

ORDINANCE NO. _____

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CARROLLTON, TEXAS AMENDING THE CODE OF ORDINANCES TITLE V “PUBLIC WORKS” BY REVISING AND RESTATING CHAPTER 56, CROSS-CONNECTION CONTROL AND PREVENTION; ADDING DEFINITIONS; PROVIDING FOR UPDATED BACKFLOW PREVENTION ASSEMBLY REQUIREMENTS; PROVIDING PROVISIONS REGARDING FIRE PROTECTION SYSTEMS, FIRE HYDRANT PROTECTION, MOBILE SYSTEMS, PLUMBING CODE, THERMAL EXPANSION, PRESSURE LOSS, COMPLIANCE FOR LANDSCAPE IRRIGATION, RAINWATER HARVESTING, RESIDENTIAL SERVICE CONNECTIONS, INTERCONNECTIONS, MULTIPLE CONNECTIONS, CUSTOMER SERVICE INSPECTIONS, CERTIFICATION OF CUSTOMER SERVICE INSPECTORS, CERTIFICATION OF BACKFLOW PREVENTION ASSEMBLY TESTERS, LICENSED BACKFLOW PREVENTION ASSEMBLY TESTER RESPONSIBILITIES, FEES, TESTING AND MAINTENANCE OF BACKFLOW ASSEMBLIES, INSTALLATION GUIDELINES AND REQUIREMENTS FOR BACKFLOW PREVENTION ASSEMBLIES, RIGHT-OF-WAY ENCROACHMENT BY BACKFLOW PREVENTION ASSEMBLIES, EMERGENCY SUSPENSION OF UTILITY SERVICE, NON-EMERGENCY TERMINATION OF WATER SUPPLY, ACCESS TO PREMISES TO CONDUCT TCEQ REQUIRED CUSTOMER SERVICE INSPECTIONS; ESTABLISHING SPECIFIC VIOLATIONS, ENFORCEMENT, AND PENALTY PROVISIONS; PROVIDING FOR ADMINISTRATIVE APPEAL; PROVIDING SAVINGS, REPEALING, AND SEVERABILITY CLAUSES; PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Carrollton, Texas (“City”) is a Home Rule municipality possessing the full power of local self-government pursuant to Article 11, Section 5 of the Texas Constitution, Section 51.072 of the Texas Local Government Code and its Home Rule Charter; and

WHEREAS, the State of Texas, through its statutes, regulations, and rules of the Texas Commission on Environmental Quality (“TCEQ”), requires the protection of the public water supply through appropriate cross connection control measures and local administration of a backflow prevention device testing program; and

WHEREAS, the City maintains and operates a public water utility and is responsible for protecting the integrity and safety of the public water supply; and

WHEREAS, the City Council of the City of Carrollton, Texas (“City Council”) has determined that state law requires additional regulations related to cross-connection and backflow controls so as to further protect the public water supply; and

WHEREAS, the City Council finds that the regulations set forth in this Ordinance are necessary and proper for the good government, health, and safety of the citizens of the City;

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CARROLLTON, TEXAS, THAT:

SECTION 1.

All of the above premises are found to be true and correct legislative findings and factual findings of the City Council, and they are hereby approved and incorporated into the body of this Ordinance as if copied in their entirety.

SECTION 2.

Title V “Public Works” of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended by revising and restating Chapter 56, “Cross-Connection Control and Prevention”, to read as follows:

“CHAPTER 56. CROSS-CONNECTION CONTROL AND PREVENTION

Sec. 56.01. Cross-connection standards program purpose.

Every source of contamination or possible contamination from any contaminant which originates from or is located at a residential or commercial establishment, which is connected to any public water supply, or which provides water to the public, shall be equipped with backflow protection required under the provisions of this ordinance. In addition, no water connection from any public drinking water supply system shall be connected to any condensing, cooling, or industrial process or any other system of non-potable usage over which the public water supply system officials do not have sanitary control. The purpose of a cross-connection control program is to promote the public health, safety, and welfare by regulations designed to:

(A) Protect the public potable water supply of the City of Carrollton 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 customers in plant potable water system(s) 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 elimination and control which will systematically and effectively prevent the contamination or pollution of the City’s potable water system; and

(D) Provide continued compliance with all applicable state laws.

Sec. 56.02. Definitions and Abbreviations.

For the purpose of this chapter, the following definitions and abbreviations apply unless the context clearly indicates or requires a different meaning. If a word or term used in this chapter is not contained in the following list, its definition, or other technical terms used, shall have the meanings or definitions listed in the most recently adopted edition of the City of Carrollton Plumbing Code and/or the *Manual of Cross Connection Control* published by the Foundation for Cross Connection Control and Hydraulic Research, University of Southern California:

Air break. A piping arrangement in which a drain from a fixture, appliance or device discharges indirectly into another fixture, receptacle or interceptor at a point below the *flood level rim* and above the trap seal.

Air gap. 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 1.0 inch.

Atmospheric vacuum breaker backflow prevention device or atmospheric vacuum breaker or AVB. A device used to prevent back-siphonage in non-health hazard conditions. This device cannot be tested and cannot prevent back-pressure backflow. AVBs are not allowed on landscape irrigation systems.

Auxiliary water supply. Any water source available to a property other than the primary, approved public water system. This can include other public water supplies, natural sources like wells, springs, or rivers, and even reused water or industrial fluids. These alternative sources are often used to supplement or replace the public water system for non-potable uses like irrigation, firefighting, or toilet flushing.

AWWA. American Water Works Association.

Backflow. The undesirable reversal of flow of a liquid, gas, or suspended solid into the potable water supply.

Backflow prevention assembly or Assembly (includes the plural). A device or mechanism used to counteract back-pressure or prevent back-siphonage in order to protect against health hazard and non-health hazard backflow conditions.

Backflow prevention assembly tester or BPAT. A person who is licensed by TCEQ and meets the City's requirements to test and repair backflow prevention assemblies on any domestic, commercial, industrial, or irrigation service. The two main categories of services that a *BPAT* provides are as follows:

- (1) *General tester.* A backflow prevention assembly tester who is licensed by TCEQ and meets the city's requirements to test and repair backflow prevention assemblies on any domestic, commercial, industrial, or irrigation service.
- (2) *Fireline tester.* A backflow prevention assembly tester who is licensed by TCEQ, meets the city's requirements to test and repair backflow prevention assemblies, and is

permanently employed by an Approved Fireline Contractor. A Fireline tester may test and repair assemblies on any domestic, commercial, industrial, irrigation service, or fire protection sprinkler system.

Backflow prevention assembly test gauge A specialized instrument used to test if a backflow preventer is working correctly. It typically consists of a differential pressure gauge, hoses, and fittings, and is used to perform a field test by measuring the pressure difference across the assembly's check valves. This measurement is critical to ensure that water does not flow backward and contaminate the potable water supply. Gauges used in the testing of backflow-prevention assemblies must be tested for accuracy annually in accordance with state laws. The same gauge cannot be used to test backflow prevention assemblies on potable and non-potable water lines. Backflow-prevention-assembly testers who test assemblies on both potable and non-potable water lines must use different gauges for each line. The gauge used to test assemblies on non-potable water lines must never be used on potable water line assemblies and must have a purple decal, affixed to the dial inside the lens cover, with "NON-POTABLE USE ONLY" printed in white lettering.

Backflow prevention device. A backflow prevention component that is not a testable plumbing appurtenance which prevents water from flowing backward into the potable water supply, often installed at a building's taps or on individual fixtures. Devices are not allowed to be installed on cross connections where there are health hazards and have limited use for non-health hazard applications for backflow prevention in certain hydrologic conditions. City approval is needed for its component application.

Back-pressure. The unwanted reverse flow of water in a plumbing system caused by a higher pressure on the downstream side than on the supply side, forcing contaminated or non-potable water backward into the clean water supply. This condition is often caused by pumps, thermal expansion, or a high-elevation water system, and it can introduce pollutants or contaminants into the drinking water supply.

Back-siphonage. The unwanted reverse flow of water or other substances into the potable water supply caused by a negative pressure or vacuum in the supply line. This can occur during events like a water main break, firefighting, or high water usage, which lowers pressure and can pull contaminants into the clean water system.

Boresight or boresight to daylight. Unrestricted straight-line opening in an enclosure that vents to grade, and is sized and constructed to adequately drain the full flow discharge from a backflow prevention assembly thus preventing any potential for submersion of the assembly.

City or the city. The City of Carrollton through the City Manager, or designee, or any representative, contractor, inspector, or employee designated by the City Manager.

Commercial establishment. Property or location which is used primarily for manufacture, production, storage, wholesaling, or retailing of goods or services which are or may be placed in the flow of commerce or any property or location which is used primarily for the provision of any good or service.

Commission or TCEQ. The Texas Commission on Environmental Quality (TCEQ), or any successor agency.

Contaminants. Any foreign material, solid or liquid, that is not common to the potable water supply which makes the water unfit or undesirable for human or animal consumption.

Contamination or contaminated. The entry into, or presence in, a public water supply of any substance which may be harmful to health or to the quality of the water.

Cross-connection. Any physical arrangement where a potable water supply is connected, directly or indirectly (actually or potentially), to or with any non-potable water system or source, used water system or auxiliary water supply, sewer, drain conduit, swimming pool, storage reservoir, plumbing fixture, swamp coolers, air conditioner units, fire protection system, or any other assembly which contains, or may contain, contaminated water, sewage, or other liquid of unknown or unsafe quality which may be capable of imparting contamination to the public water system as a result of backflow. Bypass arrangements, jumper connections, removable sections, swivel, or change-over assemblies, or other temporary or permanent assemblies through which, or because of which, backflow may occur, are examples of cross-connections.

Cross-connection control device. Any nationally approved or recognized device placed upon any connection, physical or otherwise, between a potable water supply system and any plumbing fixture or any tank, receptacle, equipment, or device, which is designed to prevent non-potable, used, unclean, polluted and contaminated water, or other substances, from entering into any part of the potable water supply system under any condition or set of conditions.

Cross-connection control survey. A cross-connection control survey is a systematic inspection of a property's entire plumbing system to identify and assess potential risks of contamination from non-potable water sources entering the potable water supply. The survey involves a detailed walk-through, documenting all actual or potential cross-connections and the methods or devices used to prevent backflow. The survey focuses on identifying any points where the potable water supply could be exposed to non-potable water, such as from auxiliary water sources, irrigation systems, fire sprinklers, or industrial equipment. The survey assesses the effectiveness of existing backflow prevention devices, ensuring they are properly installed and maintained to prevent backflow. Each identified cross-connection is evaluated based on the potential severity of contamination. The survey may result in recommendations for installing backflow prevention devices or modifying plumbing systems to eliminate or mitigate cross-connection risks.

Customer service inspection. A customer service inspection is an examination of the private water distribution facilities of a user, or potential user, of the public water system for the purpose of providing or denying water service. This inspection is limited to the identification and prevention of cross-connections, potential contaminant hazards, and illegal lead materials. A customer service inspection is not a plumbing inspection as defined and regulated by the Texas State Board of Plumbing Examiners (TSBPE).

Customer Service Inspector or CSI. A customer service inspector is an individual licensed by TCEQ to perform inspections of private water distribution facilities. A CSI's role is limited to the scope defined by TCEQ regulations and is not a plumbing inspection as defined and regulated by the TSBPE.

Degree of hazard. The hazard classification (health or non-health) assigned to an actual or potential cross-connection. A list of common hazards can be found in 30 TAC §290.47(f), this list is not all inclusive.

- (1) *Health hazard.* A cross-connection, potential contamination hazard, or other situation involving any substance that can cause death, illness, spread of disease, or has a high probability of causing such effects if introduced into the potable drinking water supply.
- (2) *Non-health hazard.* A cross-connection, potential contamination hazard, or other situation involving any substance that generally will not be a health hazard, but will constitute a nuisance, or be aesthetically objectionable, if introduced into the public water supply.

Director. The City Manager, or designee, who is vested with authority and responsibility for the implementation of an effective cross-connection control program and for the enforcement of the provisions of this chapter.

Double check detector backflow prevention assembly or DCDA. specially designed assembly composed of a line-size approved double check valve assembly with a bypass containing a specific water meter and an approved double check valve assembly. The meter shall register accurately for rates of flow up to 2 gpm (gallons per minute) and shall show a registration for all rates of flow.

Double check valve backflow prevention assembly or double check assembly or DC. An assembly which consists of two independently acting, approved check valves, including tightly closing resilient seated shutoff valves attached at each end of the assembly and fitted with properly located resilient seated test cocks.

Drinking water All water distributed by any agency or individual, public or private, for the purpose of human consumption or which may be used in the preparation of foods or beverages or for the cleaning of any utensil or article used in the course of preparation or consumption of food or beverages for human beings. The term "drinking water" shall also include all water supplied for human consumption or used by any institution catering to the public.

Engineered air gap. A specific plumbing device that creates a physical separation and contains the air gap. While a physical separation, it does not meet the plumbing code definition of a physical air gap separation of 2 x diameter of the water supply line size above the overflow "flood level rim". These devices are designed to prevent contaminated water from being siphoned back into the clean water supply. Any engineered air gaps must obtain approval from the city prior to installation.

Industrial reclaimed water. Wastewater from non-domestic or non-municipal sources that has been treated to a quality suitable for reuse in industrial processes, such as cooling, manufacturing, or dust control. Specific types of industrial wastewater that are eligible and ineligible for use as reclaimed water are listed in the Texas Administrative Code.

Inspector - An individual who is recognized by the city as a licensed inspector under the provisions of this chapter.

Irrigator - An individual who sells, designs, offers consultations regarding, installs, maintains, alters, repairs, services, or supervises the installation of an irrigation system, including the connection of such system to a raw or potable water supply or any public water system, and who is required to be licensed under all applicable state laws.

Mobile unit. A vehicle or portable operation that connects to the public potable water system and has the potential to introduce contaminants. These include, but are not limited to, recreational vehicles (RVs), mobile medical equipment units, carpet-cleaning vehicles, water-hauling vehicles, water treatment units, street-cleaning vehicles, liquid-waste vehicles, power-wash operations, food vendor units, and pest-control vehicles.

Nonresidential use. Water used by any individual other than a residential customer of the water supply and includes all uses not specifically included in “residential uses” as defined in the city’s zoning ordinance.

On-Site Sewage Facility or OSSF. Septic systems that treat and dispose of wastewater on a property instead of a public sewer

Person. Any individual, partnership, association, corporation, firm, club, trustee, receiver, and bodies politic and corporate.

Point-of-use isolation. The appropriate backflow prevention within a customer’s private water conveyance system at the point at which the actual or potential cross-connection exists. It is also referred to as fixture outlet protection.

Potable water supply. Water that is safe for human consumption and meets applicable federal and state drinking water standards. It includes water used for drinking, cooking, and other domestic purposes like washing and preparing food.

Premises. Any property connected to the public water system, including all improvements, buildings, mobile units, and other structures located on it.

Premises containment isolation. The appropriate backflow prevention assembly installed at the service connection between the public water distribution system (water meter) and the water user.

Pressure vacuum breaker backflow prevention assembly or pressure vacuum breaker or PVB. An assembly which provides protection against back-siphonage but does not provide adequate protection against back-pressure or backflow. The assembly is a combination of a single check valve with an AVB and can be used with downstream resilient seated shutoff valves. In addition,

the assembly has suction and discharge gate valves and resilient seated test cocks which allows the full testing of the assembly.

Public water system or system. A system for the provision to the public of water for human consumption through pipes or other constructed conveyances, which includes all uses described under the definition for drinking water. This term includes: any collection, treatment, storage, and distribution facilities under the control of the operator of such system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system.

Reclaimed Water. Treated wastewater that is cleaned and purified to a high standard, making it suitable for a beneficial reuse, such as agricultural irrigation, industrial processes, toilet flushing, or even replenishing groundwater. It is also known as recycled water or reused water

Reduced pressure principle assembly or RP. An assembly containing two independently acting approved check valves together with a hydraulically operated, mechanically independent pressure differential relief valve located between the check valves and at the same time below the first check valve. The unit shall include properly located resilient seated test cocks, and a tightly-closing resilient seated shutoff valve the end of the assembly.

Reduced pressure principle detector assembly or RPDA. A specially designed assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a specific bypass containing a specific water meter and an approved reduced pressure principle backflow prevention assembly. The meter shall register accurately for rates of flow up to 2 gpm and shall show a registration for all rates of flow.

Representative of the water system. An individual designated by the city to perform cross-connection control duties that shall include, but are not limited to, cross-connection inspections, water use surveys, and backflow prevention assembly testing.

Residential service connections. Water used by any residential customer of the water supply and includes single family dwellings, duplexes, multiplex, and apartments where the individual units are each on a separate meter; or, in cases where two or more units are served by one meter, the units are full-time dwellings.

Service connection. The point of delivery at which the public water system connects to the private supply line or lateral of a water user.

Spill-resistant pressure vacuum breaker or SVB. An assembly containing an independently operating, internally loaded check valve and independently operating, loaded air inlet valve located on the discharge side of the check valve. This assembly is to be equipped with a properly located resilient seated test cock and tightly closing resilient seated shutoff valves attached at each end of the assembly.

Thermal expansion. The tendency of water to increase in volume when heated. This expansion can lead to increased pressure within the water system, which can potentially cause damage.

USC-FCCCHR. University of Southern California Foundation for Cross-Connection Control and Hydraulic Research

Used water. Water supplied by a public water system to a consumer's water system after it has passed through the service connection.

Water use backflow prevention cross-connection control survey. A survey conducted, or caused to be conducted, by the city of a property's water system to identify and evaluate potential cross-connections that could allow contaminated water to flow back into the public water supply.

Sec. 56.03. Right-of-way encroachment.

No individual shall install or maintain a backflow prevention assembly upon or within any city right-of-way except as provided in this section.

- (A) A backflow prevention assembly required by the city may be installed upon or within the city right-of-way only if the owner proves to the city that there is no other feasible location for installing the assembly, installing it in the right-of-way will not interfere with traffic or utilities, and the owner obtains a permit from the city. The city retains the right to approve the location, height, depth, enclosure, and other requisites of the assembly prior to its installation.
- (B) All permits and inspections required by the city to perform work in the right-of-way shall be obtained.
- (C) The assembly shall be installed below or flush with the surrounding grade except when it is not practicable to install it in this manner. Any assembly or portion of an assembly, which extends above ground, shall be located no closer than 18 inches to the face of the curb.
- (D) The city shall not be liable for any damage done to or caused by an assembly installed in the right-of-way.
- (E) A property owner shall, at the request of the city and at the owner's expense, relocate a backflow prevention assembly which encroaches upon any city right-of-way when such relocation is necessary for street or utility construction or repairs for purposes of public safety. Failure to relocate may result in the cessation of access to the public water system.
- (F) An individual commits an offense if he/she fails to relocate a backflow prevention assembly located in or upon any city right-of-way after receiving a written order from the city.

Sec. 56.04. Multiple connection.

Any premises requiring multiple service connections for adequacy of supply and/or fire protection will be required to install a backflow assembly on each of the service lines to the premises. The type of assembly will be determined by the degree of hazard that could occur in the event of an interconnect between any of the buildings on the premises.

Sec. 56.05. Protection required; installation.

- (A) The backflow prevention assembly protection which is required under this chapter shall comply with all applicable federal and state laws as well as the City's general design standards and ordinances. The city shall determine the type and location of backflow prevention assembly to be installed within the area served by the city. The backflow prevention assembly is required in one or more of the following circumstances. This list is not exhaustive and installation of an approved backflow assembly may be required in other circumstances:
- (1) The nature and extent of any activity on the premises, or the materials used in connection with any activity on the premises, or materials stored on the premises, could contaminate or pollute the potable water supply.
 - (2) Premises having one or more cross-connections and the cross-connection(s) are protected by an AVB.
 - (3) Internal cross-connections are present that are not correctable.
 - (4) Intricate plumbing arrangements that are present which make it impractical to ascertain whether cross-connections exist.
 - (5) There is unduly restricted entry so that inspections for cross-connections cannot be made with sufficient frequency to ensure that cross-connections do not exist.
 - (6) An appropriate cross-connection control survey report form has not been filed with the city.
 - (7) A fire suppression system is connected to the city's water system.
 - (8) All new construction if deemed necessary in the customer service inspection. The type of assembly required will be determined by the degree of hazard.
 - (9) When a building is constructed on commercial premises, and the end use of such building is not determined or could change, a RP assembly may be installed at the service connection that supplies water for public use.
 - (10) Any auxiliary water supply is in use.
 - (11) Rainwater harvesting. An approved backflow prevention assembly or air gap must be installed to prevent non-potable water from entering the potable water supply. All piping that contains harvested rainwater must be labeled "UNTREATED RAINWATER - DO NOT DRINK".
 - (12) Installation of all reclaimed water systems, including industrial reclaimed water systems, must be inspected prior to the system being activated. All reclaimed water systems are prohibited from being connected to the public water system. Backflow prevention assemblies installed on these stand-alone systems shall be tested upon installation by a *BPAT* and certified to be operating within specifications prior to connection to the public water system.

- (13) In the event point-of-use isolation has not had the testing or repair done as required by this chapter, premises containment isolation will be required.
 - (14) If it is determined that additions or alterations have been made to the plumbing system without obtaining proper permits, premises containment isolation may be required.
 - (15) All multistory buildings or any building with a booster pump or elevated storage tank.
- (B) All backflow prevention assemblies installed after the effective date of this chapter shall be installed in a manner designed to facilitate ease of inspection by the city. Any currently installed backflow prevention assemblies which are in inaccessible locations, or where the tester is subject to physical danger, shall be relocated to approved locations following current national guideline standards.
- (C) Swimming pool drain lines, including those for backwash and deck drains, must discharge to the sanitary sewer through an approved air gap.
- (D) Existing Assembly Retrofit
The city may require retrofitting of an existing backflow protection where inadequate backflow protection is in place and/or to address incidents of unaccounted for water loss.
- (1) Retrofitted or remodeled systems shall have an approved backflow prevention assembly installed as close as practicable to the point of water service delivery.
 - (2) When retrofitting or remodeling existing systems, a thorough hydraulic analysis is necessary to accommodate the backflow prevention device and any associated friction loss.
 - (3) All required plan review and permitting is required prior to retrofitting activities taking place.

Sec. 56.06. Testing of assemblies.

All *BPAT* backflow assembly testing and repair activities including reports are to be completed at time of testing by the *BPAT* utilizing the city's reporting process. Re-testing activities are required for failed assembly issues with extension timelines for corrective actions approved by the city. Any late *BPAT* backflow assembly testing reports, or repair activities not addressed are subject to fees and penalties as allowed for by the Code of Ordinances of the City of Carrollton.

- (A) All backflow prevention assemblies shall be inspected and tested or caused to be inspected and tested in compliance with city and TCEQ regulations in each of the following circumstances:
- (1) Immediately after installations;
 - (2) Whenever the assembly is moved;
 - (3) A minimum of once a year (excluding non-health residential irrigation devices);
 - (4) Premises that have been vacated and unoccupied for one year, prior to re-occupancy;
 - (5) Immediately after repairs; and

- (6) There is reason to believe the assembly is not working properly.
- (B) All assembly testing shall be performed by a *BPAT*.
- (C) Duly authorized employees of the city bearing proper credentials and identification are entitled to enter any public or private property at any reasonable time for the purpose of enforcing this chapter. Persons and occupants of premises which are provided with water service by the city, either directly or indirectly, shall allow the city or its representatives ready access at all reasonable times to all parts of the premises for the purposes of inspection, testing, records examination, or in the performance of any of their duties. Where persons or occupants of premises have security measures in force which would require proper identification and clearance before entry into their premises, the persons and occupants of the premises shall make necessary arrangements with their security guards so that upon presentation of suitable identification, personnel from the city will be permitted to enter, without delay, for the purposes of performing their specific responsibilities.
- (D) The city is not liable for any damage to a backflow prevention assembly which may occur during installation, testing, or repair.
- (E) A *customer service inspection* may be conducted at any premises located in the city which is served by the public water supply, or which provides water to the public. Upon determination that the premises falls under the provisions of this chapter and requires a backflow prevention assembly, a notice to abate the condition or to install the proper backflow prevention assembly shall be issued.
- (F) It is the responsibility of the person who owns or controls the premises to have all assemblies tested in accordance with this chapter. Assemblies may be required to be tested more frequently if the city deems it necessary.
- (G) All results from assembly testing by a *BPAT* will utilize the city authorized reporting requirements.

Sec. 56.07. Thermal expansion.

It is the responsibility of any person who owns or controls premises to eliminate the possibility of thermal expansion if a closed system has been created by the installation of a backflow prevention assembly.

- (A) Temperature and pressure relief valves, or combinations thereof, and energy cutoff devices shall bear the label of an approved agency and shall have a temperature setting of not more than 210°F (99°C) and a pressure setting not exceeding the tank or water heater manufacturer rated working pressure or 150 psi (1035 kPa), whichever is less. The relieving capacity of each pressure relief valve and each temperature relief valve shall equal or exceed the heat input to the water heater or storage tank.
- (B) Backflow protection is required for a potable water supply piping cold water line due to it being used to deliver water to water heaters. To prevent heating system water from backflowing and contaminating the building water supply piping, appropriate backflow protection in the form of a reduced pressure zone assembly and or air gap is required when chemicals are used in the interior hot water plumbing system for cleaning or any other additives are introduced into the hot water plumbing system to prevent contamination of the public water system.
- (C) The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall meet the current city approved plumbing code and not installed to facilitate a cross-connection of the discharge piping.
- (D) Boiler Requirements Backflow Protection - A building's potable water supply piping cold water line is used to deliver water to hydronic or steam heating boilers, in order to prevent heating system water from contaminating the building water supply piping. For this reason, appropriate backflow protection in the form of a reduced pressure assembly and or air gap is required.
 - (1) Non-potable clear-water waste. Where devices and equipment such as process tanks, filters, drips, and boilers discharge non-potable water to the building drainage system, the discharge shall be through an indirect waste pipe by means of an air gap to an approved waste drain system.

Sec. 56.08. Pressure loss.

Any reduction in water pressure caused by the installation of a backflow prevention assembly is not the responsibility of the city.

Sec. 56.09. Residential service connections.

Any person who owns or controls any residential premises which has been determined to have an actual or potential cross-connection will be required to eliminate the actual or potential cross-connection or have an approved backflow prevention assembly installed in accordance with this chapter.

Sec. 56.10. Rental properties.

Any person who owns or controls premises is responsible for the installation, testing, and repair of all backflow prevention assemblies on their premises.

Sec. 56.11. Customer service inspection.

- (A) TCEQ Public Water System regulations require that a customer service inspection for cross-connection control shall be conducted for circumstances listed in 56.11 (C) (1-4). This inspection must be completed by an authorized CSI.
- (B) Additionally, during the customer service inspection, all requirements for newly identified and required backflow prevention assembly requirements shall be completed before access to the public water system is established. Customer service inspection requirements are mandatory and failure to comply with identified noncompliance items will result in denial of access to the public water system until corrective actions have been completed and approved by the city. Customer service inspection findings shall be documented utilizing the city's approved process. All customer service inspection reports are to be completed at time of inspection by a CSI. Re-inspections are required for customer service inspection noncompliance issues with extension timelines for corrective actions approved by the city. Any non-corrective actions addressed are subject to fees and penalties as allowed for by the Carrollton Code of Ordinances.
- (C) A TCEQ required customer service inspection shall be conducted in each of the following circumstances:
 - (1) Prior to permanent water service to a newly constructed premises or previously unconnected premises.
 - (2) After any material improvement to premises.
 - (3) Any correction or addition to the plumbing of any premises.
 - (4) The city deems it necessary.
- (D) Temporary water service which poses a potential cross-connection threat to the potable water supply shall be inspected and protected by an approved backflow prevention assembly.
- (E) Customer Service Inspections will be carried out by a qualified inspector from the city or a CSI authorized by the city to perform inspections.

Sec. 56.12. Installation guidelines and requirements for backflow prevention assemblies.

- (A) A city approved backflow prevention assembly shall be placed on the property side of the water connection to prevent contamination of the water distribution system. In the event an approved backflow prevention assembly was not installed at the time service was obtained from the city, after due notice in writing, the customer shall install an approved backflow prevention assembly or the water service will be terminated. All backflow prevention assemblies shall be tested upon installation with health hazard assemblies tested at least annually thereafter by a TCEQ licensed and or approved backflow prevention assembly tester that is authorized and registered by the city. Only approved backflow prevention assemblies endorsed by the *USC-FCCCHR* are allowed to be utilized in the city. Any deviation from this requirement must have city approval prior to

installation. Any existing backflow prevention assemblies that must be replaced shall conform to the *USC-FCCCHR* standard. All backflow prevention assembly installation must comply with AWWA, USC-FCCCHR, city, and manufacturer's recommendations. *General.* To ensure proper operation and accessibility of all backflow prevention assemblies, the following requirements shall apply to the installation of these assemblies.

- (1) Backflow prevention assemblies shall be installed in accordance with the current *TCEQ*, *AWWA* and *USC-FCCCHR* regulations and guidelines. The assembly installer must obtain the required plumbing permits and have the installation inspected by the city.
 - (2) At facilities which require a backflow prevention assembly to be installed at the point of delivery of the water supply, such installation of the assembly must be before any branch in the line and on private property located just inside the boundary between the city right of way and the landowner's property. The city may specify other areas for installation of the assembly. Assemblies that must be installed or are located on city rights of way are the responsibilities of the business or entity that the water line is serving.
 - (3) The assembly must be protected from freezing and other severe weather conditions.
 - (4) All backflow prevention assemblies shall be of a type and model approved by the city.
 - (5) All vertical installations of backflow assemblies must have prior approval by the city and must be specifically rated for vertical installations by the manufacturer.
 - (6) Assemblies that are larger than four inches and installed more than five feet above floor level must have a suitable platform for use by testing or maintenance personnel.
 - (7) Bypass lines are prohibited. Pipefittings which could be used for connecting a bypass line must not be installed.
 - (8) Facilities that require continuous, uninterrupted water service and are required to have a backflow prevention assembly must make provisions for the parallel installation of assemblies of the same type so that testing, repair, and maintenance can be performed. The backflow prevention assemblies should be sized in such a manner that either assembly will provide the maximum flow required.
 - (9) Lines should be thoroughly flushed prior to installation. A strainer with blowout tapping may be required ahead of the assembly.
 - (10) The property owner assumes all responsibility for any damages resulting from installation, operation, and/or maintenance of a backflow assembly. The owner shall be responsible for keeping all backflow prevention assembly vaults free of silt and debris.
 - (11) Upon completion of installation, the city shall be notified, and all assemblies must be inspected and tested. All assemblies must be registered with the city and shall provide the date of installation, manufacturer, model, type, size, serial number of the backflow assembly, and initial test report.
- (B) *Reduced pressure principle backflow prevention assemblies (RPs).* May be utilized at premises where a substance is handled that would be hazardous to health if introduced into the potable water system. A RP is normally used in locations where an air gap is impractical. The RP shall be effective against both back-siphonage and back-pressure in health hazard applications.

RPs are typically installed above grade in well drained areas but may be installed below grade (ground level) if a boresight drain to daylight is provided. The drain shall be of adequate capacity to carry the full rated flow of the assembly and shall be screened on both ends.

- (1) Enclosures shall be designed for ready access and sized to allow for the minimum clearances established below. Removable protective enclosures are typically installed on the smaller assemblies. Daylight drain ports must be provided to accommodate full pressure discharge from the assembly.
 - (2) Assemblies two inches and smaller shall have at least six-inch clearance on both sides and on top of the assembly, and 12 inches below and behind the assembly. All assemblies larger than two inches shall have a minimum of 12 inches on the back side, 24 inches on the test cock side. Headroom of six feet zero inches is required in vaults without a fully removable top. A minimum access opening of 36 inches is required on all vault lids.
 - (3) All RP assemblies must be tested in accordance with this chapter. Tests are the responsibility of the assembly owner.
 - (4) Variances from these specifications will be evaluated on a case-by-case basis. Any deviations must have prior written approval of the city.
- (C) *Reduced pressure principle detector backflow prevention assemblies (RPDA)*. May be utilized in all installations requiring a reduced pressure principle backflow prevention assembly and detector metering.
- (1) RPDAs shall comply with the installation requirements applicable for reduced pressure principle backflow assemblies (RP).
 - (2) The line-size RP assembly and the bypass RP assembly must each be tested. A separate test report for each assembly must be completed by the certified tester.
- (D) *Double check valve backflow prevention assemblies (DC)*. May be utilized at premises where a substance is handled that would be objectionable but not hazardous to health if introduced into the potable water system.
- (1) Premises where an uninterrupted water supply is critical should be provided with two assemblies installed in parallel. Assemblies should be sized in such a manner that either assembly will provide the minimum water requirements while the two together will provide the maximum flow required.
 - (2) DCs may be installed below grade, providing all test cocks are fitted with brass pipe plugs. All vaults shall be well drained, constructed of suitable materials, and sized to allow for the minimum clearances established below.
 - (3) Assemblies two inches and smaller shall have at least six-inch clearance below and on both sides of the assembly, and if located in a vault, the bottom of the assembly shall be not more than 24 inches below grade. All assemblies larger than two inches shall have a minimum clearance of 12 inches on the back side, 24 inches on the test cock side, and 12 inches below the assembly. Headroom of six feet zero inches is required in vaults without a fully removable top. A minimum access opening of 36 inches is required on all vault lids. "Y" pattern double check valve assemblies shall be installed so that the

- checks are horizontal, and the test cocks face upward. These clearance standards apply to all assemblies installed in vaults, enclosures, and meter boxes.
- (4) Vertical installations of DCs are allowed only on sizes up to and including four inches that meet the following requirements:
 - (a) Internally spring-loaded check valves;
 - (b) Flow is upward through assembly;
 - (c) Manufacturer states their assembly can be used in a vertical position;
 - (d) Approved by the city.
 - (5) All DCs must be tested in accordance with this chapter. Tests are the responsibility of the assembly owner.
 - (6) Variances from these specifications will be evaluated on a case-by-case basis. Any deviations must have prior written approval of the city.
- (E) *Double check detector backflow prevention assemblies (DCDA)*. May be utilized in all installations requiring a double check valve assembly and detector metering.
- (1) DCDA's shall comply with the installation requirements applicable for double check valve assemblies (DCs).
 - (2) The line-size DC assembly and the bypass DC assembly must each be tested. A separate test report for each assembly must be completed by the certified tester.
- (F) *Pressure vacuum breaker backflow prevention assemblies (PVB)*. May be utilized at point-of-use protection only and where a substance is handled that would be objectionable but not hazardous to health if introduced into the potable water system. PVBs protect against back-siphonage only and shall not be installed where there is potential for back-pressure.
- (1) The assembly shall be readily accessible for testing and maintenance, with a minimum clearance of 12 inches all around the assembly.
 - (2) All PVBs must be tested in compliance with this chapter. Tests are the responsibility of the assembly owner. -by-case basis. Any deviations must have prior written approval of the city.
- (G) *Spill resistant pressure vacuum breaker backflow prevention assemblies (SVB)*. May be utilized in all installations requiring a pressure vacuum breaker. SVBs shall comply with the installation requirements applicable for pressure vacuum breaker backflow prevention assemblies.

Sec. 56.13. Air gap separation.

Air gaps provide maximum protection from backflow hazards and should be utilized at all locations where "high" hazardous substances are at risk of entering the potable water system.

- (A) If splashing is a problem, tubular screens may be attached, or the supply line may be cut at a 45-degree angle. The air gap distance is measured from the bottom of the angle. Hoses are not allowed.

- (B) Air gap separations shall not be altered in any way without prior approval from the city and must be available for inspection at all reasonable times.
- (C) Side walls, ribs or similar obstructions do not affect air gaps when spaced from the inside edge of the spout opening a distance greater than three times the diameter of the effective opening for a single, or a distance greater than four times the effective opening for two intersecting walls.
- (D) Any of the forms of a physical separation such as air breaks and or engineered air gaps (E-Gap) must be reviewed and authorized by the city

Sec. 56.14. Fire suppression systems.

The city potable water supplies to all fire protection systems that are normally under pressure, including but not limited to standpipes and automatic sprinkler systems and shall be protected from cross-connections resulting from backpressure or back siphonage by a city approved backflow prevention assembly.

- (A) All new installations of fire suppression systems which utilize the city's potable water supply shall have installed approved backflow prevention devices (RPDA or DCDA) according to the degree of hazard and metering requirements to capture unauthorized water use.
- (B) An approved DCDA or RPDA shall be the minimum protection for fire sprinkler systems using piping material that is not approved for potable water use and/or that does not provide for periodic flow-through during each 24-hour period, unless a variance has been issued in writing from the city. A RPDA must be installed if any solution other than the potable water can be introduced into the sprinkler system.
 - (1) It is the responsibility of all property owners and persons in charge of any premises to abide by the requirements of this chapter. In the event of any changes to the plumbing system, it is the responsibility of the property owner to notify the city. All costs associated with this chapter and the purchase, installation, testing and repair of DCDA or RPDA devices is the responsibility of the property owner and persons in charge of any premises.
 - (2) Upon the approved installation of the DCDA or RPDA device, a cross-connection test report completed by a city registered and licensed *BPAT* Fireline tester must be sent to the attention of the city and include the information required by this chapter.
- (C) Fire Department Connection. Where fire protection systems supplied by a potable water system include a fire department (siamese) connection located less than 100 feet from a non-potable water source that is capable of being used by the fire department as a secondary water supply, the potable water supply shall be protected by one of the following:
 - (1) Fire Department Connection (FDC) shall be installed and connected in a manner that backflow will not occur under fire fighting activities creating a cross connection to the potable water supply. On existing FDC installations where there is only a check valve in

place, required inspection activities following the National Fire Protection Association (NFPA) requirements to confirm the check valve on the FDC is operational, if it is not, the city shall require the appropriate backflow prevention assembly to be installed to protect the water main from the FDC.

- (2) Reduced pressure principle detector backflow prevention assembly. RPDA fire protection backflow prevention assembly shall be used for non-potable water sources including fire department vehicles carrying water of questionable quality or water that is treated with antifreeze, corrosion inhibitors, or extinguishing agents.
- (3) Chemicals. Where antifreeze, corrosion inhibitors, or other chemicals are added to a fire protection system supplied by a potable water supply, the potable water system shall be protected by one of the following:

- a. Reduced pressure principle backflow prevention assembly (RP)
- b. Reduced pressure detector backflow prevention assembly

(D) Connections to Automatic Fire Sprinkler Systems and Standpipe Systems.

- (1) The potable water supply to automatic fire sprinkler and standpipe systems shall be protected against backflow by a double check backflow prevention assembly, a double check fire protection backflow prevention assembly or a reduced pressure principle fire protection backflow prevention assembly.

(E) Fire hydrant lines A backflow prevention assembly is not required on a public fire hydrant line provided the water line is installed in compliance with city water main American Water Works Association (AWWA) standards.

- (1) Potable water lines serving on-site private fire hydrants require installation of a Double Check (DC) or Reduced Pressure (RP) assembly is required on both ends of a private water main that is connected to the public water service at two or more locations.
- (2) This requirement will apply even if the private water main is installed only to serve a fire sprinkler, standpipe, or hydrant system.

(F) Location of backflow prevention assemblies for Fire Protection Systems Backflow prevention assemblies shall be located as close as practicable to the point of water service delivery (typically the water meter).

- (1) *Point of service delivery* means the terminal end of a service connection from the public water system. If a meter is installed at the end of the service connection, then the point of service delivery shall mean the downstream end (i.e., customer's side) of the meter. If an unmetered connection exists, then the point of service delivery shall mean at the point of demarcation between the public right-of-way or easements and private property.
- (2) The term service connection shall mean the terminal end of a service connection from the public potable water system, (i.e., where the water purveyor may lose

jurisdiction and sanitary control of the water at its point of delivery to the consumer's water system).

- (3) If a water meter is installed at the end of the service connection, then the service connection shall mean the downstream end of the water meter. *Close as practicable* is the point nearest the service delivery where the assembly can be installed.
- (4) Where the assembly installation location may interfere with obstacles such as driveways and sidewalks, then close as practicable is the nearest point after the obstacle, but in no way beyond the first tap.
- (5) Assemblies must NOT be located in traffic visibility triangles or where utility devices are prohibited by the zoning ordinance.
- (6) Locating an assembly behind the front yard zoning setback line, just around a building corner, or otherwise in coordination with a building design element, is typically acceptable without special justification provided the reason for the chosen location is readily apparent on the plan.

(G) Existing Fire Protection System Retrofit

The city may require retrofitting of an existing fire protection systems backflow protection where inadequate backflow protection is in place and/or address incidents of unaccounted for water loss

- (1) Retrofitted or remodeled fire protection systems shall have an approved backflow prevention assembly installed as close as practicable to the point of water service delivery when the hydraulic calculations of the sprinkler system demand that a new and/or larger service connection to the public water supply system is required.
- (2) When retrofitting or remodeling existing systems, a thorough hydraulic analysis, including revised calculations and new fire flow data, is necessary to accommodate the backflow prevention device and any associated friction loss.
- (3) All required plan review and permitting is required prior to retrofitting activities taking place.

(H) Fire Line Backflow Preventers shall meet the approval requirements and be listed by the USC-FCCCHR and/or city authorization on fire lines prior to fire line permit issuance.

(I) Testing and Maintenance:

- (1) Backflow prevention assemblies must be tested upon installation and at regular intervals as specified in this chapter.
- (2) The owner of the backflow prevention assembly is responsible for ensuring timely testing.
- (3) A city registered and TECQ Licensed Fireline BPAT is required to perform tests and repairs.

(J) System Modifications:

- (1) Test Valves:

- a) New water-based fire suppression systems must include test valves downstream of the backflow preventer.
 - b) These valves should be specific types (angle or globe) with defined thread specifications and quantities based on the system design flow.
- (2) Responsibility:
- The property owner is responsible for the maintenance and operation of the backflow prevention devices and for ensuring that required fire protection measures are in place during testing and restoration which can include the city requirements for a fire watch.

Sec. 56.15. Fire hydrant protection.

An approved RP shall be the minimum protection for fire hydrant water meters which are being used for a temporary water supply during any construction or other uses which pose a potential hazard to the public water supply.

- (A) It is the responsibility of all persons engaging in the use and rental of a fire hydrant water meter to abide by the conditions of this chapter. All fire hydrant water meter rentals shall meet the current requirements as provided by the city.
- (B) Only city fire hydrant water meters with city provided backflow prevention assemblies are allowed to be used within the city limits.
- (C) A refundable deposit is required to ensure the return of all water meters and backflow assemblies to the city. Failure to return the assemblies can result in the forfeiture of deposit and/or enforcement action being taken against the responsible party, as allowed for in this chapter.
- (D) All nonapproved fire hydrant meters, or backflow prevention assemblies attached to fire hydrant meters, which are found to be in use in the City of Carrollton will be confiscated and enforcement action taken against the responsible party, as allowed for in the enforcement section in this chapter.

Sec. 56.16. Responsibilities of property owner.

- (A) It is the responsibility of all property owners and/or persons in charge of any premises to abide by the conditions of this chapter and to comply with the following:
 - (1) Payment of all costs associated with this chapter and the purchase, installation, testing and repair of backflow prevention assemblies. (See Cross-Connection Control Fees, Title III, Chapter 31, § 31.01(P))
 - (2) Install and maintain all backflow prevention assemblies in accordance with this chapter and acceptable industry practice.
 - (3) All commercial establishments shall cause to have all backflow prevention assemblies on their premises tested annually. Such testing must be conducted by a *BPAT* registered with the city.

- (4) Maintain all backflow prevention assemblies in proper working order at all times, including repairing as required.
- (5) Maintain all backflow prevention assemblies in a manner which allows them to be tested by a method that has been approved by the city.

(B) *BPAT* shall comply with the following requirements:

- (1) Annually register with the city and pay the required fee. (See Cross-Connection Control Fees, Title III, Chapter 31, Section 31.01 (P)).
- (2) Maintain testing equipment in proper working condition/calibration.
- (3) Maintain the design or operation characteristics of an assembly.
- (4) Ensure that devices are tested according to city requirements and TCEQ regulations.
- (5) Enter all required backflow prevention assembly testing data, including test gauge serial numbers, utilizing the city's report remittance system at the time of testing and/or repair activities.

Sec. 56.17. Backflow prevention assembly tester certification; registration required.

Only approved TCEQ licensed backflow prevention assembly testers can test backflow prevention assemblies in the city. Testers must meet the city requirements for registration to include but are not limited to the following:

- (1) annual registration with the city;
- (2) provide proof of TCEQ licensing;
- (3) approved certification and provide proof that testing gauge equipment can maintain a calibration of plus or minus 0.2 PSID accuracy;
- (4) Necessary bonding insurance amounts determined by the city;
- (5) Confined Space Certification;
- (6) Payment of the annual registration fee to the city; and
- (7) Fireline Testers are required to provide their current Fireline Certification

Sec. 56.18. Fees.

- (A) There shall be an annual nonrefundable registration fee for each nonresidential backflow prevention assembly. A residential nonrefundable registration fee shall also be required for each residential backflow prevention assembly installed to protect against a health hazard cross connection.
- (B) There shall be a testing fee for each separate backflow prevention assembly on which a test is performed by the city. This fee applies to but is not limited to all newly installed backflow devices, which the city may choose to randomly test. If upon inspection or testing of a newly installed backflow prevention assembly it is deemed not to be working properly, it is the responsibility of the property owners and/or persons in charge of any premises to make necessary repairs. A retest fee will be assessed for each retest. (See Cross-Connection Control Fees Title III, Chapter 31, § 31.01(P))

Sec. 56.19. Compliance for landscape irrigation systems.

Installation requirements must comply with the current city plumbing code and TCEQ requirements for system installation and appropriate backflow prevention assembly requirements in this chapter. Interconnections of the potable water supply with an alternate water source is prohibited unless appropriate backflow protection is installed. Approved backflow protection assemblies must be installed for any landscape irrigation systems and testing requirements for the backflow assembly shall apply.

- (A) Water contained within the piping of an irrigation system is deemed to be non-potable. No drinking or domestic water usage, such as, but not limited to, filling swimming pools or decorative fountains, shall be connected to an irrigation system. If a hose bib (an outdoor water faucet that has hose threads on the spout) is connected to an irrigation system for the purpose of providing supplemental water to an area, the hose bib must be installed using a quick coupler key on a quick coupler installed in a covered purple valve box and the hose bib and any hoses connected to the bib must be labeled "non-potable, not safe for drinking." An isolation valve must be installed upstream of a quick coupler connecting a hose bib to an irrigation system.
- (B) A city permit is required to construct, install, alter, extend, or repair a landscape irrigation system. Homeowners conducting said work on their property are still required to obtain a city issued permit at no cost but must still abide by TCEQ and city requirements as they pertain to landscape irrigation systems.
- (C) Landscape irrigators working in the city must be licensed and meet all registration requirements to perform services such as design, installation, repair, and connection of an irrigation system to the public water supply. All other landscape irrigation system related activities that involve irrigation technicians, and irrigation inspectors, shall also meet city registration and TCEQ licenses requirements.
- (D) An irrigator shall ensure the backflow prevention assembly is tested prior to being placed in service, or after any repair to the assembly, and the test results provided to the city and the irrigation system's owner or owner's representative following testing of the backflow prevention assembly.
- (E) Landscape irrigation systems that are deemed health hazards shall also be tested annually or more frequently as may be required by the city.
- (F) Atmospheric Vacuum Breakers (AVB) are not permitted to be installed on landscape irrigation systems. Existing AVB's are required to be retrofitted with a newly approved backflow prevention assembly when the landscape irrigation system undergoes repair and or alteration.

(G) All newly installed backflow prevention assemblies for landscape irrigation systems deemed non-health hazards, are required to be tested and certified by a TCEQ licensed and city registered backflow prevention assembly tester upon installation

(H) Design and Installation: Before any chemical is added to an irrigation system connected to any potable water supply, the irrigation system must be connected through a reduced pressure principal backflow prevention assembly or air gap.

- (1) Connection of more than one water source to an irrigation system presents the potential for contamination of the potable water supply if backflow occurs. Therefore, connection of any additional water source to an irrigation system that is connected to the potable water supply can only be done if the irrigation system is connected to the potable water supply through a RP or an air gap.
- (2) Irrigation system components with chemical additives induced by aspiration, injection, or emission system connected to any potable water supply must be connected through a RP.
- (3) If an irrigation system is designed or installed on a property that is served by an on-site sewage facility (OSSF), as defined in Title 30 TAC Chapter 285 relating to On-Site Sewage Facilities).
- (4) All irrigation piping and valves must meet the separation distances from the On-Site Sewage Facilities system as required for a private water line under 30 TAC §285.91(10) Relating to Minimum Required Separation Distances for On-Site Sewage Facilities.
- (5) Any water from the irrigation system that is applied to the surface of the area utilized by the On-Site Sewage Facility system must be controlled on a separate irrigation zone or zones so as to allow complete control of any irrigation to that area so that there will not be excess water that would prevent the on-site sewage facilities system from operating effectively.
- (6) An accurate irrigation design must be developed for each new system before installation begins and must be on-site during construction.
- (7) The design should consider factors like effluent characteristics and site-specific conditions.
- (8) Drip irrigation systems require a design by a professional engineer or professional sanitarian and can only be installed by a TCEQ licensed OSSF installer class II.
- (9) All system components must be installed according to the approved design and regulations.

(I) Graywater and Alternative On-Site Water:

- (1) If using graywater or alternative on-site water, a designated area for future OSSF expansion must be set aside.
- (2) Graywater or alternative on-site water should not be applied to the surface of a reduced OSSF disposal field.
- (3) Physical connection between the graywater or combined reuse system and the OSSF is prohibited.

- (4) Three days of graywater storage are required when using a graywater or combined reuse system with a reduced OSSF.
- (5) Upon property transfer, buyers must be notified of the OSSF limitations and their responsibilities by the seller and or their agent.
- (6) Tanks used for water storage should be clearly labeled, have restricted access, and not create vector habitats.

Sec. 56.20. Mobile Units.

The connection of a mobile unit to any potable water system is prohibited unless such connection is protected by an air gap or an approved backflow prevention assembly. Prior approval and annual assembly testing of any backflow prevention assembly must be received from the city before connecting to any potable water system. Mobile units may be subject to a customer service inspection as determined by the city.

Sec. 56.21 Emergency Suspension of Utility Service.

- (A) The City Manager or their designee may, without prior notice, suspend water service, when such suspension is necessary to prevent or stop an actual or threatened backflow to any customer or premises for any of the following circumstances:
 - (1) Failure or refusal to allow and/or correct noncompliant items discovered while completing the TCEQ required customer service inspection;
 - (2) Presents or may present imminent and substantial danger to the environment or to the health or welfare of any person; or
 - (3) Presents or may present imminent and substantial danger to the city's public water supply.
- (B) As soon as is practicable after the suspension of service, the City Manager or their designee shall notify the customer of the suspension in person or by certified mail, return receipt requested, and shall order such individual to correct the cross-connection that allowed the backflow to occur.
- (C) The City Manager or their designee shall not reinstate suspended water service until:
 - (1) The customer presents proof satisfactory to the City Manager or their designee, that the cross-connection has been eliminated and its cause determined and corrected; and
 - (2) The customer pays the city for all costs the city incurred in responding to the backflow or threatened backflow.
- (D) Failure on the part of a customer to discontinue the use of a cross-connection and to physically separate a cross-connection is sufficient cause for the immediate discontinuance of public water service to the premises.

- (E) A customer whose service has been suspended may appeal such suspension to the City Manager or their designee, in writing, within ten working days of notice of the suspension.

Sec 56.22 Non-Emergency Termination of Water Supply.

- (A) The City Manager or their designee may terminate, after written notice and opportunity for a hearing, the water service of any customer who:
 - (1) Fails or refuses to allow and or correct noncompliance items discovered while completing the TCEQ required customer service inspection;
 - (2) Fails or refuses to install a reduced pressure principle assembly when required by this chapter;
 - (3) Fails or refuses to install and maintain backflow prevention assemblies in compliance with this chapter; or
 - (4) Fails or refuses to install, maintain, and operate the customer's piping and plumbing systems in accordance with all applicable codes, regulations, and law.
- (B) The City Manager or their designee shall notify the customer of the proposed termination of water service at least ten working days before the proposed termination. The customer may request a hearing on the proposed termination by filing a written request for a hearing with the City Manager or their designee not more than ten (10) days after receipt of notice of the proposed termination.
- (C) If water service is terminated, the City Manager or their designee shall not reinstate water service until:
 - (1) The customer presents proof, satisfactory to the city, that the backflow condition has been eliminated and/or corrected with appropriate backflow protection.

Sec 56.23 Access to Premises.

- (A) A commercial water service customer may, in lieu of the possible mandatory installation of a backflow prevention assembly, provide the city with access during reasonable business hours to the customer's premises for the purpose of determining compliance with the provisions of this chapter. Such access shall be unobstructed and safely accessible.
- (B) A commercial water service customer who fails or refuses to provide access shall install and maintain a reduced pressure principle assembly at the water service connection to the premises and/or be subject to water service termination as allowed for by this chapter.

Sec. 56.24. Enforcement.

- (A) This chapter shall be enforced by the City Manager or the manager's designated representatives or employees.
- (B) The city shall inspect and initially test, or cause to be tested, all backflow prevention assemblies installed pursuant to the requirements of this chapter. For new facilities, permanent water service shall not be provided until all backflow prevention assemblies reports have been submitted as required, indicating the assemblies are in proper working order and are installed in accordance with city regulations. Except in cases where the testing of backflow prevention assemblies must be delayed until the installation of internal production or auxiliary equipment, the city shall not approve a certificate of occupancy until all backflow prevention assemblies have been tested and are operational. The city shall not be liable for damage caused to any backflow prevention assembly as a result of the inspection or testing activities.
- (C) *Violations.*
 - (1) An individual commits an offense if there is failure to maintain backflow prevention assemblies in compliance with this section.
 - (2) An individual commits an offense if there is failure to comply with a repair or replacement order issued by the city.
 - (3) An individual commits an offense if backflow from premises owned, operated, or managed by the individual enters the public water supply system.
 - (4) An individual commits an offense by violating any section of this chapter.
 - (5) An individual commits an offense if discontinued or disconnected water service to premises under this chapter is reinstated except as directed by the city.
 - (6) An individual commits an offense by allowing an unlicensed or unregistered tester to perform testing and repair work on a backflow prevention assembly at their property or establishment.
 - (7) An individual commits an offense by testing backflow prevention assembly within the city without being registered and approved by the city.
 - (8) An individual commits an offense by using non-approved fire hydrant meters and backflow prevention assembly configuration.
 - (9) An individual commits an offense by testing fire line backflow prevention assemblies without a proper license as provided in the Texas Insurance Code.
 - (10) An individual commits an offense by failing to complete or submit backflow prevention assembly test reports as required by this chapter.
 - (11) An individual commits an offense by using nonregistered and/or inaccurate gauges.
 - (12) An individual commits an offense by using non-approved backflow prevention assembly testing procedures.
 - (13) An individual commits an offense by creating a threat to public health or the environment.
 - (14) An individual commits an offense by failing or refusing to allow for correcting noncompliant items discovered while completing the TCEQ required customer service inspection.

- (15) An individual commits an offense for failure to maintain or operate a backflow prevention assembly that does not comply with current standards adopted by TCEQ, applicable state plumbing codes, and/or this chapter.

(D) *Penalty.*

- (1) An individual who violates any provision of this chapter is guilty of a misdemeanor and upon conviction is punishable as set forth in section 10.99 of the Carrollton Code of Ordinances, for each act of violation and for each day or part of a day during which the violation is committed, continued, or permitted.
- (2) In addition to any other remedies or penalties contained in this section, the city is entitled to pursue all other criminal and civil remedies to which is entitled under authority of statutes or other ordinances against an individual committing any violation of this chapter including injunction and civil penalties.

- (E) *Sanction for failure to pay inspection and or testing fees.* In addition to sanctions provided for by this chapter, the city is entitled to exercise sanctions provided for by other ordinances of the city.

- (F) A registration granted to an approved *BPAT* that meets city and TCEQ requirements may be reviewed, suspended and/or revoked by the city if it is determined that the tester:

- (1) Has falsely, incompletely, or inaccurately reported assembly reports;
- (2) Has used inaccurate gauges;
- (3) Has used improper testing procedures;
- (4) Has created a threat to public health or the environment;
- (5) Found to be in violation of any of the provisions of this chapter; or
- (6) If a customer complaint investigation reveals that the tester violated responsibilities and ethical guidelines by creating a threat to the public health by compromising the protection of the public water supply.

- (G) Any backflow prevention assembly originally installed under prior code provisions and not meeting current regulatory standards shall be deemed noncompliant. Upon written notice or discovery of such noncompliance, the property owner or responsible party shall replace or upgrade the assembly to conform with current TCEQ and plumbing code requirements within 90 days.”

SECTION 3.

Any Person violating a provision of this Ordinance, upon conviction, is guilty of an offense punishable as provided in Section 10.99 of the Carrollton City Code.

SECTION 4.

The provisions of this Ordinance are severable in accordance with Section 10.07 of the Carrollton City Code.

SECTION 5.

This Ordinance shall be cumulative of all provisions of ordinances and of the Code of Ordinances of the City of Carrollton, Texas, except where the provisions of this Ordinance are in direct conflict with provisions of such ordinances and such codes, in which event the conflicting provisions of such ordinances and such codes are hereby repealed.

SECTION 6.

All other provisions of the Carrollton Code of Ordinances not expressly amended as stated herein shall remain in full force and effect.

SECTION 7.

This Ordinance shall become effective on and after its adoption and publication.

City of Carrollton, Texas

Steve Babick, Mayor

ATTEST:

Chloe Sawatzky, City Secretary

APPROVED AS TO FORM:

APPROVED AS TO CONTENT:

Kanika Juneja, Assistant City Attorney

Jody Byerly, Director of Public Works