

ORDINANCE NO. 2014-49

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF COPPERAS COVE, CORYELL COUNTY, TEXAS, AMENDING CHAPTER 11, ARTICLE II, WATER OF THE CITY'S CODE OF ORDINANCES BY ADDING SECTION 11-27, CONTROL OF BACKFLOW AND CROSS-CONNECTIONS.

WHEREAS, the City has a duty to protect the health, safety, welfare and environment of the City and its residents by protecting the public potable water supply from the possibility of contamination or pollution;

WHEREAS, it is in the best interest of the City to amend the current regulations by regulating the possibility of backflow into the public water systems and controlling existing and potential cross-connections between the City and consumer's internal distribution system or private water system;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF COPPERAS COVE, TEXAS:

SECTION 1. That Chapter 11, Article II of the Code of Ordinances of the City of Copperas Cove, Texas, entitled "Municipal Utilities and Services", Article II "Water", shall hereby be amended by adding Section 11-27 and it shall read as follows:

Sec. 11-27. Cross-Connection Control and Backflow Prevention

(a) General Policy:

- (1). *Purposes.* The purposes of this Section are to:
 - (a) Protect the City's potable water system from contamination or pollution by preventing contaminants and pollutants originating from customers' water systems from entering into the City's potable water system that may jeopardize the health, safety and welfare of the customers.
 - (b) Provide for a continuing program of cross-connection control and backflow prevention by requiring the installation of approved backflow prevention assemblies or methods as required by this Section, the City plumbing code, the requirements of Chapter 290, Title 30 of the Texas Administrative Code, and the requirements of Chapter 341, Subchapter C, Texas Health and Safety Code, all as

amended, and requiring the certification and operational testing of all testable backflow prevention assemblies.

- (c) Comply with the federal Safe Drinking Water Act (Title 42, United States Code, Chapter 6a, Subchapter XII) and state regulations as established by the Texas Commission on Environmental Quality (Title 30, Texas Administrative Code) related to cross-connections and backflow prevention.

(2) *Applicability:*

This Section applies to all connections to the City's potable water system, unless the customer's system is excepted, both as system protection and as internal protection, and to all installations of backflow prevention assemblies related to the City's potable water system, regardless of whether the connection or assembly is located within the City limits of Copperas Cove or in the City's certificated water service area (State law reference: 30 Texas Administrative Code (TAC) §290.44(h)(1)).

(3) *Definitions:*

Air gap separation means the unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water or waste to a tank, plumbing fixture, receptor, or other assembly and the flood level rim of the receptacle.

Approved assembly means a backflow prevention assembly that has been listed approved, manufactured, tested and installed for specific uses in accordance with the standards adopted by the AWWA (Manual M14, latest version) or approved and listed by the University of Southern California Foundation Manual for Cross-Connection Control (latest version) and is otherwise in compliance with this Section and the Plumbing code.

Auxiliary water supply means any water supply on or available to a customer's premises from a source other than directly through the City water system. Auxiliary water supplies include all of the following:

1. Water from another public water system.
2. Water from a natural source, such as a well, spring, pond, river or creek.
3. Reclaimed water.

4. Any water supplied by a public water system, including the City water system, that has passed through a point of delivery and is no longer controlled by the City water system.
5. Rain harvesting.

AWWA means the America Water Works Association.

Backflow means the undesirable reversal of flow of water and/or mixtures of water and other liquids, gases, or other substance from a customer's side of the service connection into the City water system. Backflow may occur under either a backpressure or back siphonage condition or as a result of cross-connection.

Backflow prevention assembly or assembly means an approved assembly or aggregation of approved assemblies designed to prevent backflow.

Backpressure means any situation or occurrence where the pressure in a customer's system is higher than in the City water system.

Back siphonage means an occurrence where the pressure in the City water system becomes less than that of the customer's system due to a vacuum in the City water system causing the flow of water to reverse its flow.

Building official means the person designated as the building official in the City's adopted International Building Code..

Bypass means a connection from the City side of a backflow prevention assembly to the customer side of the assembly for the purpose of diverting the water around the assembly while it is being repaired or replaced.

Certified backflow prevention assembly tester or certified tester means a person who: 1) holds a current professional certification as a backflow prevention assembly tester as required by 30 Texas Administrative Code §290.44(h)(4)(A), as amended; and 2) is currently registered with the water distribution superintendent.

Check valve means a valve that seats readily and completely in order to completely cease the flow of water.

City water system means the entire potable water distribution system of the City of Copperas Cove including, without limitation, all pipes, facilities, valves, pumps,

conduits, tanks, receptacles and fixtures and appurtenances between the water supply source and the point of delivery, used by the City to produce, convey, deliver, measure, treat or store potable water for public consumption or use.

Contamination means the presence of any foreign substance (organic, inorganic, radiological or biological) in water that tends to degrade its quality so as to constitute a hazard or impair the usefulness of the water. Contamination includes both hazardous contaminants and pollutants.

Cross-connection means any physical connection between the City water system and either another supply of unknown or questionable quality, any source which may contain contaminating or polluting substances, or any source of water treated to a lesser degree in the treatment process, through which backflow may occur.

Customer means any person or entity that is supplied potable water by or through the City water system and includes an owner, tenant or lessee.

Customer service inspection means an examination of the customer's 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's system means the entire plumbing system including pipes, conduits, tanks, receptacles, fixtures, equipment and appurtenances used to produce, convey, store or utilize potable or non-potable water between the point of delivery and the customer's point of use.

Director means the Director of Public Works for the City of Copperas Cove or another official designated by the Director.

Hazardous contaminant means any form of contamination that poses a health hazard with respect to the use of water for drinking or other domestic purposes.

Health hazard means 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.

Irrigation systems means an assembly of component parts that is permanently installed for the controlled distribution and conservation of water to irrigate any type of landscape vegetation in any location, and/or to reduce dust or control erosion.

Non-health hazard means 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 City water system.

Nonpotable water means untreated water that is unsafe for human consumption.

Person means any natural person, entity, corporation, corporate body, partnership, cooperative corporation, association, public or private organization of any character, or political subdivision of the state.

Plumbing code means the version of the International Plumbing Code or other related provisions in the International Residential Code.

Point of delivery means the point at which water leaves the City water system and enters a customer's system at or near the property line or edge of an easement. When a water meter is installed on or near the property line or edge of an easement, the point of delivery is the terminal end on the discharge side of the water meter.

Pollutant means a contaminant that impairs the quality of water in a manner or to a degree that does not create a hazard to public health, but may adversely affect the aesthetic qualities of the water for domestic use.

Potable water means water that complies with the TCEQ rules for drinking water and other domestic uses.

Potential contamination hazard means a condition which, by its location, piping or configuration, has a reasonable probability of being used incorrectly, through carelessness, ignorance, or negligence, to create or cause to be created a backflow condition by which contamination can be introduced into the water supply.

Rainwater harvesting system means any system used for the capture, storage, and distribution of untreated rainwater from a rooftop catchment surface or from precipitation captured directly from the sky to be used for outdoor landscape irrigation or foundation watering only.

Service connection means the terminal end of a service connection from the City water system. If a meter is installed at the point of delivery, the service connection means the point at which the terminal end on the discharge side of the water meter connects to the customer's system.

TCEQ means the Texas Commission on Environmental Quality or its predecessor or successor agencies.

(4) *Conflicts:*

If there is a conflict between any provisions of this Section, or any other provision of this Section or state or federal law including Title 30 of the Texas Administrative Code, all as amended, the most restrictive provision shall apply.

(b) Authority and Responsibility:

(1) *Director of Public Works*

(a) *Authority and responsibility.* The Director, in accordance with this Section and Title 30, Chapter 290 of the Texas Administrative Code, both as amended, is responsible for enforcing the requirements of this Section and may establish policies to implement the purposes of this Section (State law reference: 30 Texas Admin. Code §290.44(h)(1)(B)(iii); Texas Health and Safety Code, Chapter 341, Subchapter C).

(b) *Adequate protection determination.* To ensure adequate protection in individual cases, the Director may assess and determine the degree of hazard to the City's potable water system posed in the case of individual connections, customers or users. When the Director determines that a backflow prevention assembly is required for the protection of the City water system, the Director will require the customer, at the customer's expense, to properly install an approved assembly at each service connection or hazard point. Notice of such requirement shall be given in accordance with this Section (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(1)(B)(iii)).

(c) *Certified testing required.* In accordance with the TCEQ's rules, the Director shall require a certified testing report for all required and testable assemblies where an actual or potential hazard has been determined to exist in the following instances:

- 1) Prior to providing continuous water service to new construction;
- 2) On any existing service when the Director has reason to believe that cross connections or other unacceptable plumbing practices increase the risk of actual or potential contamination hazards entering into the City water system;
- 3) After any installation, repair, relocation, alteration, or addition to a customer's system that may affect the system's compliance with this Section; and
- 4) At other times as provided by this Section.

(State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(4)).

(d) *Testing by City.* City personnel, as directed by the Director, may perform periodic tests on assemblies at random locations to ensure that acceptable test standards are being followed by certified testers and randomly select and tag assemblies in a manner that will determine if the assemblies have been tested as required.

(e) *Authority to compel report production.* The Director may require, from any person, the submission of any records relating to the installation, maintenance, repair or testing of backflow prevention assemblies performed in accordance with this Section. (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(1)(B)(ii)).

(f) *Authority to refuse or terminate service.* The Director may refuse to initiate service or discontinue present service to any customer where the Director determines that: 1) an actual or potential sanitary hazard in the customer's system exists; and/or 2) adequate protection against backflow has not been provided or reported in accordance with this Section. Notice of terminating service is not required where the actual or potential threat of contamination endangers the health, safety and welfare of the City water system and the customers the system serves (State law reference: 30 Texas Admin. Code (TAC) §290.46(j)(2)).

(g) *Authority to revoke certified tester registration.* The Director may revoke a certified tester's registration in the following cases:

- 1) Failure to register the serial number or have the gauge tested for accuracy annually;
- 2) Use of a test gauge that does not meet the manufacturer's calibration standards in preparation of a City backflow test and maintenance report

- 3) Two (2) testing or reporting discrepancies within a one (1) year period, beginning on the date of the first discrepancy, including:
 - (i) false, incomplete, or inaccurate reporting of test completion or certification of a backflow prevention assembly;
 - (ii) use of inaccurate gauges;
 - (iii) improper operational certification methods; or
 - (iv) failure to comply with sections of this Section.
- 4) Failure to maintain licensure or registration with TCEQ;
- 5) Failure to comply with sections of this Section; or,
- 6) Conviction of a violation of this Section.
(State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(4)).

Revocation under this paragraph is effective upon receipt of written notice from the Director sent via certified mail, return receipt requested. Receipt is presumed to occur five (5) calendar days following the date the notice is mailed. Non-receipt of the notice does not affect the validity of a revocation order. Written notice under this paragraph shall provide specific written findings justifying revocation. Registration for certified tester's that have had a registration revoked shall not be accepted for a period of one (1) year following the effective date of revocation.

(h) *Appeal of registration revocation.* A request for appeal and reconsideration of registration revocation by a certified tester shall be delivered to the City Manager within fifteen (15) calendar days of receipt of the revocation notice and shall specifically contest or justify the Director's findings as outlined in the revocation notice. The City Manager shall have fifteen (15) calendar days to reconsider revocation and shall then issue a written final determination via certified mail, return receipt requested.

- (2) *Responsibilities of customers.*
 - (a) *Duty.* Each customer has a duty to prevent contaminants from entering the customer's system and the City water system. This duty begins at the point of delivery and includes the customer's entire internal water system. If the Director determines that an actual or potential hazard exists in the customer's system, this Section, including the requirements to implement an adequate cross-connection control program and /or install a backflow prevention assembly at the service connection and compliance with the applicable testing requirements,

shall apply. (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)).

- (b) *Consent to allow access and survey.* Each customer, as a condition of receiving water service, consents to allow City personnel access to the customer's property during normal business hours to inspect and survey the customer's system for potential contamination, backflow hazards and cross-connections. Written consent for access shall be requested by the City prior to conducting an inspection and the property owner shall grant such consent within ten (10) calendar days of receipt of the request for access by the City. If a customer refuses to allow access to City personnel for an inspection or survey in the time frame provided, the Director may discontinue or refuse the customer's water service, and/or assume that a high contamination health hazard exists and, therefore, require the highest degree of protection to be used in the customer's system prior to providing water service. If access is denied, the Director may immediately discontinue water service without further notice and the installation and certification of such required protection shall be required prior to allowing service to the customer.
- (c) *Expense.* Each customer, at the customer's expense, shall install, operate, maintain and test approved backflow prevention assemblies as required by this Section.
- (d) *Testing requirements.*
 - 1) *Customer responsibilities.* If the Director determines that an internal cross-connection program and/or a backflow prevention assembly at the service connection is required, the customer shall: 1) initiate the testing required by this section; 2) have completed any maintenance or installation of backflow assemblies as determined by the test to be necessary; and 3) ensure that an original report is submitted to the Director as required by this Section (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(1)(B)(i) and (h)(4)).
 - 2) *Initial testing or testing following repair, replacement, alteration or relocation.* All required backflow prevention assemblies shall be tested by a certified tester upon installation, repair, alteration or relocation and prior to being placed into service (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(1)(B) and (4)).
 - 3) *Annual testing.* **Testing shall be required annually between April 1 and April 30 of each year.** All required backflow

prevention assemblies which are installed to provide protection against health hazards shall be tested by a certified tester annually following installation, repair or maintenance (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(1)(B)(i) and (h)(4)).

- (e) *Installation, repair or maintenance.* Each customer, when contracting for the installation, repair or maintenance of backflow prevention assemblies shall employ a person, entity or contractor lawfully permitted to perform such services under state law. A customer must apply for and obtain a permit from the building department before installing, replacing, re-piping or relocating a backflow prevention assembly.
- (f) *Record keeping requirements.* Customers shall keep and maintain accurate copies of City of Copperas Cove test and maintenance report forms for all tests and repairs made to backflow prevention assemblies for at least three (3) years from the date of any such act, and shall provide the Director with copies of these reports upon written request or as provided for in this Section (State law reference: 30 Texas Admin. Code (TAC) §290.46(f)(3)(B)(vi)).
- (g) *Internal System Inspections – thermal expansion.* With the installation of backflow assemblies, the potential for creating a “closed-system” occurs. This closed system could result in injury to the water system customer if adequate safety measures, including thermal expansion valves, are not functioning properly. Thermal expansion of heated water may occur wherever potable water is heated in a closed system. This expansion may cause damage ranging from leaking faucets to a ruptured water heater if the condition is not addressed. The City shall not accept any liability resulting from the implementation of this Section.

(3) *Certified backflow prevention assembly testers.*

- (a) *Registration of certified testers.* Each person qualified to perform services as a certified tester for a City water system customer shall submit a completed City registration form to the Director prior to performing any services regulated under this Section. Test results or certification of the performance of other services shall not be accepted if the tester is not currently registered with the Director. The Director shall maintain a current list of registered certified testers, and will make this list available to City water system customers upon request.

Registrations will be valid for one (1) year and must be renewed annually.

- (b) *Testing equipment.* The certified tester shall furnish the City with the serial number of the tester's test kit, and the tester's test gauge must be tested when purchased and annually thereafter, or more frequently as required by the Director, to be in compliance with the University of Southern California's Manual of Cross Connection Control (latest edition) or the American Water Works Association Manual of Cross Connection Control requirements (Manual M14, latest edition). The certified tester must maintain the test gauge within a two (2) percent accuracy deviated and retain test results for three (3) years from the date of any such test. All test results shall be made available to the Director upon written request or as provided for by this Section (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(4)(A) and (B)).
- (c) *Accountability of certified tester.* The certified tester is responsible for the competency and accuracy of all tests and reports certifying assemblies to be operating within specifications performed or submitted by the certified tester, and for all work done by any persons under the direction or control of the certified tester. All work performed by a certified tester's assistants must be performed in the tester's presence. Certified testers shall certify that all backflow prevention assemblies comply with the specification provided in the University of Southern California's Manual of Cross Connection Control (latest edition) or the American Water Works Association Manual of Cross Connection Control requirements (Manual M14, latest edition) and that such assemblies are otherwise in compliance with this Section.
- (d) *Reporting and record keeping requirements.* A City of Copperas Cove test and maintenance report form must be completed by a certified backflow prevention assembly tester for each assembly tested. The signed and dated original must be submitted to the Director for record keeping purposes. Only the City of Copperas Cove's test and maintenance report forms will be accepted. All test and maintenance reports shall be retained for at least three (3) years from the date of any such test, and shall be made available to the Director upon written request or as provided for by this Section (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(1)(B)(i) and (h)(4)).
- (e) *Immediate notification required from a certified test.* If a backflow prevention assembly test fails or an assembly malfunctions and the

actual or potential hazard of contamination is not immediately curable through repair or replacement, the certified tester shall notify the Director and the customer immediately in person or by telephone. This notification shall be submitted in writing within five (5) calendar days. If the failure or malfunction of a backflow prevention assembly is not immediately curable through repair or replacement, the Director, upon notification, shall take all necessary steps, including the immediate cessation of water service through the assembly, to prevent the possible contamination of the City water system.

(f) *Alteration of backflow assembly.* It is a violation of this Section for a certified tester to alter the design, material, or operational characteristics of a backflow prevention assembly during testing, repairing or maintaining the assembly without the prior written approval of the Director.

(g) *Qualified.* Certified backflow prevention assembly testers are qualified to test and repair assemblies on any domestic, commercial, industrial or irrigation service. However, certified testers shall only test and repair assemblies on fire lines if they are permanently employed by an approved fire line contractor as required by the State of Texas Fire Marshal's office (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(1)(A)(i) and (ii)).

(4) *Backflow assembly installation and maintenance; permit required.*

(a) *Permit and inspection required.* Plumbing permits shall be obtained prior to installing, replacing, modifying or relocating existing backflow prevention devices in accordance with this Section. In addition, plumbing inspections are required to be requested upon completion of the above acts and no inspection shall be requested until the original backflow test results are submitted to the City in accordance with this Section.

(b) *Testing, reporting and record keeping required.* When backflow prevention assembly is installed, replaced, modified or relocated, the approved assembly shall be tested prior to being placed into service. The person completing the work in paragraph (a) of this section shall submit copies of written reports detailing the work to the customer and original reports to the Director on the City of Copperas Cove's test and maintenance report form. The report shall include a list of the materials or replacement parts used. All test, installation and maintenance reports shall be retained for at least three (3) years from the date of

any such test, and shall be made available to the Director upon written request or as provided for by this Section.

(c) Standards and Requirements

(1) General requirements.

- (a) Compliance required.* This Section, the TCEQ Rules and Regulations for Public Water Systems provided in Title 30 of the Texas Administrative Code, the City plumbing code and other applicable state and federal laws, all as amended, will govern the design, construction, operation and maintenance of the City water system with respect to cross-connection control and backflow prevention. Each person shall comply with all applicable provisions of these rules and regulations.
- (b) Auxiliary and reclaimed water systems.* It is unlawful for a person to cause or allow water from an auxiliary water supply or reclaimed water system to enter the City water system. Where a customer is served by an auxiliary water supply or utilizes a reclaimed water system in addition to the City water system, all applicable TCEQ regulations shall be followed, and the Director will determine the type of backflow prevention assembly to be used (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(2)).
- (c) Unlawful connections.* It is unlawful for a person to make a connection from the City water system to a customer's system where an actual or potential contamination hazard to the City water system exists and there is not air gap separation between the drinking water supply and the source of potential contamination. Where a containment air gap is impractical and, instead, an individual internal air gap or mechanical backflow prevention assembly is used, a backflow prevention assembly will be required at the service connection in accordance with AWWA Standards on those establishments handling substances deleterious or hazardous to the public health. This requirement does not apply if the customer maintains an adequate internal cross-connection control program that includes an annual inspection by a certified tester (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(1)(A) and (B)).
- (d) Non-potable connections.* It is unlawful for a person to make any connection from the City water system to any condensing, cooling or industrial process or any other system of non-potable usage, over which City water system officials do not have sanitary control, in a manner that does not fully comply with the requirements of subsection

- (c) above. It is unlawful for any person to cause or permit backflow from any such process to be transmitted into the City water system (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(2)).
- (e) *Overhead bulk water dispensing stations.* Overhead bulk water dispensing stations must be provided with an air gap between the filling outlet hose and the receiving tank to protect against back siphonage and cross-contamination (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(3)).
- (f) *Service connections, addition protection.* The use of a backflow prevention assembly at a service connection will be considered additional backflow prevention, and does not negate the requirement of backflow prevention on internal hazards as provided by this Section. (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(5)).
- (g) *Unlawful bypasses.* It is unlawful for a person to install, or to cause or permit the installation of, a bypass that has not been approved in advance by the Director. All bypasses on backflow prevention assemblies must themselves include provisions for backflow prevention as described in this Section.
- (h) *Rainwater harvesting systems.* The use of rainwater harvesting systems shall be restricted to non-potable, outdoor irrigation and foundation watering only. 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 shall be permitted only if the irrigation system is connected to the potable water supply through a reduced-pressure zone assembly or an air gap.
- (i) *Septic systems.* Property that has a septic system will be classified as an “on-site sewage facility” thus requiring the public potable water supply be protected by a reduced-pressure zone assembly if an irrigation system has or will be installed on the property (State law reference: 30 Texas Admin. Code (TAC) §344.51(d)). It further states if an existing irrigation system is connected to the public potable water supply and is protected by any other backflow device other than a reduced-pressure zone assembly, it will be allowed until major maintenance, alterations, repair or service is required, after which the system must be connected to the public potable water supply through an approved, properly installed reduced-pressure zone assembly (State law reference: 30 Texas Admin. Code (TAC) §344.52 (a)).

- (j) *Irrigation Systems.* All Underground Lawn/Sprinkler Systems will be required to have either a pressure vacuum breaker (PVB) or a reduced-pressure zone (RPZ) on all new installations. All presently installed backflow prevention assemblies for lawn/sprinkler systems which do not meet the requirements of this section but were approved devices for the purposes described herein at the time of installation and which have been properly maintained, shall, except for testing and maintenance requirements, be excluded from these rules so long as the Director is assured that they will satisfactorily protect the water purveyor's system. Whenever the existing device is moved from its present location, requires repairs, or fails field test, the device will need to be replaced with either a pressure vacuum breaker (PVB) where applicable or a reduced-pressure zone assembly (RPZ).
- (k) *Exception.* This Section shall not apply at any residence or facility where there is no actual or potential contamination hazard as determined by the Director (State law reference: 30 Texas Admin. Code (TAC) §290.44(h)(6)).

(2) *Types of backflow prevention required.*

- (a) *Generally.* Cross-connections vary widely in degree of potential contamination hazards. Backflow may occur under many different pressure differentials, varying from vacuum to very high pressures. The protection afforded by a backflow prevention assembly depends upon its type, the circumstances in which it is installed, and on its proper installation, maintenance and testing. Only approved assemblies shall be used.
- (b) *Minimum specific backflow prevention assembly required.* Specific backflow prevention assembly requirements for all affected customers and persons shall comply with this Section, TCEQ regulations as provided in Title 30, Chapter 290 of the Texas Administrative Code and the City's plumbing code, all as amended. In the event that a conflict exists, the most stringent requirement shall control. Only approved assemblies shall be used. The TCEQ table provided below details the types of premises and uses that are commonly subject to compliance with this Section, however, notwithstanding this provision or the table below, the Director shall retain final approval authority in each individual case.

Table Insert: (State law reference: 30 Texas Admin. Code (TAC) §290.47(1)).

Assessment of Hazards and Selection of Assemblies

The following table lists many common hazards. It is not an all-inclusive list of the hazards which may be found connect to public water systems.

Premises Isolation – Description of Premises	Assessment of Hazard	Required Assembly
Aircraft and missile plants	Health	RPBA or AG
Animal feedlots	Health	RPBA or AG
Automotive plants	Health	RPBA or AG
Breweries	Health	RPBA or AG
Canneries, packing houses and rendering plants	Health	RPBA or AG
Cold storage facilities	Health	RPBA or AG
Commercial car wash facilities	Health	RPBA or AG
Commercial laundries	Health	RPBA or AG
Connection to plating tanks	Health	RPBA
Connection to salt-water cooling systems	Health	RPBA
Connection to sewer pipe	Health	RPBA or AG
Cooling towers with chemical additives	Health	AG
Cuspidors	Health	AVB or PVB
Dairies	Health	RPBA or AG
Degreasing equipment	Nonhealth†	DCVA
Docks and dockside facilities	Health	RPBA or AG
Domestic space-heating boiler	Nonhealth†	RPBA
Dye vats or machines	Health	RPBA
Dye works	Health	RPBA or AG
Fire-fighting system (toxic liquid foam concentrates)	Health	RPBA
Flexible shower heads	Nonhealth†	AVB or PVB
Food and beverage processing plants	Health	RPBA or AG
Heating equipment – commercial	Nonhealth†	RPBA
Heating equipment – domestic	Nonhealth†	DCVA
Hose bibs	Nonhealth†	AVB
Hospitals, morgues, mortuaries, medical clinics, dental clinics, veterinary clinics, autopsy facilities, sanitariums, and medical labs	Health	RPBA or AG
Irrigation systems – with chemical additives	Health	RPBA
Irrigation systems – without chemical additives	Nonhealth†	AVB or PVB
Kitchen equipment – commercial	Nonhealth†	AVB
Lab bench equipment	Health or nonhealth	AVB or PVB
Metal manufacturing, cleaning, processing, and fabrication plants	Health	RPBA or AG
Microchip fabrication facilities	Health	RPBA or AG
Ornamental fountains	Health	AVB or PVB
Paper and paper products plants	Health	RPBA or AG
Petroleum processing and storage facilities	Health	RPBA or AG
Photo and film processing labs	Health	RPBA or AG
Plants using radioactive material	Health	RPBA or AG
Plating or chemical plants	Health	RPBA or AG

Pleasure boat marinas	Health	RPBA or AG
Private/Individual/Unmonitored wells	Health	RPBA or AG
Reclaimed water systems	Health	RPBA or AG
Restricted, classified or other closed facilities	Health	RPBA or AG
Rubber plants	Health	RPBA or AG
Sewage ejectors	Health	AG
Sewage lift stations	Health	RPBA or AG
Sewage pump	Health	RPBA or AG
Sewage treatment plants	Health	RPBA or AG
Shampoo basins	Nonhealth†	AVB
Slaughter houses	Health	RPBA or AG
Specimen tanks	Health	AVB or PVB
Steam generators	Nonhealth†	RPBA
Steam plants	Health	RPBA or AG
Steam tables	Nonhealth†	AVB
Sterilizers	Health	RPBA
Swimming pools – private	Nonhealth†	RVB or AG
Swimming pools – public	Nonhealth†	RPBA or AG
Tall buildings or elevation differences where the highest outlet is 80 feet or more above the meter	Nonhealth	DCVA
Internal Protection – Description of Cross Connection		
Aspirators	Nonhealth†	AVB
Aspirator (medical)	Health	AVB or PVB
Autoclaves	Health	RPBA
Autopsy and mortuary equipment	Health	AVB or PVB
Bedpan washers	Health	AVB or PVB
Connection to industrial fluid systems	Health	RPBA
Tank vats or other vessels containing toxic substances	Health	RPBA
Trap primers	Health	AG
Vending machines	Nonhealth†	RPBA or PVB
Watering troughs	Health	AVB or PVB

NOTE: AG = air gap; AVB = atmospheric vacuum breaker; DCVA = double check valve backflow prevention assembly; PVB – pressure vacuum breaker; RPBA – reduced-pressure principle backflow prevention assembly.

*AVBs and PVBs may be used to isolate health hazards under certain conditions, that is, backsiphonage situations. Additional area of premises isolation may be required.

†Where a greater hazard exists (due to toxicity or other potential health impact) additional area protection with RPBA is required.

Uses not listed in this table may require backflow prevention through air gaps or backflow prevention assemblies depending on the nature of the use, the equipment and the plumbing system. These will be determined on an individual basis by the Director.

- (c) *Exceptions.* A person may request approval from the Director for a proposed variance from or exception to the requirements of this Section. Upon request, the Director shall conduct a customer service inspection to determine what (if any) hazards are present and shall document what (if any) backflow protection is required and provide the same to the customer. The Director may approve a variance or exception if the variance or exception does not conflict with applicable law or increase the risk of an actual or potential contamination hazard from entering the City water system.
- (d) *Criteria for selection of backflow prevention assemblies.* The selection of an appropriate backflow prevention assembly depends upon the degree of hazard involved and will be based on the following criteria:
- 1) whether the assembly could ever be subject to backpressure due to the customer's internal pumping pressures or elevation differentials;
 - 2) the nature of contaminating material under the most critical circumstances;
 - 3) the extent to which additions may be made to the plumbing system at a later date which would affect the initial selection of the assembly;
 - 4) the frequency with which a water supply could be exposed to a hazardous condition; and,
 - 5) the degree of protection of the water supply required, as provided by this Section, the local plumbing code and Title 30, Chapter 290 of the Texas Administrative Code, as enforced by the Director.
- (e) *Highly detrimental hazards.* Where an actual or potential contamination hazard is determined to be highly detrimental to the general health of the City water system, the Director may require a total containment backflow prevention system to provide for backflow prevention assemblies on each internal branch line. The proper backflow protection assembly shall be maintained on each service connection or separation of internal systems. At the point of delivery, an assembly must be installed on each leg or branch (i.e., industrial and domestic). The type of backflow prevention assembly required on each leg or branch shall be in accordance with the highest degree of actual or potential contamination hazard found on the premises.
- (f) *Mobile connections.* Any person connecting any part of a vehicle or other container to the City water system shall utilize an air gap method or permanently install an approved backflow prevention assembly on

the vehicle or container and shall have the assembly tested in accordance with this Section prior to connecting to the City water system.

(d) Procedures

(1) New facilities.

- (a) All new facilities, unless excepted from this Section, are required to comply with the requirements of this Section. Compliance by a new City water system customer with the requirements for installation of one or more backflow prevention assemblies shall be verified in conjunction with the customer's application for water service or with the customer's building and plumbing permits.
- (b) The Director may require field inspection of the customer's premises in addition to building plan submittal and review to determine the actual or potential contamination hazards and backflow prevention assembly requirements.
- (c) All plumbing layouts or building plans submitted to the building inspection division shall be reviewed to assure compliance with the requirements of this Section and the plumbing code. All plumbing layouts or plans will be stamped by the building inspections division to indicate that containment backflow prevention may be required.

(2) Existing facilities, inspections.

- (a) *Inspection procedure.* The Director or designated representative may inspect the existing facilities of City water system customers that do not have a record of backflow prevention assembly installation or current annual certified testing report(s) on file in the water distribution department and at other times as determined necessary by the Director in accordance with this Section. The Director shall prioritize these inspections based on the severity of the potential health hazard. After the inspection is completed, the Director will provide a written notice to the customer advising of any backflow prevention assembly requirements for the customer's system.
- (b) *Installation and testing required.* Upon receipt of written notice as provided for in paragraph (a) of this section, the customer shall have thirty (30) calendar days from the date of the receipt of the notice to have the appropriate backflow prevention assemblies installed, replaced or repaired and certification of testing submitted to the Director. Notice is presumed to be received fifteen (15) calendar days

after the notice is mailed. Upon written request of the customer and for cause, the Director may extend this time period if an immediate threat of contamination does not exist for additional time periods, which, when combined, shall not exceed ninety (90) calendar days.

(c) *Building plan review.* Plans submitted to the building inspection department for approval of plumbing modifications, or extension to an existing plumbing system, may be reviewed by the Director to determine the type of backflow prevention method or assembly required. The method and type of assembly required will be noted on the plans.

(3) Customer service inspections.

(a) A customer service inspection shall be completed prior to providing continuous water service to all new facilities, for any existing facility when the Director has reason to believe that potential cross-connections or other contaminant hazards exist, or after any material improvement, correction, or addition to the private distribution facilities that may affect the system's compliance with the Section (State law reference: Title 30 Texas Admin. Code (TAC) §290.46(j)).

(b) The customer service inspector has no authority or obligation beyond the scope of the TCEQ's regulations and only individuals with the following credentials shall be recognized as qualified to conduct a customer service inspection (in accordance with Title 30 Texas Admin. Code (TAC) §290.46(j)):

- 1) Plumbing Inspectors and Water Supply Protection Specialists that have been licensed by the Texas State Board of Plumbing Examiners; or,
- 2) Customer service inspectors who have completed a TCEQ approved course, passed an examination administered by the TCEQ, and hold current professional certification or endorsement as a customer service inspector.

(c) The customer service inspection must certify that:

- 1) No direct connection between the City water system and a potential source of contamination exists and potential sources of contamination are isolated from the City water system by a properly installed air gap or an appropriate backflow prevention assembly;
- 2) No cross-connection between the City water system and a private water source exists;

- 3) No connection exists which would allow water to be returned to the City water system;
- 4) No pipe or pipe fitting containing more than 8% lead has been used for the installation or repair of plumbing at any connection that provides water for human use; and,
- 5) No solder or flux containing more than 0.2% lead has been used for the installation or repair of plumbing at any connection that provides water for human use. A minimum of one lead test shall be performed for each inspection.

(4) *Penalty and disconnection.*

- (a) A person who violates, or causes or permits the violation of, any provision of this Section shall be punishable. A fine not exceeding two thousand dollars (\$2,000.00) may be imposed for violation of provisions in the Sections that govern fire safety or public health or sanitation. With respect to violations of this Section that are continuous with respect to time, each day the violation continues is a separate offense. Proof of a culpable mental state is not required for conviction of an offense under this Section.
- (b) Failure or refusal on the part of a customer to comply with any provision of this Section will constitute grounds for refusing or discontinuing water service.

SECTION 2.

That any ordinances or resolutions or part of ordinance or resolutions in conflict with the provisions of this Fire Prevention and Protection Ordinance are hereby repealed to the extent of such conflict.

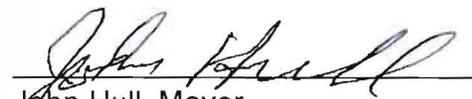
SECTION 3.

That should any section, clause, or provision of the Fire Prevention and Protection Ordinance be declared by a court of competent jurisdiction to be invalid, the same shall not affect the validity of this ordinance or any other ordinance of the City as a whole or any part thereof, other than the part so declared to be invalid.

SECTION 4.

That this ordinance shall go into effect after its adoption and approval by City Council, and publication as required by law.

PASSED, APPROVED, AND ADOPTED on this 2nd day of December 2014 at a regular meeting of the City Council of the City of Copperas Cove, Texas which meeting was held in compliance with the Open Meetings Act, Tex. Gov't Code, §551.001, et.seq. at which meeting a quorum was present and voting.



John Hull, Mayor

ATTEST:



Mariela Altott, City Secretary

APPROVED AS TO FORM:



Denton, Navarro, Rocha, Hyde
& Zech, P.C., City Attorney

