

AVONDALE BACKFLOW ORDINANCE

24-1 Definitions.

The following words and terms, when used in this article, shall have the following definitions, unless the context clearly indicates otherwise:

"Approved" means accepted by the department as meeting an applicable specification stated or cited in this article, and as suitable for the proposed use.

"Authorized representative" means that person designated by the director of the department of public works to enforce this article.

"Auxiliary water supply" means any water supply on or available to the premises other than the public potable water supply, including, but not limited to, water from another purveyor, public potable water supply, treated effluent, wastewater or industrial fluids.

"Backflow" means the reversal of the normal flow of water caused by either backpressure or backsiphonage.

"Backflow preventer" means an assembly or means designed to prevent the reversal of the normal flow of water caused by either backpressure or backsiphonage.

(1) "Air-gap" 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 shall be at least double the diameter of the supply pipe, measured vertically, above the overflow rim of the vessel, and in no case less than one inch.

(2) "Reduced pressure principle assembly" means an assembly of two (2) independently acting approved check valves together with a hydraulically operating, mechanically independent differential pressure relief valve located between the check valves and, at the same time, below the first check valve. The unit shall include properly located test cocks and tightly closing shutoff valves at each end of the assembly. The entire device shall meet the design and performance specifications as determined by a recognized laboratory and approved by the department for backflow prevention assemblies. To be approved, these devices must be readily accessible for in-line testing and maintenance.

(3) "Double check valve assembly" means an assembly of two (2) independently operating approved check valves with tightly closing shutoff valves on each end of the check valves, plus properly located test cocks for the testing of each check valve. The entire assembly shall meet the design and performance specifications as determined by a recognized laboratory and approved by the department of backflow prevention assemblies. To be approved these devices must be readily accessible for in-line testing and maintenance.

(4) "Pressure vacuum breaker assembly" 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 will be equipped with properly located test cocks and tightly closing shutoff valves located at each end of the assembly.

"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 in pressure of the potable water supply system.

"Contamination" means an impairment of the quality of the potable water by sewage, industrial fluids or waste liquids, compounds or other materials to a degree which creates an actual or potential hazard to the public health through poisoning or through the spread of disease.

"Cross-connection" means any physical connection or arrangement of piping or fixtures between two (2) otherwise separate piping systems, one (1) of which contains potable water and the other nonpotable water or industrial fluids through which, or because of which, backflow may occur into the potable water system. This would include any temporary connections, such as swing connection, removable sections, four-way plug valves, spools, dummy section of pipe, swivel or change-over-devices or sliding multiport tube.

"Department" means the public works department of the City of Avondale.

"Pollution" means the presence of any foreign substance (organic, inorganic or biological) in the water which tends to degrade its quality so as to constitute a hazard or impair the usefulness or quality 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.

Tester, Certified. The term "certified tester" means a person who has proven his/her competency to the satisfaction of the department. Each person certified to make competent tests or to repair, overhaul and make reports on backflow prevention assemblies shall be conversant with the applicable laws, rules and regulations and have had experience in plumbing or pipe fitting or have other qualifications which are equivalent in the opinion of the department.

Water, Nonpotable. "Nonpotable water" means water which is not safe for human consumption.

Water, Potable. "Potable water" means any water which, according to recognized standards recognized by the City of Avondale, is safe for human consumption.

"Water service connection" means the terminal end of the service connection from the public potable water system at its point of delivery to the user's water system. If a meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the meter. Unprotected takeoffs from the service line will not be permitted upstream of any meter or any backflow prevention device located at the point of delivery to the user's water system. Service connection shall also include water service connection from a fire hydrant and all other temporary or emergency water service connections from the public potable water system. (Ord. No. 570, § 1, 7-5-94)

24-2 Approval of backflow preventive assembly. 

(a) Each backflow preventive assembly required hereunder shall be approved by the department prior to the installation, and shall be installed by and at the expense of the user.

(b) The department may approve backflow assemblies when such devices have received approval from the Foundation of Cross-Connection Control and Hydraulic Research of the University of Southern California, American Water Works Association (AWWA), and the manufacturer has a local parts and service center.

(c) Assemblies shall be specified and located on the construction plans for all new buildings, additions with new services, and charges of use of existing buildings. (Ord. No. 570, § 1, 7-5-94)

24-3 Installation of devices. 

(a) Assemblies shall be installed at the service connection or near the property line but in all cases before the first branch line leading off of the service line, and in an accessible location approved by the department.

(b) Backflow preventive assemblies shall have at least the same cross-sectional area as the water service and/or meter. In those instances where a continuous water supply is necessary, two (2) sets of backflow preventive assemblies shall be installed in parallel, if the water supply cannot be temporarily interrupted for the testing of assemblies.

(c) No bypass shall be installed around backflow preventive assemblies.

(d) Double check valve assemblies may be installed below ground in a vault if approved, in writing, on a case-by-case basis by the department. Double check valve assemblies installed in vaults shall have sufficient clearance provided to permit testing in place or removal for maintenance, as prescribed in the standard details. Copies are available upon request from department.

(e) A reduced pressure principle backflow preventive assembly shall be installed above ground. Assemblies installed shall be accessible for testing as not to endanger the tester. Under no conditions, except as provided for herein, will backflow prevention assemblies be installed less than twelve (12) inches or more than twenty-four (24) inches above grade level.

(f) All pressure-type backflow preventive assemblies which are design for periodic field testing shall be equipped with gate valves on both the upstream and the downstream side of the assembly. In addition, test cocks shall be provided and located so that test equipment may be connected to the assembly at such points that the pressure in each pressure one may be detected and, in addition, a test cock shall be located upstream of the upstream gate valve as close as possible to the upstream gate valve.

Premises or systems requiring approved backflow preventive devices.

(a) An approved backflow preventive assembly of the type specified in this section shall be the minimum installation of each service connection (whether from a fire hydrant, temporary, regular or other water service connection) to the following type of premises or systems:

WATER

	Type of Assembly Required			
Premises Requiring Approved Backflow Preventive Devices	Double Check	Reduced Pressure	Air Gap	Pressure Vacuum

				Breaker
Air craft and missile plants		X		
Animal clinics, animal grooming shops		X		
Automotive repair with steam and/or acid cleaning equipment or solvent facilities		X		
Auxiliary water systems (interconnected)		X		
Auxiliary water systems (noninterconnected)	X	X		
Beverage bottling plants	X			
Breweries	X			
Buildings greater than 3 stories or 34 feet in height	X			
Buildings with house pumps or potable water storage	X			
Buildings with sewer ejectors (inadequate on-site protection)		X		
Buildings with sewer ejectors (adequate on-site protection)	X			
Canneries, packinghouses and reduction plants		X		
Car wash facilities		X		
Centralized heating and air conditioning plants		X		
Chemical plants		X		
Chemically treated potable or nonpotable water systems		X		
Civil works (government-owned or operated facilities not open for inspection by the department)		X		
Commercial laundries		X		
Dairies and cold storage plants	X			
Dye works		X		
Film processing labs		X		
Food processing	X			
High school and colleges	X			
Holding tank disposal stations		X		
Hospitals and mortuaries		X		
Medical and dental buildings	X			
Sanitariums, rest and convalescent homes	X			
Irrigation systems (premises having nonpotable piping 1 inch and larger)	X			X
Irrigation systems (premises having separate		X		

systems)				
Labs using contaminating materials		X		
Manufacturing, processing and fabricating plants using contaminating materials		X		
Mobile home parks	X			
Motion picture studios		X		
Oil and gas production facilities		X		
Plating plants		X		
Power plants		X		
Radioactive materials processing		X		
Restricted, classified or other closed facilities		X		
Rubber plants		X		
Sand and gravel plants		X		
Sewage and storm drainage facilities		X		
Shopping centers	X			
Any premises where a cross-connection is maintained		X		
Water trucks, hydraulic sewer cleaning equipment		X	X	
Any premises where water supplied by the city is subject to deterioration in sanitary quality and its entry into the public water system		X		

(b)

Fire protection systems will be required to have the following type of protection:

	Type of Assembly Required			
	Double Check	Reduced Pressure	Air Gap	Pressure Vacuum Breaker
Direct connection from public water system (noncontaminating)	X			
Direct connection from public water system (contaminating)		X		
With pump and/or storage tank		X		
With auxiliary supply		X		

(Ord. No. 570, § 1, 7-5-94)

24-4 Backflow permit and fee.

- (a) A permit shall be required by the city for all backflow installations.
- (b) A fifty dollar (\$50.00) permit fees shall be paid to the city when acquiring a backflow permit.
- (c) The city water department shall perform a construction inspection not to include the testing and certification of the backflow device.
- (d) The testing and certification of the backflow device shall be performed by a certified backflow tester. (Ord. No. 570, § 1, 7-5-94)

24-5 Approved backflow preventive devices.

- (a) As required by this article the standard installation at each service connection to premises or each system required an approved backflow preventive assembly shall be model and size approved by the department.
- (b) The term "approved backflow preventive assembly" means an assembly approved by the department and may mean an assembly that has been manufactured in full conformance with the standards established by the American Water Works Association — AWWA C506-78 most recent revised publication "Standards for Reduced Pressure Principle and Double Check Valve Backflow Prevention Assemblies," and have met completely the laboratory and field performance specifications of the Foundation for Cross-Connection Control and Hydraulic Research (FCCCHR) of the University of Southern California established by specifications of backflow prevention assemblies, Section 10 of the most current issue of the "Manual of Cross-Connection Control," which will be available for inspection.
- (c) Backflow preventive assemblies which may be subject to backpressure or backsiphonage that have been fully tested and have been granted a certificate of approval by FCCCHR may be listed on the current list of "Approved Backflow Prevention Assemblies," which will be made available upon written request to the department. (Ord. No. 570, § 1, 7-5-94)

24-6 Maintenance, testing and records.

- (a) The user shall maintain accurate records of tests and repairs made to backflow prevention devices and provide the department with copies of such records. The records shall be on forms approved by the department and shall include the list of materials or replacement parts used.
- (b) Testing, maintenance and repairs to such devices shall be made at the customer's expense by a certified backflow prevention device tester that is approved by the department or any other agency designated by the department to prescribe test methods or to certify or approve persons to conduct such tests. It shall be the duty of the user to see that these tests are made at the time of the initial installation and at least once a year, on the anniversary date of the initial inspection.
- (c) The user shall notify the department fifteen (15) days in advance when the annual tests are to be done, so that an official representative of the department may witness the tests if so desired.

(d) Following the installation of any assembly, the user must have an initial test on the assembly and have it inspected by the water department before the certificate of occupancy is issued. (Ord. No. 570, § 1, 7-5-94)

24-7 Inspections.

The user's system must be open for inspection at all reasonable times, and in all emergencies to authorized representatives of the department to determine whether cross-connections or other structural or sanitary hazards, including violations of these regulations, exist. When such a condition becomes known, the department may deny or immediately discontinue service to the premises by providing a physical break in the service line until the user has corrected the condition in conformance with this article. (Ord. No. 570, § 1, 7-5-94)

24-8 Discontinuance of service.

Service of water to any premises may be discontinued by the department if a backflow preventive assembly required by this article is not installed, tested and maintained, if it has been found that a backflow preventive assembly has been removed or bypassed, or if a cross-connection exists on the premises. Service will not be restored until such conditions or defects are corrected. Avondale may also terminate a user's service upon twenty (20) days' notice in writing in nonemergency. (Ord. No. 570, § 1, 7-5-94)

24-9 Existing devices and users.

(a) If the department determines that a user's backflow preventive assembly does not meet current standards, the user shall retrofit his assembly so that it will meet current standards.

(b) Whenever it is determined by the public works director or his authorized representative that a water service poses an actual or potential threat to the physical properties of the water system or potability of the public water system a device complying with this article shall be installed. (Ord. No. 570, § 1, 7-5-94)

24-10 Remedies.

(a) If a customer has committed one or more of the acts specified in subsection (c) of this section and has not taken the corrective action as required by the authorized representative, the authorized representative may elect to impose a civil penalty not to exceed one hundred percent of all billings for all water used beginning from the date the corrective actions was required and until the corrective action has been completed by the customer.

(b) If a situation, which would otherwise result in a discontinuance of water service, is not remedied within the time provided in the notice of termination sent to the customer, the authorized representative, at his discretion, may install a backflow prevention assembly at the customer's point of service delivery and bill the customer for all costs together with all applicable penalties.

(c) In addition to any other remedy available to the city under [Section 1-9](#) of the Avondale City Code, to enforce this article, the City may terminate water service if the customer:

(1) Fails to properly locate, install, test or maintain a required backflow prevention assembly; or

(2) Removes or bypasses a required backflow prevention assembly without the prior approval of the authorized representative; or

(3) Allows a cross-connection to occur; or

(4) Fails to timely submit records of tests and repairs of a backflow prevention assembly; or

(5) Fails to comply with the written policy on backflow prevention and cross-connection on file with the city clerk and authorized representative; or

(6) Fails to comply with any requirements imposed upon the customer by State Rule R18-4-242.

(d) Termination of water service shall be immediate and without prior notice if the authorized representative determines that the customer's water system may cause a health hazard to the public potable water supply. Otherwise, the authorized representative shall give ten (10) days written notice to the customer prior to termination of water service. Water service may be restored when the condition forming the basis for the termination has been remedied to the satisfaction of the authorized representative, all costs, fees, and expenses incurred, and all surcharges and penalties relating to the termination and restoration of water service shall be paid prior to the water service being restored. (Ord. No. 570, § 1, 7-5-94)

24-11—24-15 Reserved.