DIVISION 1.5. CROSS-CONNECTION CONTROL PROGRAM[1]

Sec. 21-22. Purpose; scope.

There is hereby established a cross-connection control program the purpose of which is to promote the public health, safety, and welfare by regulations designed to:

(a) Protect the public potable water supply of the City of Plano from the possibility of contamination or pollution by isolating within a customer's internal distribution systems or a customer's private water systems contaminants or pollutants that could backflow into the public water system;

(b) Promote the elimination or control of existing cross-connections, whether actual or potential, between a customer's in-plant potable water systems and non-potable water system(s), plumbing fixtures, and industrial piping system(s);

(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 city's potable water system;

(d) Establish requirements for Plano Backflow Prevention Assembly Testers; and

(e) Comply with 30 TAC Chapter 290 (Public Drinking Water) and Chapter 344 (Landscape Irrigation) of the Texas Commission on Environmental Quality Rules and Regulations~~Chapter 290, Water Hygiene, of the Texas Commission on Environmental Quality Rules and Regulations for Public Water Systems~~.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-23. Definitions.

For the purpose of this division, the following definitions shall apply unless the context clearly indicates or requires a different meaning. Other technical terms used shall have the meanings or definitions listed in the most current~~10th~~ Edition of the Manual of Cross-Connection Control published by the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, a copy of which is on file in the office of the city secretary, or in the most current~~Third~~ ~~E~~edition of the Recommended Practice for Backflow Prevention and Cross-Connection Control Manual M14 published by the American Water Works Association. In any case where provisions of these manuals are in conflict, the ~~10th~~most current Edition of the Manual of Cross-Connection Control shall prevail.

Air gap separation (AG) as defined by the Texas Commission on Environmental Quality~~CEQ~~, means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water to a tank, fixture, receptor, sink, or other assembly and the flood level rim of the receptacle. The vertical, physical separation must be at least twice the diameter of the water supply outlet, but never less than one (1) inch~~a physical separation between the free flowing discharge end of a potable water supply pipeline and an open or non-pressure receiving vessel~~.

[1]Editor's note(s)—Ord. No. 2011-12-2, §§ I, II, adopted December 12, 2011, repealed and reenacted division 1.5 in its entirety to read as herein set out. Formerly, division 1.5, §§ 21-22—21-35.3 pertained to similar subject matter and derived from Ord. No. 2009-10-8, § II, adopted October 12, 2009.

~~*Approved water supply source* means the City of Plano water system.~~

Atmospheric vacuum breaker (AVB) means an assembly containing a float check, a check seat, and an air inlet port.

Auxiliary water supply means any water supply other than the City of Plano's approved public water supply, including water from another public water supply or from a natural source including, but not limited to, wells, cisterns, springs, rivers, streams, used waters, or industrial fluids.

Backflow means the reversal of flow of water or mixtures of water and other liquids, gases or other substances into the distribution pipes of a potable water supply from any sources other than the City of Plano water system~~an approved water supply source~~.

Backflow prevention assembly means an assembly which, when properly installed between the city water supply system and the terminus or point of ultimate use, will prevent backflow. Examples of such assemblies include, but are not limited to, reduced pressure backflow assemblies, double check valve assemblies, pressure vacuum breakers, and ~~air gap separation~~spill resistant vacuum breakers.

Backflow prevention assembly tester (BPAT) means an individual licensed in accordance with Texas Commission on Environmental Quality rules to test backflow prevention assemblies.

Back-pressure means any elevation of pressure in the downstream piping system (including by pump, elevation of piping, or steam and/or air pressure) above the supply pressure at the point of consideration which would cause, or tend to cause, a reversal of the normal direction of flow.

Backflow Program Administrator means a third-party who assists the City of Plano with managing the backflow assemblies and associated records.

Back siphonage means a form of backflow caused by a reduction in system pressure resulting in the existence of a negative or sub-atmospheric pressure at a site in the water system.

~~*Building official*~~*Building official* means the ~~building official~~bBuilding official of the City of Plano or the building official's~~his~~ designee.

~~*Chemical injection system* means a system which automatically injects fertilizer, pesticide, weed killer, etc., into an irrigation system, while the irrigation system is operating.~~

City means the City of Plano, Texas, and its duly authorized representatives.

Closed system means a piping system that has no space for water to expand.

Commission means the Texas Commission on Environmental Quality ("TCEQ").

Contamination means an impairment of the quality of the public potable water supply or a private potable water supply by the introduction or admission of any foreign substance that degrades the quality and which creates an actual hazard to the public health through poisoning or through the spread of disease by sewage, industrial fluids, ~~or~~ waste, or other hazardous product or material~~etc~~.

Cross-connection means any actual or potential connection or structural arrangement between a public or consumer's potable water system and any other source or system through which it is possible to introduce into any part of the potable system any used water, industrial fluid, gas, or substance other than the intended potable water with which the system is supplied. Bypass arrangements, jumper connections, removable sections, swivel or change-over devices and other temporary or permanent devices through which or because of which backflow can occur are considered to be cross-connections.

Customer means a person, company, or entity contracting with the cCity ~~of Plano~~ to receive potable water service.

Customer's potable water system means that portion of the privately owned potable water system lying between the service connection and the point of use by customer. This system includes, but is not limited to, all

pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey, store, or utilize the potable water.

Degree of hazard means either a non-health or health hazard and is determined by the evaluation of the conditions within a system by the superintendent, director ~~of public works~~, the cCity's ~~of Plano~~ Environmental Health & Sustainability Department, or the building official.

Director means the director of the ~~public~~ city's Public ~~works~~Works Department.

Double check valve assembly (DC) means an assembly composed of two (2) independently acting approved check valves, including tightly closing resilient-seated shutoff valves, attached at each end of the assembly and fitted with four properly located resilient-seated test cocks.

Health hazard means a cross-connection, potential cross-connection, or other situation involving any substance that could cause death, illness, spread of disease, or has a high probability of causing such effects if introduced into the potable drinking water supply.

Industrial fluids means any fluid or solution which may be chemically, biologically, or otherwise contaminated or polluted in a form or concentration which would constitute a health, system, pollutional, or plumbing hazard if introduced into an approved water supply. Examples of industrial fluids include, but are not limited to: polluted or contaminated used water; all types of process waters and used waters originating from the public potable water system which may deteriorate in sanitary quality; chemicals in fluid form; plating acids and alkalis; circulated cooling waters connected to an open cooling tower and/or cooling waters that are chemically or biologically treated or stabilized with toxic substances; contaminated natural waters such as form wells, springs, streams, rivers, bays, harbors, seas, irrigation canals or systems, etc.; and oils, gases, glycerin, paraffins, caustic and acid solutions and other liquid and gaseous fluids used industrially, for other processes, or for firefighting purposes.

Material reporting deficiencies shall mean inaccurate or incomplete reporting as required in the approved cCity ~~of Plano~~ backflow prevention assembly test report ~~of information required in the Backflow Prevention Assembly Test Report form as noted in "Appendix A." Required information reported in section "B" is noted with an "x." Sections "C" and "D" are required in their entirety.~~

Nonhealth hazard means a cross-connection or potential cross-connection involving any substance that generally would not be a health hazard but would constitute a nuisance, or be aesthetically objectionable, if introduced into the potable water supply.

Non-potable water means a water supply which has not been approved for human consumption by the cCommission.

Person means any individual or any association, firm, partnership, joint venture, corporation or other legally recognized entity, whether for profit or not for profit.

Plano backflow prevention assembly tester (Plano BPAT) means an individual licensed in accordance with TCEQ~~Texas Commission on Environmental Quality~~ rules and registered with the cCity ~~of Plano~~ ~~Utility Operations Division~~ for the purpose of testing backflow prevention assemblies.

Plumbing hazard means an internal or plumbing type cross-connection in a customer's potable water system that may be either a pollutional or a contamination type hazard, including, but not limited to, cross-connections to toilets, sinks, lavatories, wash trays, water filtration systems and lawn sprinkling systems.

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

Potable water means any public water supply which has been investigated and approved by the commission as satisfactory for drinking, culinary and domestic purposes.

Premises or *property* means any property real, improved or personal that is connected to the cCity ~~of Plano~~ water system.

Pressure vacuum breaker (PVB) means an assembly which contains an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve with properly located resilient-seated test cocks and tightly closing resilient-seated shutoff valves attached at each end of the assembly.

Process waters means water used to cool any operation or manufacturing process.

Public potable water supply means any publicly or privately owned water system operated as a public utility under a health permit to supply water for domestic purposes. Such a system includes all sources, facilities and appurtenances between the source and the point of delivery such as valves, pumps, pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey, treat, or store potable water for public consumption or use.

Pressure loss means any reduction in the water pressure supplied by the city.

Reduced pressure backflow prevention assembly (RP) means an assembly containing two (2) independently acting approved check valves together with a hydraulically operating, mechanically independent pressure differential relief valve located between the check valves and at the same time below the first check valve. The assemblyunit includes four properly located resilient-seated test cocks and two (2) tightly-closing resilient-seated shutoff valves at each end of the assembly.

Service connection means the terminal end of a service connection from the public potable water system (i.e., where the uUtilitywater purveyor loses jurisdiction and sanitary control over the water at its point of delivery to the customer'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.

Spill-resistant pressure vacuum breaker (SVB) means an assembly which contains an independently operating internally loaded check valve and an independently operating loaded air inlet valve located on the discharge side of the check valve, with properly located resilient seated test cock, a properly located bleed/vent valve and tightly closing resilient seated shutoff valves attached at each end of the assembly.

SuperintendentSuperintendent means the utility operations superintendent for the cCity of Plano designated by the dDirector to oversee the cCross-cConnection cControl program or the superintendent'shis designee.

Supply pressure means the existing pressure in the cCity of Plano water system.

System hazard means an actual or potential threat of severe danger to the physical properties of the public or the customer's potable water system or of a pollution or contamination which has or would have a protracted effect on the quality of the potable water in the system.

Thermal expansion means heated water that does not have any space to expand.

Used water means any water supplied by the uUtility a water purveyor from a public water system to a customer's water system after passing through the service connection and which is no longer controlled by the uUtilitywater purveyor.

Utility means the division in cCity's of Plano pPublic wWorks departmentdivision overseeing the cCross-cConnection cControl pProgramUtility Operations Division.

Utility water service area means all locations within the City of Plano water system as defined by the city's state certificate of convenience.

Valid backflow prevention assembly test shall mean test results reported by a Plano BPAT who performed the test and reported within ten (10) calendar days of the test that meet the performance criteria located within the 10th Edition of the Manual of CrossConnection Control published by the University of Southern California Foundation for CrossConnection Control and Hydraulic Research for the type of backflow prevention assembly tested, unless otherwise noted within this division.

Water purveyor means the operator of a potable water system supplying at least fifteen (15) service connections or servicing at least twenty-five (25) individuals at least sixty (60) days out of the year.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-24. Interpretation.

The provisions in this article are cumulative of all city ordinances. In cases where the requirements of this division differ from any other ordinances or codes, the more stringent requirements shall apply.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-25. Backflow prevention assemblies required.

(a) Each service connection from the public water system to premises having an auxiliary water supply shall be protected against backflow of water from the premises into the public water system with a reduced pressure backflow prevention assembly (RP).

(b) For all newly constructed premises on which a substance is handled so that it may enter the public water system, each service connection from the public water system to such premises shall be protected against the backflow of water from the premises into the public water system. This requirement shall apply to each premise on which persons handle process water and water originating from the public water system which has been subjected to deterioration in sanitary quality.

(c) For all existing premises on which a substance is handled so that it may enter the public water system, each service connection from the public water system to such premises may be required to be protected against the backflow of water from the premises into the public water system upon the determination of the superintendent or the building official. This requirement shall apply to each premise on which persons handle process waters and waters originating from the public water system which have been subjected to deterioration in sanitary quality.

(d) Backflow prevention assemblies shall be installed on a service connection to a premises: (1) having internal cross-connections that cannot be permanently corrected and controlled in compliance with this division, (2) upon the superintendent or building official's determination that an intricate plumbing and piping arrangement exists which makes it impractical to ascertain whether cross-connections exist therein, or (3) where a portion of the premises cannot be readily accessed for inspection purposes making it impractical or impossible to ascertain whether cross-connections exist. The owner or person responsible for a property or the maintenance of a property connected to or required to be connected to the public potable water system shall make all necessary arrangements, at its sole expense, to remove without delay security barriers or other obstacles to access by the superintendent or the building official.

(e) If an interstreet main flow may result from two (2) or more services supplying water to the same building, structure, or premises, then a standard check valve shall be installed adjacent to the respective meters and on the owner's property. If a check valve is not adequate to protect the public water system's mains from pollution or contamination, the installation of an approved backflow prevention assembly may be required by the superintendent. Approval will be given if a backflow prevention assembly is functioning.

(f) If a health hazard exists, a testable backflow prevention assembly or an air gap shall be required. The backflow prevention assemblies shall include a reduced pressure backflow prevention assembly (RP), pressure vacuum breaker (PVB) or a spill-resistant vacuum breaker (SVB). The PVB and SVB shall not be subjected to backpressure.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-26. Type of backflow prevention assembly required.

(a) The type of backflow prevention assembly required shall be commensurate with the type of hazard that exists on the customer's premises. The minimum types of backflow prevention assemblies required to protect the city's potable water supply are set forth in Table 1 below. However, the water user may choose a higher level of protection than required by the city. All backflow prevention assemblies shall be from an approved list from the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research.

TABLE 1

Type of Hazard	Minimum Type of Backflow Prevention Assembly
Commercial fFire protection systems utilizing chemicals or additives (nNew iInstallations or rRemodels of existing systems)	RP — UL or FM & USC Approved Assemblies Only
Commercial ~~and Residential~~ fFire sSprinklers systems without chemicals or additives (All new installations or remodeling of existing systems, after March 1, 2014, with a cumulative total of 50 or more head changes (additions and/or relocates) or cumulative remodeling of 10,000 or more square feet of floor space in a building during the life of the sprinkler system)	DC — UL or FM & USC Approved Assemblies Only
Residential, sSingle-fFamily fFire sSprinkler sSystems (nNew iInstallations or rRemodels of existing systems)	DC – USC Approved Assemblies Only (2" or smaller) DC — UL or FM & USC Approved Assemblies Only (larger than 2")
Commercial and residential landscape irrigation systems utilizing chemical additives or ~~hose connections and/or~~ quick coupler hose connections	RP or AG Only
Stationary cConstruction fFire hHydrant mMeters	RP or AG immediately adjacent to meter and one-way check valve on discharge lines on trucks
Temporary cConstruction fFire hHydrant mMeters	RP or AG in fill line on the water hauling equipment and one-way check valve on discharge lines on trucks
Premises where any customer purchasing water for the purpose of resale or distribution	RP or AG at each service connection
Premises owned by any state, federal, or foreign government or agency	RP or AG at each service connection
Premises where there is a history of cross-connections being established or re-established	RP or AG
Animal wWatering sSites	AG or RP or PVB or SVB. PVB or SVB not approved where back-pressure situations exist.
Non-hHealth hHazard	DC, PVB, SVB or RP at point of connection to hazard or at service connection prior to first branch line off customer's service line. PVB or SVB not approved where back-pressure situations exist.
Health hHazard	AG, PVB, SVB or RP at point of connection to hazard and/or at service connection prior to first branch line off customer's service line. PVB or SVB not approved where back-pressure situations exist.
Carbonated dDrink mMachines	RP — Assembly and all downstream piping shall be non-corrosive when in contact with CO_2 gas.

Situations which are not covered in Table I shall be evaluated on a case by case basis, and the required backflow prevention assembly shall be determined by the superintendent.

(b) Containment and/or secondary protection may be required on certain health hazard installations in accordance with the following Table 2, in addition to any other protection, identified herein, which is required to isolate equipment within a facility. The superintendent or building official may require backflow prevention assembly to be installed on other facilities with a similar degree of hazard in accordance with the plumbing code of the City of Plano, as amended, or other applicable law. These backflow prevention assemblies shall be installed in the main service line on the building side of the meter or the principle branch serving a single tenant space. The location of the backflow prevention assembly shall be approved by the superintendent or building official in accordance with the provisions contained in section 21-28.

(c) The building official, the city's fire chief and the director ~~of public works~~ may approve a variance to these requirements for backflow on fire sprinkler systems.

TABLE 2
HEALTH HAZARD INSTALLATIONS

	TYPE OF BACKFLOW PREVENTION ASSEMBLY REQUIRED
Breweries	RP
Carwash	RP
Dairies	RP
Multi-story building three (3) floors or more	RP
Animal hospital	RP
Auxiliary water supply	RP
Building containing a reclaimed water system	RP
Chillers	RP
Commercial laundry	RP
Cooling towers	RP
Dental office	RP
Doctor's office	RP
Food and beverage processing plants	RP
Funeral home and mortuary	RP
Green house or nursery (with toxic chemicals)	RP
Hospitals (parallel system required)	RP
Laboratories (including medical, dental and research labs, and labs at educational facilities)	RP
Manufacturing plant	RP
Meat processing plant	RP
Metal manufacturing, cleaning, processing and fabrication plants	RP
Micro chip fabrication facilities	RP
Petroleum processing or storage facilities	RP
Photo and film processing	RP
Plants using radioactive materials	RP
Plating or chemical plants	RP
Premises where inspection is restricted or exempted	RP
Private/individual unmonitored wells	RP
Rainwater harvesting systems	RP
Rendering plant	RP
Sewage lift stations	RP

Sewage treatment plants	RP
Steam plants	RP
Space heating boilers	RP

(Ord. No. 2011-12-2, § II, 12-12-11; Ord. No. 2014-2-10, § I, 2-24-14)

Sec. 21-27. Backflow prevention assembly installation requirements.

(a) All new, replacement, or reconditioned backflow prevention assemblies shall be installed in accordance with the International Plumbing Code, as adopted and amended by the City of Plano and with the following standards, unless otherwise directed or approved by the superintendent.

(1) *Plumbing permit required.* Prior to the installation, relocation or replacement of a backflow assembly, a plumbing permit must be obtained from the building inspection department of the city.

(2) *Installation.* The assembly shall not be located in the same vault or meter box with the city's water meter. Backflow assemblies and components shall not be installed within three (3) feet of a water meter box or vault. All backflow assembly installation shall be done in accordance to the approval set forth in the list of approved backflow prevention assemblies issued by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research, a copy of which is on file in the city public works department. If installed in a structure all backflow assemblies must be easily accessible for testing, repair or replacement.

(3) *Location.* The owner or occupant must prove to the city that no connections or tees are located between the meter and the backflow prevention assembly. The relief valve discharge on a reduced pressure backflow assembly (RP) shall not be solidly piped into a sump, sewer, drainage ditch, etc. Test cocks shall not be used as supply connections.

(4) *Air gap separation (AG).* All piping from the service connection to the receiving tank shall be above grade and be entirely visible. No water use shall be provided from any point between the service connection and the air gap separation. The water inlet piping shall terminate at a distance of at least two (2) pipe diameters of the supply inlet, but in no case less than one (1) inch above the overflow rim of the receiving tank. ~~An "approved air gap separation" shall be at least twice the diameter of the supply pipe measured vertically above the overflow rim of the vessel and shall in no case be less than one (1) inch (2.54cm).~~

(5) *Reduced pressure backflow assemblies (RP).* Reduced pressure backflow assemblies shall be installed above ground level and shall be placed a minimum of twelve (12) inches above the finished grade, no higher than five (5) fe~~e~~~~o~~t, and accessible for testing and repair ~~to allow clearance for repair work~~. A freeze-proof enclosure with a concrete slab at finished grade is recommended. Where it is impractical to install the assembly outside, the installation may be made inside the building in an area not susceptible to flooding. Proper free flowing/gravity drainage must be provided for the relief valve. If the drain line is to drain outside, then the termination point must be a minimum of twelve (12) inches above finished grade.

(6) *Double check valve assemblies (DC).* Double check valve assemblies can be installed above finished grade in a freeze-proof enclosure or below grade in a vault. If assembly is installed below grade the test cocks must be plugged with corrosion resistant watertight plugs. Assembly may~~shall~~ not be installed ~~a minimum of twelve (12) inches~~more than five (5) fe~~e~~~~o~~t above the finished grade~~loor~~.

(7) *Bypass.* If a bypass is installed around any approved backflow prevention assembly, the bypass must be protected from backflow/back-pressure with the same type of backflow prevention assembly that it has bypassed. The backflow prevention assembly on the bypass must be installed according to the same requirements as the service line assembly.

(8) *Thermal expansion.* The installation of a backflow assembly may create a closed system which may result in thermal expansion. It is the responsibility of the owner, occupant, manager, other person in control of any premises or the person responsible for the maintenance of a property to address the possibility of thermal expansion due to the required installation of backflow assemblies creating a closed system.

(b) Lost pressure. The city is not responsible for any pressure loss created by the installation of a backflow assembly.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-28. Inspection, testing and registration of backflow prevention assemblies.

(a) *Testing of backflow prevention assemblies.* The owner, occupant, manager, other person in control of any premises or the person responsible for the maintenance of the property on which, or on account of which, backflow prevention assemblies are installed, shall have the assemblies tested by a Plano BPAT. Backflow prevention assemblies shall be tested annually and shall also be tested immediately after installation, relocation, repair or work performed upstream of the assembly. However, upon ten (10) days prior written notice by the city to the owner, occupant, manager, other person in control of the premises or the person responsible for the maintenance of the property must provide more frequent testing as required in the written notice.

(b) *Report of backflow prevention assembly test.* An approved cCity of Plano backflow prevention assembly test report form (original form) shall be completed by a Plano BPAT on each backflow prevention assembly tested. Each completed test report original form, together with the records of such tests, repairs, or replacement, shall be submitted to the hand delivered in person to the utility operations division of the City of PlanobBackflow pProgram aAdministrator within ten (10) calendar days after the testing, repair, replacement or work performed upstream of the assembly. A copy of the completed test report shall be left on-site with the property owner, occupant, manager or other person in control of any premises or the person responsible for the maintenance of the property.

(c) *Test results.* Test results for a reduced pressure backflow prevention assembly shall provide a reading for both checks and have at least a three (3) PSI differential between the first check and the relief valve opening point. Once it has been determined that the second#2 check has closed tight above the relief valve opening point, then record the reading of the gauge as the secondnumber 2 check reading. Only backflow prevention assembly field test procedures approved by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research will be accepted. If an assembly fails, the Plano BPAT shall immediately notify the superintendent or his designee in person or by phone during regular business hours of the City of Plano public works department. If an assembly failure occurs at any time other than regular business hours, the Plano BPAT shall notify the superintendent or his designee on the next regular business day.

Upon notification to the superintendent or his designee of assembly failure, the superintendent or his designee will notify the owner, occupant, manager or other person in control of any premises or the person responsible for the maintenance of the property of the time period that they have to repair or replace the assembly. The assembly shall be replaced or repaired within the time period set by the superintendent or his designee or within five (5) calendar days from the date of assembly failure whichever date is sooner. In the event of assembly failure, water service shall not be connected or restored until the assembly has been repaired or replaced and passes a retest unless written authorization is given by the superintendent or his designee that water service is authorized to be connected or restored at an earlier date.

(d) *Registration and maintenance of backflow prevention assemblies.*

(1) Each backflow prevention assembly located on property subject to this division shall be registered with the utility operations division of the City of Plano through the submittal of a completed form approved by TCEQ to the bBackflow pProgram aAdministrator.

(2) The owner, occupant, manager, other person in control of the property or the person responsible for the maintenance of the property is responsible for general maintenance and upkeep of all approved backflow prevention assemblies located thereon.

(3) Backflow prevention assemblies shall be tested, repaired, and/or replaced at the expense of the owner, occupant, manager, other person in control of the property or the person responsible for the maintenance of the property whenever such assemblies are determined to be defective by the superintendent or building official. An assembly is defective if it cannot be identified through the manufacturer's serial number and/or is not a properly installed backflow prevention assembly as required by this division.

(e) *New plumbing or plumbing modifications.* The building official or superintendent shall inspect all new backflow prevention assembly installations, which are subject to this division and are required by application for a plumbing permit. A service inspection certification form shall be completed by the building official or superintendent on each new plumbing installation or on plumbing modifications. Each completed form shall be received by the utility ~~operations division~~ within ten (10) days after the inspection.

(f) *Existing properties.* The superintendent shall inspect all existing properties connected to the potable water system for the purpose of determining whether a cross-connection exists and what type of backflow prevention assembly should be installed pursuant to this division.

(g) *Existing backflow prevention assemblies.* Properties with existing backflow prevention assemblies installed in their system, which have not been registered with the superintendent, as of the effective date of this division shall come into compliance with the provisions of this division within sixty (60) days of notification unless the superintendent finds a health hazard exists in which case the superintendent shall determine the appropriate time of compliance.

(h) *Existing assemblies in compliance.* The owner, occupant, manager or other person in control of any premises or the person responsible for the maintenance of a property with existing assemblies, which comply with the provisions of this division, shall provide written proof that each such assembly has been properly maintained and serviced by a Plano BPAT. If maintenance and service records are not available, the assembly shall be tested in accordance with the requirements of this division.

(i) *Replacement.* If the assembly is not capable of being tested, identified or cannot be repaired, it must be replaced with an approved assembly in accordance with the requirements of this division.

(j) *Testing fee.* A thirty-five dollar ($35.00) fee shall be submitted to the bBackflow pProgram aAdministrator~~utility operations division~~ for each backflow prevention assembly tested and shall be paid at the time that the Plano BPAT files the backflow prevention assembly test report ~~form~~ with the city.

(k) *Retesting fee.* A twenty-five dollar ($25.00) fee shall be submitted to the cCity ~~of Plano~~ ~~utility operations division~~ for each backflow prevention assembly that is required to be retested due to a deficiency or a violation of this division including, an invalid test report, or one of the following:

- Falsification of backflow prevention assembly test report. ~~form~~
- Incorrect serial number.
- Blank or incomplete information fields on backflow prevention assembly test report. ~~forms~~
- Plano BPAT's test gauges are not registered with the city.
- Duplicate serial number on multiple backflow prevention assembly test report. ~~forms~~
- Performing a backflow prevention assembly test using unapproved testing procedures.
- Inappropriate registration with the city.
- BPAT is not registered with the ~~City of Plano~~ utility ~~operations division~~ at the time the test(s) was performed.

(l) *Retest procedure.* The retest(s) shall be performed in the presence of the superintendent ~~or his designee~~. The fee shall be paid to the c~~C~~ity ~~of Plano~~ prior to the retest(s) being performed and the retest(s) shall be completed within five (5) business days from first notification. Any retest(s) required shall be performed by the Plano BPAT or BPAT who is responsible for the deficiency or violation unless the Plano BPAT or BPAT has resigned or lost their testing privileges. All retest(s) should be performed during normal city business hours.

(m) *Exemption.* Atmospheric vacuum breakers are exempt from this section.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-29. Quality assurance program.

(a) *Quality assurance program.* To assure the quality of the backflow prevention tests being performed, each month five (5) Plano BPATs will be randomly selected to be observed by the superintendent ~~or his designee~~. The tester will be notified by certified mail to the address on file with the city. When a tester has been chosen for random observation he/she shall have thirty (30) calendar days from the date of the letter to schedule and complete an approved observation with the ~~city~~ utility ~~operations division~~. Failure to do so shall result in the Plano BPAT's testing privileges being suspended. Testing privileges shall not be reinstated until the observation has been completed and approved.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-30. Removal of backflow prevention assembly.

(a) *Removal.* Prior written approval must be obtained from the superintendent before a backflow prevention assembly may be removed or relocated.

(b) *Discontinued use.* The use of a backflow prevention assembly may be discontinued, and the assembly removed from service, upon written approval from the superintendent after presentation to the superintendent of sufficient written evidence to verify that a hazard no longer exists and is not likely to be created in the future.

(c) *Relocation.* A backflow prevention assembly may be relocated following written approval from the superintendent ~~or his designee~~ after presentation to the superintendent ~~or his designee~~ of sufficient written evidence to verify that the relocation will continue to provide the required protection and satisfy installation requirements. An assembly may not be removed for relocation unless water use is discontinued, until the relocation is complete, or until the service connection is equipped with other backflow protection approved by the superintendent ~~or his designee~~ and sufficient to prevent backflow during relocation. A retest will be required following the relocation of the assembly.

(d) *Repair.* A backflow prevention assembly may be removed for repair and a retest will be required following the repair of the assembly. Before an assembly is removed, the Plano BPAT shall notify the ~~superintendent or his designee~~. The superintendent ~~or his designee~~ shall determine the time period allowed for repair of the assembly and determine whether water service will be discontinued during that time period.

(e) *Replacement.* An assembly may be removed and replaced. All replacement assemblies must be approved by the superintendent ~~or his designee~~ and must be commensurate with the degree of hazard involved. A retest will be required following the replacement of the assembly. Before an assembly is replaced, the Plano BPAT shall notify the superintendent ~~or his designee~~. The superintendent ~~or his designee~~ shall determine the time period allowed for replacement of the assembly and determine whether water service will be discontinued during that time period.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-31. Requirements for backflow prevention assembly testers.

(a) *Registration.* Prior to performing any testing of backflow prevention assemblies within the City of Plano, a backflow prevention assembly tester must be registered with the ~~City of Plano~~ utility ~~operations division~~.

(1) Eligibility for registration shall be conditioned upon applicant providing proof that they are currently licensed as a backflow prevention assembly tester by the ~~Texas~~ Commission ~~on Environmental Quality~~ and have not been found to be in violation of section 21-32 of this division.

(2) Each applicant licensed as a backflow prevention assembly tester with the state shall furnish evidence to the superintendent to show that he/she has available the necessary tools and equipment to properly test and certify such assemblies. Serial numbers of all test gauges shall be registered with the superintendent. Registered serial numbers of test gauges shall be listed on tests and maintenance reports prior to being submitted to the superintendent. Each recorded test kit shall be tested annually for accuracy and calibrated to maintain a ~~+/- two percent (+/- 2%)~~ +/- 0.2 psid (pounds per square inch differential)~~accuracy factor~~. Failure to register the serial number or calibrate gauges annually shall be grounds for temporary suspension of a tester's registration until compliance with this requirement is attained.

(3) Registration shall remain in force provided that the tester maintains his/her eligibility for registration by complying with all requirements of this division and applicable state law. Evidence of renewal of the tester's TCEQ backflow prevention assembly testing license shall be furnished to the superintendent upon request. A tester shall advise the superintendent if the tester's state license is ever suspended or terminated within five (5) business days of notice to the tester of such suspension or termination.

(b) *Registration fee.* An annual registration fee in the amount of one hundred dollars ($100.00) shall be paid at the time an application for annual registration is submitted to the superintendent. This annual registration fee includes the ~~c~~City's testing of the tester's equipment and tools.

(c) *Responsibilities of testers.* Plano BPAT's shall be responsible for performing competent tests, issuing accurate reports of backflow prevention assemblies tested, filing timely backflow prevention assembly test reports and test fees to the b~~B~~ackflow p~~P~~rogram a~~A~~dministrator~~city~~. Plano BPAT's shall not change the design or operational characteristics of a backflow prevention assembly during repair or maintenance without prior written approval of the superintendent.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-32. Suspension and revocation of assembly tester registration.

(a) Failure to make immediate notification of a backflow prevention assembly field test failure as required by this division shall result in revocation of the Plano BPAT's registration.

(b) Refusal to perform retest(s) or pay appropriate fee as required by this division shall result in revocation of Plano BPAT's registration.

(c) Submitting a falsified test report shall result in revocation of a Plano BPAT's registration.

(d) Upon notification or discovery of testing deficiencies, material reporting deficiencies, or violations of this division by a Plano BPAT, the superintendent may, in addition to any other actions taken by the city, take one or more of the following actions:

(1) Require a re-test on any backflow prevention assembly reported as operational.

(2) Suspend the tester's registration with the city for a period not to exceed six (6) months if the tester accrues five (5) or more testing deficiencies, material reporting deficiencies, or violations of this division within a one (1) calendar year period; the five (5) errors may be any combination of testing deficiencies, material reporting deficiencies, or violations of this division.

(3) Revoke the tester's registration with the city upon the establishment of grounds for a second suspension of the tester's registration which occurs within five (5) years from the conclusion of the first suspension.

(4) Refuse to allow registration/renewal of a BPAT who refused to perform a retest or pay appropriate retest fees for assemblies tested by the BPAT while registration with the utility ~~operations~~ was not current.

(e) The superintendent shall send written notice to the Plano BPAT at the last known address on file for the Plano BPAT informing the Plano BPAT of a suspension or revocation. The date specified on the notice shall be the effective date of the revocation or suspension.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-33. Appeal of determinations under this division.

(a) *Appeal to director ~~of public works~~.* Any person aggrieved by a decision of the superintendent or the building official made pursuant to sections 21-24 through 21-33 of this division, may appeal that decision by filing their appeal in writing to the ~~director of public works~~d~~D~~irector within seven (7) calendar days of the notice of that decision. An appeal filed pursuant to this section shall clearly state the decision being appealed and the factual or legal basis for the appeal and shall clearly state whether a hearing is being requested on the matter. If a hearing is requested, the director or the director's ~~his~~ designee shall hold a hearing within ten (10) business days of the receipt of the written notice of appeal.

(b) *Failure to appeal.* Failure to request a hearing shall be deemed a waiver of a hearing and the decision of the superintendent or building official is final and binding.

(c) *Issuance of decision by director.* A decision from the director ~~of public works~~ or the director's~~his~~ designee shall be issued within ten (10) calendar days of the conclusion of the hearing or of the city's receipt of the written appeal if no hearing is requested. Decisions of the director ~~of public works~~ or the director's~~his~~ designee shall be final and binding.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-34. Prohibited conduct.

(a) The following actions or omissions are prohibited:

(1) Installing, allowing to remain installed, or maintaining a potable water supply, piping, or part thereof in such a manner that allows used, unclean, polluted, or contaminated water, mixtures, gas~~s~~es, or other substances to enter any portion of the public potable water supply by reason of back siphonage, back pressure or any other cause.

(2) Maintaining any water-operated equipment or mechanism or use of any water-treating chemical or substance if it is determined that such equipment, mechanism, chemical or substance may cause pollution or contamination of the public potable water supply. Provided, however, that such equipment or mechanism may be permitted when equipped with a backflow prevention assembly approved by the city.

(3) Connecting, allowing to be connected, or allowing to remain connected to the public potable water system any mechanisms or systems designed to return used water to the public potable water system.

(4) Connecting, allowing to be connected, or allowing to remain connected to the public potable water system an auxiliary water system without the prior written approval of the superintendent ~~or his designee~~.

(5) Incorrectly installing a backflow prevention assembly or allowing an incorrectly installed backflow prevention assembly to remain installed.

(6) Restoring the water supply to a backflow prevention assembly that failed a test under this division.

(7) Falsifying any information in a backflow prevention assembly test~~ing~~ report submitted to the city.

(8) Conducting a backflow assembly test without being registered with the city.

(9) Conducting a backflow assembly test while without a valid registration.

(10) Submitting an incomplete backflow prevention assembly test~~ing~~ report to the bBackflow pProgram aAdministrator~~city~~.

(11) Disconnecting, removing, or discontinuing the use of a backflow prevention assembly without the written permission of the superintendent ~~or his designee~~.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-35. Offenses and penalties.

(a) *Persons responsible.* A person is responsible for a violation of this division if the person is the owner, occupant, manager, other person in control of the property or premises or the person responsible for the maintenance of the property determined to be the source of a violation of this division or the tester who performed the test or procedure.

(b) *Criminal penalties.* Any person knowingly violating any provision of this article or failing to observe any provisions of this article shall be deemed guilty of a misdemeanor and upon conviction thereof, shall be punished as provided in subsection 1-4(a) of this Code of Ordinances. Every day the violation continues shall be deemed as a separate offense.

(Ord. No. 2011-12-2, § II, 12-12-11)

Sec. 21-35.1. Enforcement.

(a) *Authority.* The director ~~of public works~~, the superintendent, and the building official, or their respective designees are hereby authorized to enforce the provisions of this division by any one or more of the enforcement mechanisms set forth in this division, or as allowed by local, state, or federal law.

(b) *Civil penalties.* The city may file a civil lawsuit to enforce this division and may seek civil penalties as authorized by law.

(c) *Discontinuance of water service.* Water service to the property or premises where the alleged violation exists may be discontinued or refused by the utility if violations are not corrected within the time period indicated in the notice of violation provided by the city.

(d) *Remedies cumulative.* All remedies authorized under this division are cumulative of all others unless otherwise expressly provided. Accordingly, the filing of a criminal action shall not preclude the pursuit of a civil or administrative action for violation of this division nor shall the filing of a civil action preclude the pursuit of any other action or remedy, administrative, or criminal.

(Ord. No. 2011-12-2, § II, 12-12-11)

Editor's note(s)—Ord. No. 2011-12-2, § II, adopted December 12, 2011, enacted provisions intended for use as section 21-36. Inasmuch as there are already provisions so designated, and at the discretion of the editor, said provisions have been redesignated as section 21-35.1.