorized representative, an approved backflow prevention device is necessary for the safety of the public water supply system, the officer shall give notice to the consumer to install such approved backflow prevention device at each service connection to the premises. The consumer, after due written notice and within the prescribed time indicated on the notice, shall install such approved device at his own expense, failure or refusal on the part of the consumer to install such device immediately shall constitute grounds for discontinuing water service to the premises until such device has been installed. The consumer shall retain records of installation, maintenance, testing and repair as required in this division.

(b) If in accordance with ~~the Uniform Plumbing Code~~ Section 5-44 of the Peoria City Code (1992), or in the judgment of the department, an approved backflow prevention assembly is necessary for the safety of the public water supply system, the department will give notice to the water customer to install such an approved assembly immediately. The water customer shall, at his own expense, install such an approved assembly at a location and in a manner in accordance with ~~the Uniform Plumbing Code and city requirements~~ Section 5-44 of the Peoria City Code (1992).

SECTION 4. Chapter 5 of the Peoria City Code (1992) is amended by amending Section 5-112 pertaining to Cross-connection prohibited and which shall read as follows:

Sec. 5-112. Cross-connection prohibited.

(a) Connections between the public water supply system and other systems or equipment containing water or other substances of unknown or questionable quality are prohibited except when and where approved cross-connection control devices or methods are installed, tested and maintained to ensure proper operation on a continuing basis. No connection shall be permitted between the public water supply system and any other water supply not of equal or better bacteriological and chemical quality as determined by inspection and analysis by the agency and/or the city. There shall be no arrangement or connection by which contamination may enter the public water supply system.

(b) It is the responsibility and financial obligation of the water consumer to prevent backflow into the public water supply system by ensuring that:

- (1) All cross-connections are removed, or approved cross-connection control assemblies are installed for control of backflow from backpressure and back-siphonage.
- (2) Cross-connection control assemblies shall be installed in accordance with the manufacturer's instructions and this division.
- (3) Cross-connection control assemblies shall be inspected at least annually by a person approved by the department as a cross-connection control tester. The inspection of mechanical devices shall include physical testing in accordance with the manufacturer's instructions, and those of the foundation, at the consumer's or owner's expense.

SECTION 5. Chapter 5 of the Peoria City Code (1992) is amended by amending Section 5-113 pertaining to Testing and records and which shall read as follows:

Sec. 5-113. Testing and records.

(a) *Device.* Each device shall be tested at least annually or more frequently if recommended by the manufacturer, or the department, at the consumer's or owner's expense.

(b) *Records.* Records submitted to the city shall be available for inspection by agency personnel.

(c) *Identification.* Each assembly shall have a tag attached listing the manufacturer and serial number of the assembly.

(d) *Log.* A maintenance log shall be maintained and include the following:

- (1) Date of each test.
- (2) Name and approval number of person performing the inspection or test.
- (3) Test results/inspection.
- (4) Repairs or servicing required.
- (5) Repairs and date completed.
- (6) Services performed and date completed.
- (7) Results of final test.

(e) *City records.* The department will maintain records of the types and locations of all assemblies used for the prevention of back flow in accordance with requirements of chapter 7, section H, paragraph 2, Arizona Department of Health Services Engineer Bulletin No. 10, Guidelines for the Construction of Water Systems, as amended.

(f) *Annual notification to test.*

(1) The City shall notify the customer via first class mail at least 60 days before the annual test compliance due date for each backflow prevention assembly.

(2) If by the annual compliance date the City does not receive the required test report, the City shall provide written notice via hand delivery or certified mail delivered to the customer of the City's intent to discontinue water service if the required annual test report is not received within five days of the confirmed delivery date.

(3) The customer shall not test any backflow prevention assembly more than 60 days prior to the annual test due date, unless a waiver is requested in writing and granted with written City approval.

SECTION 6. Chapter 5 of the Peoria City Code (1992) is amended by amending Section 5-114 pertaining to Where protection required and which shall read as follows:

Sec. 5-114. Where protection required.

(a) A backflow prevention assembly approved by the officer shall be installed on each water service line to a customer's water system. Such approved backflow prevention assembly shall be installed prior to issuance of any certificate of occupancy for the structure to which the water system will provide service.

(b) An approved backflow prevention assembly shall be installed on each water service line to a consumer's water system where the following conditions exist:

- (1) Premises having an auxiliary water system, unless such auxiliary water system is accepted as an additional source by the city and the source is approved by the agency and the council.
- (2) Premises where any substance exists which can create an actual or potential hazard to the public water supply system.
- (3) Premises having internal cross-connections that, in the judgment of the officer, are not correctable or intricate plumbing arrangements which made it impractical to determine whether or not cross-connections exist.
- (4) Premises where, because of security requirements or other prohibitions or restrictions, it is impossible or impractical to make a complete cross-connections survey.
- (5) Premises having a repeated history of cross-connections being established or reestablished.
- (6) Premises which utilize non-potable or reclaimed water.

(c) An approved backflow prevention assembly shall be installed on each water line to a consumer's water system serving, but not necessarily limited to, the following types of facilities or to isolate specific equipment or hazards unless the officer determines that no actual or potential hazard to the public water supply system exist:

- (1) Aircraft and missile plants, RP.
- (2) Animal clinics and animal grooming shops, RP.
- (23) Automotive plants, RP.
- (34) Auxiliary water systems (interconnected), RP.
- (45) Auxiliary water systems (not interconnected), DC RP.

- (~~56~~) Beverage bottling plants, ~~DC~~ RP.
- (~~67~~) Breweries, RP.
- (~~78~~) Buildings greater than three (3) stories or greater than thirty-four (34) feet in height from curb level, ~~DC~~ RP.
- (~~89~~) Buildings with house pumps and/or potable water storage tank, ~~DC~~ RP.
- (~~910~~) Canneries, packing houses and reduction plants, RP.
- (~~11~~) Carbonated beverage equipment, Stainless Steel, RP.
- (~~4012~~) Car wash facilities or car washes with water reclamation system, RP.
- (~~4113~~) Centralized heating and air conditioning plants, RP.
- (~~4214~~) Chemical plants, RP.
- (~~4315~~) Chemically treated potable or nonpotable water systems, RP.
- (~~4416~~) Commercial laundries, ~~DC~~ RP.
- (~~17~~) Cooling tower, boiler, condenser, chiller, and other cooling systems, RP.
- (~~4518~~) Dairies and cold storage plants, RP.
- (~~19~~) Decorative fountain, baptismal, pond, or any location water is exposed to atmosphere, RP or Air Gap.
- (~~4620~~) Dye works, RP.
- (~~4721~~) Film processing laboratories, RP.
- (~~4822~~) Food processing plants, ~~DC~~ RP.
- (~~4923~~) High schools, grade schools, day-care centers, and colleges, ~~DC~~ RP.
- (~~2024~~) Holding tank disposal stations, RP.
- (~~2125~~) Hospitals and mortuaries, RP.
- (~~2226~~) Medical and dental buildings or suites, sanitariums, rest and convalescent homes, ~~DC~~ RP.

- (2327) Mobile home and travel trailer parks, RP.
- (2428) Irrigation systems (premises having separate systems such as parks, playgrounds, cemeteries, golf courses, schools, estates, ranches, etc.), RP.
- (2529) Laboratories using toxic materials, RP.
- (2630) Manufacturing, processing and fabricating plants using toxic materials, RP.
- (2731) Manufacturing, processing and fabricating plants using nontoxic materials, RP.
- (2832) Motion picture studios, RP.
- (33) Non-Carbonated beverage equipment, DC.
- (2934) Oil and gas production facilities, RP.
- (3035) Paper and paper production plants, RP.
- (36) Pesticide, herbicide, fertilizer, and chemical applicators, RP.
- (3137) Plating plants, RP.
- (3238) Radioactive materials processing facilities, RP.
- (3339) Restricted, classified or other closed facilities, RP.
- (40) Recreational vehicle dump stations (sewer), or any other location where water may be exposed to bacteria, virus or gas, RP.
- (3441) Rubber plants, RP.
- (3542) Sand and gravel plants, RP.
- (3643) Sewage and storm drainage facilities, RP.
- (3744) Any premises where a cross-connection is maintained, RP.
- (3845) Water trucks, temp. water storage units, hydraulic sewer cleaning equipment, street sweepers, steel wheeled rollers, RP or air-gap.

- (46) Water treatment facilities and all water processing equipment (other than residential water softeners), RP.
- (47) X-ray equipment, plating equipment, or any other photographic processing equipment, RP.
- (48) Any premises on which chemicals, oils, solvents, pesticides, disinfectants, cleaning agents, acids or other pollutants and/or contaminants are handled in a manner by which they may come in direct contact with water, or there is evidence of the potential to contact water, RP.
- (3949) Any premises where water supplied by the city is subject to deterioration in sanitary quality and its entry into the public water system is permitted, RP.
- (4050) Any connection to a fire hydrant (except fire department equipment), RP.

SECTION 7. Chapter 5 of the Peoria City Code (1992) is amended by amending Section 5-115 pertaining to Type of protection required and which shall read as follows:

Sec. 5-115. Type of protection required.

(a) The type of protection required shall depend on the degree of hazard which exists as follows:

- (1) An approved fixed air gap or an approved reduced pressure zone principle backflow prevention assembly shall be installed where the public water supply system may be contaminated causing a system health hazard.
- (2) An approved fixed proper air gap separation or an approved DC backflow prevention assembly shall be installed where the public water supply system may be polluted with substances that could cause a pollution hazard not dangerous to health.

(b) All American Water Works Association classes 1, 2 and 3 fire systems six (6) inches in size and larger or any system three (3) inches in size and larger constructed of a piping material not approved as a potable water system material per the ~~Uniform Plumbing Code~~ adopted Section 5-44 of the Peoria City Code (1992) by the city shall have a DC. All American Water Works Association classes 4, 5 and 6 shall have an RP. Fire systems where backflow protection is required on the industrial/domestic service connection that is located on the same premises, both service connections will have adequate backflow protection for the highest degree of hazard effecting either system.

(c) Any property with more than one (1) water service shall, at the discretion of the department have backflow protection on each service to the property.

(d) At the discretion of the department a strainer shall be required on assemblies.

SECTION 8. Chapter 5 of the Peoria City Code (1992) is amended by amending Section 5-116 pertaining to Backflow prevention devices and which shall read as follows:

Sec. 5-116. Backflow prevention devices.

(a) All backflow prevention assemblies required by the provision of this division shall be approved by the department. Installation of an approved assembly shall be made in accordance with the departmental regulations. Maintenance as recommended by the manufacturer of the device, and the department, shall be performed. The manufacturer's maintenance manual shall be available on-site. Installation standards are available at the department. All backflow prevention assemblies shall be testable units and equipped with test cocks.

(b) The assembly shall have a diameter at least equal to the diameter of their service connection or service line at the point of connection. Each service connection will require its own backflow prevention assembly.

(c) The assembly shall be in an accessible location and installed as close to the service connection as practicable.

(bd) All backflow prevention assemblies must comply with the standards of the department and the provisions of this division. A double check valve assembly shall only be used to protect against a nonhealth hazard (i.e. pollutant). A double check-detector valve assembly shall only be used to protect against a nonhealth hazard (i.e., pollutant).

SECTION 9. Chapter 5 of the Peoria City Code (1992) is amended by amending Section 5-117 pertaining to Inspection and Maintenance and which shall read as follows:

Sec. 5-117. Inspection and maintenance.

(a) *Generally.* The consumer at premises on which backflow prevention assembly required by the provisions of this chapter are installed shall have inspection, tests, maintenance and repair made in accordance with the following schedule or more often where inspections indicate a need or are specified in manufacturer's instructions, at the consumer's expense:

- (1) Fixed proper air gap separations shall be inspected at the time of installation and at least annually thereafter.
- (2) Double check valve assemblies shall be inspected and tested at the time of installation or repair and at least annually thereafter, ~~and required service performed within fifteen (15) days~~ or more frequently if recommended by the manufacturer, or the department.
- (3) Reduced pressure principle backflow prevention devices shall be tested at the time of the installation or repair and at least annually or more frequently if recommended by the manufacturer, or the department.
- (4) All commercial pressure vacuum breakers shall be tested at the time of the installation or repair and at least annually or more frequently if recommended by the manufacturer, or the department.

(b) *Testing.* Testing shall be performed by a person who has been approved by the department. Proof of approval shall be in writing. Testing procedures shall be conducted in accordance to the current edition of the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research Manual for Cross-Connection Control. Testers who wish to perform backflow testing within the City must possess and maintain the following credentials:

- (1) Complete and sign an application for recognition.
- (2) Certified as a backflow assembly tester from an agency approved by the Department.
- (3) Test gauge calibration reports.
- (4) Liability insurance policy with a \$1,000,000 minimum liability per occurrence.
- (5) Commercial Arizona Registrar of Contractors License as determined by the Department.
- (6) City of Peoria Tax & Business License.

(c) *Repairs.* Whenever backflow prevention assemblies required by these regulations are found to be defective, they shall be repaired or replaced at the expense of the consumer within forty-five (45) days or as specified by the officer.

(d) *Alterations.* Backflow prevention assemblies shall not be bypassed, made inoperative, removed or otherwise made ineffective without specific authorization by the department.

(e) *Rebuilding.* All backflow prevention assemblies shall be rebuilt as determined by the officer.

(f) *Security.* All backflow assemblies installed shall have a chain with a padlock from the first O.S. & Y. valve to the second O.S. & Y. valve, or an alarm system, or both.

(g) *Painting.* All backflow assemblies shall be painted tan or a color to match the background.

(h) *Test cocks.* Test cocks are to be used for testing only, any unauthorized use is unlawful. All test cocks shall have plugs in place at all times. These plugs shall only be removed for testing.

SECTION 10: If any section, subsection, sentence, clause or phrase of this Ordinance is for any reason held to be invalid or unconstitutional by the decision of any Court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this Ordinance.

SECTION 11. This Ordinance shall become effective in the manner provided by law.

PASSED AND ADOPTED by the Mayor and Council of the City of Peoria, Arizona, this 1st day of November, 2011.

Dated: 11/6/2011

Bob Barrett
Bob Barrett, Mayor

ATTEST:
Wanda Nelson
Wanda Nelson, City Clerk



APPROVED AS TO FORM:
Stephen M. Kemp
Stephen M. Kemp, City Attorney

Published in Peoria Times
Publication Dates: November 4, 2011 and November 11, 2011
Effective Date: December 6, 2011