

CITY OF HASLET

ORDINANCE NO. 036-2017

AN ORDINANCE REPEALING ARTICLE 13.12 "BACKFLOW CROSS-CONNECTION CONTROL PROGRAM" OF THE HASLET CODE OF ORDINANCES IN ITS ENTIRETY, AND ADOPTING A NEW ARTICLE 13.12 "CROSS CONNECTION CONTROL AND BACKFLOW PREVENTION PROGRAM" BY ESTABLISHING THE POLICY ATTACHED HERETO AS EXHIBIT "A" AND ADOPTING A WATER SERVICE AGREEMENT ATTACHED HERETO AS APPENDIX A TO BE EXECUTED BY ALL NEW WATER CUSTOMERS OF THE CITY OF HASLET WATER SYSTEM; PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE OF ALL ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING FOR A PENALTY FOR VIOLATIONS; PROVIDING A SAVINGS CLAUSE; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the City of Haslet, Texas is a Type A general-law municipality located in Tarrant and Denton Counties, Texas, created in accordance with the provisions of Chapter 6 of the Local Government Code and operating pursuant to the enabling legislation of the State of Texas; and

WHEREAS, the City is required by Texas Commission on Environmental Quality (TCEQ) Chapter 290 of the Rules and Regulations for Public Water Systems, to protect its drinking water system by adopting and instituting a Cross Connection Control and Backflow Prevention Program; and

WHEREAS, the City's current regulations regarding backflow prevention and cross connection control are set forth in Article 13.12 of the Haslet Code of Ordinances; and

WHEREAS, the City desires to repeal Article 13.12 in its entirety, and adopt a new Article 13.12 implementing a cross connection and backflow prevention program, attached as Exhibit "A" to this ordinance, which includes requiring each new water customer of the City's public water system to execute a Water Service Agreement before new service is established setting out restrictions each customer must comply with to avoid unacceptable practices that are prohibited by State regulation.

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

SECTION 1.

Article 13.12 “Backflow Cross-Connection Control Program” of the Haslet Code of Ordinances is hereby repealed in its entirety and is replaced with the following new Article 13.12 “Cross Connection and Backflow Prevention Program” to read as follows:

“ARTICLE 13.12 CROSS CONNECTION CONTROL AND BACKFLOW PREVENTION PROGRAM

Sec. 13.12.001 Establishing policy- adoption

The Cross Connection Control and Backflow Prevention Program attached to this ordinance as Exhibit "A" is hereby adopted as the official Cross Connection Control and Backflow Prevention Policy of the City. This policy is fully incorporated by reference as though copied into this article in its entirety. The material contained in the Cross Connection Control and Backflow Prevention Policy shall be maintained as a public record in the office of the city engineer and will be available for public inspection and copying during regular business hours.

Sec. 13.12.002 Water service agreement

The City hereby adopts the Water Service Agreement attached as Appendix "A" to the Cross Connection Control and Backflow Prevention Policy, requiring each new customer of the City's water system to execute said Water Service Agreement in order to receive service from the City.”

SECTION 2.

This Ordinance shall be cumulative of all provisions of ordinances of the City of Haslet, Texas, as amended, except where the provisions of this ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed. Ordinance 0105-03 and Article 13.12 of the Haslet Code of Ordinances are specifically repealed and replaced hereby.

SECTION 3.

It is hereby declared to be the intention of the City Council that the phrases, clauses, sentences, paragraphs and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph or section of this Ordinance shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining, phrase, clauses, sentences, paragraphs or sections of this Ordinance since the same would have been enacted by the City Council without incorporation in this Ordinance of any such unconstitutional phrase, clause, sentence, paragraph or section.

SECTION 4.

Any person, firm or corporation who violates, disobeys, omits, neglects or refuses to

comply with or who resists the enforcement of any of the provisions of this ordinance shall be fined not more than \$2000.00 for all violations involving zoning, fire safety, or public health and sanitation, including dumping or refuse, and shall be fined \$500.00 for all other violations of this ordinance. Each day that a violation is permitted to exist shall constitute a separate offense.

SECTION 5.

All rights and remedies of the City of Haslet, Texas, are expressly saved as to any and all violations of any other ordinances or the Code of Ordinances regarding backflow prevention and cross connection control which have accrued at the time of the effective date of this Ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such ordinances same shall not be affected by this Ordinance but may be prosecuted until final disposition by the courts.

SECTION 6.

The City Secretary of the City of Haslet is directed to publish the caption, penalty clause, and effective date of this Ordinance in the official newspaper of the City of Haslet, Texas, as authorized by Section 52.011 of the Texas Local Government Code.

SECTION 7.

This Ordinance shall be in full force and effect from and after its passage and publication as provided by law, and it is so ordained.

PASSED AND APPROVED ON THIS 18TH DAY OF DECEMBER, 2017.



Bob Golden, Mayor

Attest:



Dianna Buchanan, City Secretary



City of Haslet
Cross Connection Control and Backflow
Prevention Program

Policy- Exhibit "A"
Ordinance 036-2017
Adopted December 18, 2017

City of Haslet
Cross Connection Control and Backflow Prevention Program

POLICY - EXHIBIT A

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City of Haslet
Cross Connection Control and Backflow Prevention Program

Policy- Exhibit "A"

ARTICLE I: GENERAL

SECTION 1.01 Adoption

The City of Haslet (City) hereby adopts the Cross Connection Control and Backflow Prevention Program as Policy for the City.

SECTION 1.02 Purpose

The purposes of this Policy are to:

1. Protect the City potable water system from contamination or pollution by preventing contaminants and pollutants from residential, commercial/retail and industrial uses from entering the City water system.
2. Provide for the maintenance of a continuing program of cross connection control by requiring the installation of approved backflow prevention assemblies as required by the plumbing code adopted by the City, and requiring the certification of all testable backflow prevention assemblies upon initial installation.
3. Provide for a continuing program of cross connection control by requiring the operational testing of all testable backflow prevention assemblies that are directly served potable water by the City.
4. Comply with federal regulations related to cross connections and backflow prevention, including without limitation, those of the Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA).
5. Comply with state regulations related to cross connections and backflow prevention, including, without limitation, those of the Texas Commission on Environmental Quality (TCEQ).

SECTION 1.03 Applicability

As a condition of receiving water service from the City, all new customers shall execute a Water Service Agreement attached hereto as **Appendix A** and install, maintain, and operate their piping and plumbing systems in accordance with the City's Plumbing Code, Cross Connection Control and Backflow Prevention Program, City Ordinances and TCEQ regulations. If there is a conflict between any of the provisions contained within these documents or codes, the more restrictive provision shall apply.

This Policy applies to all direct connections to the City's potable water system, and to all initial installations of backflow prevention assemblies that fall under the City's regulatory jurisdiction, regardless of whether the connection or assembly is located within the City's certificated water service area, and regardless of whether the connection or assembly is for a retail, wholesale, industrial or other customer or user of the City's water system.

SECTION 1.04 Definitions

For the purpose of this Policy, the following definitions shall apply unless the context clearly indicates or requires a different meaning. If a word or term used in this Policy is not contained in the following list, its

definition, or other technical terms used, shall have the meanings or definitions listed in Title 40 Code of Federal Regulations (CFR) § 141.2. Definitions or terms not found in 40 CFR § 141.2 shall have the meanings or definitions contained in the latest edition of The Drinking Water Dictionary, prepared by the American Water Works Association (AWWA).

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 one (1) inch.

Approved backflow prevention assembly: or (backflow assembly or assembly) means an assembly to counteract backpressures or prevent backsiphonage. An assembly that has been approved, manufactured, tested and approved in accordance with the standards adopted by AWWA, or approved and listed by the University of Southern California Foundation for Cross- Connection Control and Hydraulic Research.

Atmospheric vacuum breaker: (AVB) a device, which contains a float check, a check seat and an air inlet vent. When water pressure is reduced to a gauge pressure of zero or below, air enters the device, preventing backsiphonage. It is designed to protect against backsiphonage only. Because AVB devices are not mechanically testable, the City will no longer allow their installation. However, any existing devices in place prior to the adoption of this Policy shall be inspected annually.

Auxiliary supply: any water source or system other than the public water system that may be available in the building or on the property.

(a) Approved- An auxiliary water supply, which has been investigated and approved by the health authority, meets water quality regulations, and is accepted by the water purveyor.

(b) Unapproved- An auxiliary water supply, which is not approved by the health authority.

AWWA: American Water Works Association.

Backflow: a hydraulic condition, caused by a difference in pressures that introduces nonpotable water, liquids, gases or other substances into the City's water distribution system.

Backflow prevention assembly tester (BPAT): a person who has met all of the requirements of the TCEQ to be recognized as a certified tester in the State of Texas and is registered with the City or its third party provider. A certified tester who is employed by a State approved fire protection contractor shall test fire protection assemblies.

Backpressure: any elevation of pressure in the downstream piping system (by any means) above the supply pressure at the point of consideration which would cause, or tend to cause, a reversal of the normal direction of flow and the introduction of nonpotable water, mixture, liquids, gases or substances from any source other than the intended source.

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

Boresight: or (boresight to daylight) means providing adequate drainage for backflow prevention assemblies installed in vaults through the use of an unobstructed drain pipe.

City: City of Haslet.

City Building Official: the Building Official of the City or their designated representative.

City Public Works Director: the Public Works Director of the City or their designated representative.

Combination protection: an assembly installed for point-of-use isolation in addition to a premise isolation assembly.

Commercial customers: generally defined as customers whose business is primarily engaged in the sale of goods, commodities or services to consumers.

Contamination: the entry into or presence in a public water supply system of any physical, chemical, biological, or radiological substance which would present an unreasonable risk to health and/or quality of the water.

Cross connection: any physical arrangement where a potable water supply is connected, directly or indirectly (actual or potential), with any other non-potable water system, used water system or auxiliary water supply, sewer, drain conduit, swimming pool, storage reservoir, plumbing fixture, swamp cooler, air conditioner unit, 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 considered to be cross connections.

Customer: is any person to whom water is sold or furnished from the City water supply by the City of Haslet Water System. (Can mean either owner or lessee).

Customer service inspector: or (CSI) is an individual who has fulfilled the requirements set out in TCEQ Rules and Regulations for Public Water Systems and is capable of conducting inspections on a customer's water system.

Degree of hazard: the health or nonhealth, low, high, or plumbing hazard classification that shall be attached to all actual or potential cross connection.

- (a.) Health hazard shall mean an actual or potential threat of contamination of a physical or toxic nature to the public water system or the consumer's potable water system that would be a danger to health.
- (b.) High hazard shall mean the classification assigned to an actual or potential cross-connection that potentially could allow a substance that may cause illness or death, to backflow into the potable water supply.
- (c.) Low hazard shall mean the classification assigned to an actual or potential cross-connection that potentially could allow a substance that may be objectionable but not hazardous to one's health to backflow into the potable water supply.
- (d.) Plumbing hazard shall mean an internal or plumbing type cross-connection in a consumer's potable water system that may be either a pollutorial or a contamination type hazard.
- (e.) Pollution hazard shall mean an actual or potential threat to the physical properties of the water system or the potability of the public or the consumer's potable water system but which would not constitute a health or system hazard, as defined by the maximum degree of intensity of pollution which the potable water system could be degraded under this definition would cause a nuisance or be aesthetically objectionable or could cause damage to the system or its appurtenances.
- (f.) System hazard shall mean an actual or potential threat of severe danger to the physical properties of the public or consumer's potable water supply or of a pollution or contamination that would have a detrimental effect on the quality of the potable water in the system.

Double check detector assembly: or (DCDA) means an approved assembly consisting of two approved double check valve assemblies, set in parallel, equipped with a meter on the bypass line to detect small amounts of water loss or use. This unit must be purchased as a complete assembly.

Double check valve backflow prevention assembly: or (double check valve assembly or double check or DC assembly or DC) is an assembly which consists of two (2) independently operating check valves which are spring-loaded or weighted. The assembly comes complete with a gate valve on each side of the checks, as well as test cocks to test the checks for tightness.

Drinking Water: water distributed for human consumption, for use in preparing food or beverages, or for use in cleaning utensils or articles used in preparing or consuming food or beverages by human beings.

Fireline tester: a tester who is employed by a state-approved fireline contractor and is qualified to test backflow prevention assemblies on fire lines only.

Hazardous contaminant (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 water supply.

Human consumption: a use by humans in which water can be ingested into or absorbed by the human body.

Industrial customers: generally defined as customers whose business is primarily engaged in manufacturing, processing, assembling or storing/distributing products or goods.

In-plant protection: the appropriate backflow prevention at the point of hazard to protect one or more actual or potential cross-connections within a premise.

Inspector: a person that is a cross connection inspector recognized by the City.

Mobile unit: any operation, which may have the potential to introduce contaminants into potable water systems from a mobile source. These include, but are not limited to: carpet-cleaning vehicles, water-hauling vehicles, street-cleaning vehicles, liquid-waste vehicles, power-wash operations, and pest-control vehicles.

Non-residential: shall include, but is not limited to, duplexes, multiplex housing and apartments where the units are not on separate meters, and all other uses not specifically included in residential use.

Non-potable water: water not fit for drinking, personal use, or culinary utilization.

Person: a natural person (an individual), corporation, company, association, partnership, firm, limited liability company, joint venture stock company or association, and other such entity.

Plumbing code: the current version of the plumbing code as adopted by the City by ordinance.

Plumbing hazard: means an internal or plumbing-type cross connection in a consumer's potable water system that may be either a pollution or a contamination-type hazard.

Point-of-use isolation: the appropriate backflow prevention within the consumer's water system at the point at which the actual or potential cross connection exists.

Pollutant: means polluted water, dredge spoil, solid waste, incinerator residue, sewage (including sewage from boats, garbage, sewage sludge, munitions, chemical waste, biological materials, toxic materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial,

municipal, and agricultural waste. (Does not mean sewage sludge, rock sand, cellar dirt, or dredged sludge when used by the city for fill or reuse).

Pollution: an impairment of the quality of the public potable water system which does not create a hazard, but does effect the aesthetic quality or the water (a low hazard).

Pollution hazard: an actual or potential threat to the physical properties of the water system or the potability of the public or the consumer's water system but which would not constitute a health or system hazard, as defined. The maximum degree of intensity of pollution to which the potable water system could be degraded under this definition would cause a nuisance, or be aesthetically objectionable, or could cause minor damage to the system or its appurtenances.

Potable water supply: any water that has been tested as required by State regulations for drinking water supplies and conforms to bacteriological and chemical quality as required by the Federal Safe Drinking Water Act.

Premises: any piece of property to which water is provided, including all improvements, mobile structures, and structures located on it.

Premises isolation or containment: the appropriate backflow prevention at the service connection between the public water system and the water user.

Pressure vacuum breaker assembly: (PVB) an approved assembly consisting of a spring-loaded check valve loaded to the closed position, an independently operating air inlet valve loaded to the open position and installed as a unit with and between two resilient seated shut-off valves and with suitable connections for testing. This type of assembly is designed to protect against backsiphonage only.

Public water system: or (system) means any public or privately owned water system which supplies water for public domestic use. The system must meet all the health requirements set forth by the TCEQ. The system will include all services, reservoirs, facilities and any equipment used in the process of producing, treating, storing or conveying water for public consumption.

Reduced pressure principle backflow prevention assembly: or (reduced pressure principle assembly or RP assembly or RPZ) shall mean 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 assembly shall include properly located test cocks and tightly closing shut-off valves at each end of the assembly.

Reduced pressure detector assembly: or reduced pressure detector or RPDA) shall mean an approved assembly consisting of a line size approved reduced pressure principle backflow assembly, set in parallel, with a meter equipped bypass line with an approved to reduced pressure principle backflow assembly for detecting small amounts of water leakage or use. This unit must be purchased as a complete assembly.

Regulatory Authority: any municipal officer or department of the city appointed to administer this article.

Residential use: includes single family dwellings, duplexes, multiplex housing, and apartments where the individual units are each on a separate meter; or in cases where two (2) units are served by one (1) meter, the units are full time dwellings.

Service connection: is the point of deliver up to and including water meters through which the public water system furnishes water to the user or the terminal end of a connection from the City water system. At this point the City (the Water Purveyor) loses jurisdiction and sanitary control over the water and the water becomes the customers.

Spill resistant vacuum breaker: (SVB), an assembly containing an independently-operating, internally loaded check valve, and an independently-operating, loaded air-inlet valve, located on the discharge side of the check valve. The assembly is to be equipped with a properly located, resilient, seated test cock; a properly located bleed/vent valve, and a tightly-closing, resilient, seated shut off valve attached at each end of the assembly. This assembly is designed to protect against a non-health hazard (i.e., pollutant) or a health hazard (i.e., contaminant) under a backsiphonage condition only.

State regulatory authority: the state agency(s) which have authority to adopt and enforce rules necessary to carry out its powers and duties under the laws of the state.

Thermal expansion: tendency of water to change in volume due to an increase in its temperature.

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

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

ARTICLE II AUTHORITY AND RESPONSIBILITY

Pursuant to title 30, state administrative code, section 290.44, 290.46, or as amended, and the 2015 International Plumbing Code, or as amended, it is the responsibility of the city to protect its drinking water supply by instituting and enforcing a cross connection program. The purpose of this article, therefore, is to comply with the above-cited regulatory requirements, and to protect the water supply of the city from contamination or pollution due to cross connections.

SECTION 2.01 Authority of City

- 1.) The City Public Works Department is responsible for enforcing the requirements of this Policy with respect to connections made to the City water system.
- 2.) To ensure adequate protection in individual cases, the City may assess and determine the degree of hazard to the public potable water system posed in the case of individual connections, customers or users.
- 3.) When the City determines that a backflow prevention assembly is required for the protection of the City water system, the City will require the customer to have installed, at the customer's expense, an approved assembly at each service connection or hazard point.
- 4.) The City may refuse to initiate service, or may discontinue service to any customer that maintains an actual or potential sanitary hazard in the customer's system, or whose plumbing is susceptible to cross connections, or where the City determines that adequate protection against backflow is not provided.

SECTION 2.02 Authority of Building Official

The Building Official is designated under this Policy for enforcing all provisions of the plumbing code pertaining to cross connections (i.e., proper installation and location of each customer's system), including the connection to the City water system. Additionally, the Building Official will coordinate all building permit approvals to ensure compliance with this Policy.

SECTION 2.03 Inspection- Inspectors- Testers

A. Customer Service Inspection

- 1.) Pursuant to TCEQ regulations, an inspection for cross connection control shall be completed by the City prior to providing continuous water service in each of the following circumstances:

- (a) A newly constructed facility or previously existing premise, which is requesting water service.
 - (b) Where any correction or addition to the plumbing of any facility or premise has occurred.
 - (c) The City deems it necessary to ensure the protection of its water system.
- 2.) Permanent water service shall not be supplied to a newly constructed facility(s) until the inspection by the City is completed.
- 3.) Inspections will be carried out by an inspector employed by the City, or authorized by the City to perform inspections.

B. Customer Service Inspectors

Inspectors performing cross connection control duties within the City must be authorized by the City, and shall be employed by or be an independent contractor for the City.

C. Certified Backflow Prevention Assembly Testers and Tester Responsibilities

- 1.) All backflow assembly testers operating within the City shall be certified in accordance with all applicable regulations and requirements of the TCEQ.
- 2.) At the time of registration, recertification, and upon the City or its third party providers request, each person certified as a backflow prevention assembly tester shall furnish evidence to show that they are insured and bonded to perform services on private property, and have current licenses as required by the State of Texas to perform these services.
- 3.) Persons certified as backflow prevention assembly testers shall meet the following requirements:
- (a) Hold a TCEQ-approved backflow prevention assembly tester certification;
 - (b) Maintain commercial general liability insurance: \$500,000 combined single limit per occurrence for bodily injury, personal injury and property damage. This policy shall have no coverages removed by exclusions. Automobile liability insurance: \$500,000 combined single limit per accident for bodily injury and property damage.
 - (c) Agree to abide by all requirements of OSHA, including but not limited to confined space requirements.
- 4.) Each certified backflow prevention assembly tester shall:
- (a) Provide evidence to the City or its third party provider, to establish that the applicant has available the necessary tools and equipment to properly test backflow prevention assemblies; and
 - (b) Identify all test gauges the applicant will use in testing backflow prevention assemblies.
- 5.) A certified backflow prevention assembly tester shall:
- (a) File the serial number of each of their test gauges with the City or its third party provider;
 - (b) Annually, have each recorded test kit tested for accuracy and calibrated to within a maximum discrepancy of two percent (2%) of industry standards;
 - (c) Perform competent and accurate testing or inspection of each backflow prevention assembly and submit a written report, stating the backflow prevention assembly has been tested or inspected and is functioning properly. A copy of the test or inspection results along with a non-refundable processing fee in the amount as specified in **Appendix B** per each assembly tested or inspected, shall be submitted to the City or third party provider within 15 days of testing the device;

(d) List registered serial numbers of test gauges on tests and maintenance reports prior to submitting them to the City or third party provider; and

(e) Not change the design or operation characteristics of a backflow prevention assembly.

6.) The City may invalidate any test result if it is determined that the tester:

(a) Has made false, incomplete or inaccurate assembly testing reports;

(b) Has used inaccurate gauges;

(c) Has used improper testing procedures;

(d) Has expired insurance;

(e) Is not in compliance with safety regulations;

(f) Has failed to annually calibrate gauges as required by this Policy;

(g) Has failed to maintain a current certification from TCEQ; or

(h) Has violated any other provision of this Policy.

SECTION 2.04 Responsibilities of Customers (Owners, Agents and Lessees)

It is the responsibility of all property owners and their agents and lessees to abide by the requirements of this Policy.

ARTICLE III STANDARDS AND REQUIREMENTS

SECTION 3.01 General Requirements

1.) The TCEQ Rules and Regulations for Public Water Systems, as amended from time to time, will govern the design, construction, operation and maintenance of the City water system with respect to cross connection control and backflow prevention. Each customer must comply with all applicable provisions of these rules and regulations.

2.) All backflow prevention assemblies must be mechanically testable, tested upon installation by a certified tester, and certified to be operating within specifications. Backflow prevention assemblies which are directly served potable water by the City and are installed to provide protection against hazardous contaminants must also be tested and certified to be operating within specifications by a certified tester as required by this Policy.

3.) Gauges used in the testing of backflow prevention assemblies must be tested for accuracy annually in accordance with the University of Southern California's Foundation of Cross Connection Control and Hydraulic Research and/or the AWWA's Manual of Cross Connection Control (Manual M -14). Each certified tester that performs tests related to the City water system must include test gauge serial numbers on all test and maintenance report forms to verify that the tester used gauges that have been tested for accuracy.

4.) A test report must be completed by the certified backflow prevention assembly tester for each assembly tested. The signed and dated original must be submitted to the City for record keeping purposes. If the tester chooses to use a report which differs from the City form, it must contain at least all of the information required on the City form.

5.) The use of a backflow prevention assembly at a service connection will be considered additional backflow prevention, and will not negate the need for use of backflow prevention on internal hazards as defined in this Policy or the City's adopted Plumbing Code.

6.) It is unlawful for a customer to install, or to cause or permit the installation of a bypass that has not been approved in advance by the City. All bypasses on backflow prevention assemblies must themselves include provisions for backflow prevention as described in this Policy.

SECTION 3.02 Types of Backflow Prevention

Refer to **Appendix C - TCEQ Backflow Requirements- Assessment of Hazards and Selection of Assemblies** for the list of all approved assemblies. This list may be amended from time to time without having to amend this Policy.

AG	Air Gap Separation
RPDA	Reduced Pressure Detector Assembly
RP/RPZ	Reduced Pressure Backflow Prevention Assembly
DC	Double Check Valve Assembly
DCDA	Double Check Detector Assembly
PVB	Pressure Vacuum Breaker

Variations from these requirements will be evaluated on a case-by-case basis by the City. No deviations shall be permitted without prior written approval from the City.

A. Air Gap Separation

1.) Air gap separations provide maximum protection from backflow hazards and may be utilized at premises where a substance is handled that would be hazardous to health if introduced into the potable water system.

2.) An air gap separation shall be at least twice the diameter of the supply pipeline measured vertically above the top rim of the receiving vessel; however, in no case shall the separation be less than one (1) inch. If splashing is a problem, tubular screens may be attached or the supply line may be cut at a 45° angle. The air gap distance is measured from the bottom of the angle. Hoses shall not be allowed.

3.) Air gap separations shall not be altered in any way and shall be available for inspection at all times.

B. Detector Check Valve Assembly

Detector check assemblies may be utilized in all installations requiring a double check valve assembly or a reduced pressure principle backflow prevention assembly with leak detector metering. Double check detector valve assemblies and reduced pressure detector assemblies shall comply with the installation requirements applicable for double check valve assemblies and reduced pressure principle backflow prevention assemblies.

C. Double Check Valve Backflow Prevention Assembly (DC) All DC assemblies will be tested in each of the following circumstances: immediately upon installation, after repair, if it is moved and in compliance with this Policy (refer to Section 4.05 Records and Testing).

- 1.) DC assemblies 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.
- 2.) DCs shall be sized to provide an adequate supply of water and pressure for the premises being served.
- 3.) Premises where non-interruption of water supply is critical shall be provided with two assemblies of the same type installed in parallel. They shall 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.
- 4.) Bypass lines are prohibited. Pipe fittings which could be used for connecting a bypass line shall not be installed.
- 5.) Vertical installations are allowed on sizes up to and including four (4) inches that meet the following requirements:
 - (a) Internally spring-loaded check valves;
 - (b) Flow is upward through assembly;
 - (c) Approved by the City; and
 - (d) Found on the approved list of assemblies.

D. Pressure Vacuum Breaker Assembly (PVB) and Spill-Resistant Vacuum Breaker (SVB)

- 1.) PVBs and SVBs may be utilized at point-of-use protection only. PVBs and SVBs protect against backsiphonage only and shall not be installed where there is potential for backpressure.
- 2.) The assembly shall be installed a minimum of twelve (12) inches above the highest use outlet or overflow level downstream from the assembly.
- 3.) PVBs and SVBs shall not be installed in an area subject to flooding or where damage would occur from water discharge.
- 4.) The assembly shall be readily accessible for testing and maintenance, with a minimum clearance of twelve (12) inches all around the assembly.
- 5.) PVBs and SVBs shall be located between twelve (12) inches and sixty (60) inches above ground level.
- 6.) A strainer with blowout tapping may be required ahead of the assembly.

E. Reduced Pressure Backflow Prevention Assembly (RP/RPZ) All RP assemblies shall be tested in each of the following circumstances: immediately upon installation, after repair, if it is moved, and in compliance with this Policy (refer to Section 4.05 Records and Testing).

- 1.) RP/RPZs shall be utilized at premises where a substance is handled that would be hazardous to the public health if introduced into the potable water system. An RP/RPZ is normally used in locations where an air gap is impractical. An RP/RPZ is effective against both backsiphonage and backpressure.
- 2.) RP/RPZs shall be sized to provide an adequate supply of water and pressure for the premises being served.

- 3.) Premises where non-interruption of water supply is critical shall be provided with two assemblies of the same type installed in parallel. They shall 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.
- 4.) Bypass lines are prohibited. Pipe fittings which could be used for connecting a bypass line shall not be installed.
- 5.) The assembly shall be readily accessible for testing and maintenance and shall be located in an area where water damage to buildings or furnishings will not occur from relief valve discharge. An approved air gap funnel assembly may be used to direct minor discharges away from the assembly; this assembly will not control flow in a continuous relief situation. Full relief valve discharge flow should be considered when installing this assembly.
- 6.) Enclosures shall be designed for ready access and sized to allow for the minimum clearances.
- 7.) RP/RPZ assemblies may be installed in a vault only if relief valve discharge can be drained to daylight through a boresight type drain. The drain shall be of adequate capacity to carry the full rated flow of the assembly and shall be screened on both ends.
- 8.) An approved air gap shall be located at the relief valve orifice of RP assemblies. This air gap shall be at least twice the diameter of the incoming supply line as measured vertically above the top rim of the drain, but in no case, less than one (1) inch.

SECTION 3.03 Backflow Assembly Requirements

A customer service inspector or utility inspector, employed by or under contract with the City, shall determine the type and location of a backflow assembly to be installed within the City's water service area. The assembly shall be required in each of the following circumstances, but the inspector is in no way limited to just these circumstances:

- 1.) When the nature and extent of any activity at a premise, or the materials used in connection with any activity at a premise, or materials stored at a premise, could contaminate or pollute the potable water supply.
- 2.) When a premise has one or more cross connections as that term is defined in Section 1.04, Definitions.
- 3.) When internal cross connections are present that are not correctable.
- 4.) When intricate plumbing arrangements are present that make it impractical to ascertain whether cross connections exist.
- 5.) When a premise has a repeated history of cross connections being established or reestablished.
- 6.) When entry to a premise is restricted so that inspections for cross connections, or testing of required assemblies, cannot be made, a RP assembly will be required to be installed at the service connection and maintained, in accordance with this Policy,.
- 7.) When materials are being used such that, if backflow should occur, a health hazard could result.
- 8.) When installation of an approved backflow prevention assembly is deemed by an inspector to be necessary to accomplish the purpose of this Policy.
- 9.) When an appropriate cross connection survey report form has not been filed with the City.

I 0.) In all new non-residential construction, there shall be installed an approved backflow assembly at the service connection. The type of the assembly will be commensurate with the degree of hazard as determined by an inspector.

II.) When a building is constructed on a commercial premise, and the end use of such building is not determined, or could change, a RP assembly shall be installed at the service connection to provide protection of the public water supply in the event of the most hazardous use of the building.

12.) Any used water-return system that has received approval from the City.

13.) If a point-of-use assembly has not been tested or repaired as required by this Policy, the installation of a RP assembly will be required at the service connection.

14.) If an inspector determines that additions or rearrangements have been made to the plumbing system, without the proper permits as required by the City's Plumbing Code, premise isolation shall be required.

15.) All commercial multi-story buildings, or any buildings with a booster pump or elevated storage tank.

A. Testing of Assemblies

I.) The City will cause to be inspected and tested, all required backflow assemblies in each of the following circumstances:

(a) Immediately after installation;

(b) Based on classification of hazard, refer to Section 4.05 Records and Testing; and **Appendix C-Assessment of Hazards and Selection of Assemblies.**

(c) Immediately after repair;

(d) Whenever the assembly is moved.

2.) Assemblies may be required to be tested more frequently if the City deems it necessary.

3.) All mechanically non-testable backflow prevention devices (atmospheric vacuum breakers) installed prior to the adoption of this Policy must be inspected annually.

4.) All assembly testing and inspections shall be performed by a certified and registered backflow prevention assembly tester, in accordance with TCEQ-approved test procedures.

5.) It is the responsibility of the property owner to have all assemblies tested or inspected in accordance with this Policy.

6.) The City shall not be liable for damage to an assembly that may occur during testing.

B. Maintenance of Assemblies

I.) A person who owns, operates, or manages premises in which required back flow prevention assemblies are installed, shall maintain such assemblies in proper working order at all times, including repair as required. All maintenance and repair of assemblies shall be done in accordance with all applicable regulations of the TCEQ and this Policy.

2.) Back flow prevention assemblies shall be maintained in a manner that allows them to be tested by a method that has been approved by the TCEQ.

C. Installation Requirements

Backflow prevention assemblies shall be installed in accordance with the following requirements, to ensure their proper operation and accessibility: The City of Haslet may require backflow devices at the water meter, based upon the level of hazard.

1.) Backflow prevention assemblies shall be installed in accordance with all plumbing codes adopted by the City and this Policy. The assembly installer shall obtain the required plumbing permits prior to installation or replacement, and shall have the assembly inspected by a cross connection inspector that is employed by the City, as required by the Plumbing Code. In the event there is a conflict between the Plumbing Code and the installation requirements set forth in this Policy, the more stringent will apply. The backflow device shall be installed directly after the water meter (outside of the City meter box), not more than five feet from the property line. The City may allow a variance to install the device so that it does not obstruct a sidewalk, driveway, or other public easement. The City Building department can assist with exact placement.

2.) All new installations of irrigation systems, residential and non-residential, will have a minimum of a DC assembly. A RP assembly will be required if any solution or any other source of supply is used or if it is deemed necessary by an inspector.

3.) No part of a RP assembly shall be submerged in water, or installed in a location subject to flooding. If a DC assembly is installed in a vault, brass plugs shall be maintained in the test ports at all times and adequate drainage shall be provided.

4.) In the event a premises isolation assembly is required, the assembly shall be installed at the point-of-delivery of the water supply, before any branch in the line, and on private property located just outside the boundary of the City's right-of-way, and/or the point of the cross connection.

5.) The assembly shall be protected from freezing and other severe weather conditions.

6.) All backflow prevention assemblies shall be of a type and model approved by the City.

7.) All vertical installations shall be approved in writing by the City prior to installation.

8.) The assembly shall be readily accessible with adequate room for maintenance and testing.

9.) If the backflow assembly is installed inside of a building, the assembly shall be readily accessible for inspection and testing.

I 0.) If an assembly is installed pursuant to this Policy and is five (5) feet or higher above the floor, it shall be equipped with a rigid and permanently installed scaffolding acceptable to the City. This installation shall also meet all applicable requirements set out by OSHA and the State of Texas Occupational Safety and Health laws.

II.) The property owner and/or installer-tester shall register all backflow assemblies with the City. Registration shall consist of the date of installation, manufacturer, model, serial number of the backflow prevention assembly, initial test report, location of device and the name and license number of the installer.

12.) Lines shall be thoroughly flushed prior to installation. A strainer with blowout tapping may be required ahead of the assembly.

13.) The property owner, their lessee, or their agent, assumes all responsibility for leaks and damage. The owner shall also see that any vault is kept reasonably free of silt and debris.

SECTION 3.04 Irrigation Systems

- 1.) All irrigation systems, which currently have no backflow protection or systems installed after the effective date of this Policy, shall be required to meet all requirements pertaining to irrigation systems as stipulated by TCEQ regulations and requirements, the City's adopted Plumbing Code, or as amended by City ordinance. In the event that there is a conflict between these codes and regulations, the more restrictive shall apply.
- 2.) All irrigation systems which do not currently meet the requirements as stipulated in this Section, will be required to meet these requirements upon notification from the City, or if the device fails a certification test.
- 3.) In the event an assembly is removed each year to protect against freezing, it must be tested immediately upon re-installation.

SECTION 3.05 Mobile Units

- 1.) A person who owns or operates any mobile unit that uses water from the City's public water system shall make application, pay appropriate fees and obtain a permit from the City before accessing the public water system. The City may require a fixed air gap, or a backflow assembly commensurate with the degree of hazard, mounted either on the vehicle or piping.
- 2.) The failure of the owner or operator of the unit to comply with this Policy shall be grounds for the City to revoke any permit or license required under the City Code to operate the unit, or the business for which such unit is used.
- 3.) The City may deny a permit to any person who is not in compliance with this Policy, or who has a history of violating the requirements of this Policy.
- 4.) All assemblies used to protect the water supply, when using a mobile unit, must abide by the maintenance and testing sections of this Policy.

SECTION 3.06 Multiple Service Connections

If premises with multiple service connections require premises isolation, a backflow assembly shall be installed at each service connection. The assemblies shall be commensurate with the degree of the highest potential hazard.

SECTION 3.07 Plumbing Code

As a condition of water service, customers shall install, maintain and operate their piping and plumbing systems in accordance with the City's Plumbing Code. If there is a conflict between this Policy and the Plumbing Code, the more restrictive provision shall apply, or a RP assembly will be required to be installed at the service connection.

SECTION 3.08 Thermal Expansion

If a closed system has been created by the installation of a backflow assembly at the service connection, it is the responsibility of the property owner to eliminate the possibility of thermal expansion. Installations of thermal expansion relief devices are to be installed in accordance with the City's Plumbing Code.

SECTION 3.09 Pressure Loss

Any water pressure drop caused by the installation of a backflow assembly shall not be the responsibility of the City.

SECTION 3.10 Residential Service

Any residential property which has been determined to have an actual or potential cross connection, or has violated the City's Plumbing Code in any way, shall be equipped with an approved backflow prevention assembly, installed in accordance with this Policy.

SECTION 3.11 Fire Systems

1.) An approved double check detector backflow prevention assembly (DCDA) shall be the minimum protection on all new 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 twenty four (24) hour period. A reduced pressure principle detector backflow prevention assembly (RPDA) must be installed, if any solution other than the potable water can be introduced into the sprinkler system. If the City representative/inspector or Fire Chief/Marshall determines a chemical loop system can be isolated by installing a RP assembly at the point of the chemical injection, this, in conjunction with the installation of the DCDA, will be adequate protection. Retrofitting entire sprinkler systems will be required in each of the following circumstances:

- (a) Where improper maintenance has occurred;
- (b) On all high hazard systems; and
- (c) Wherever an inspector deems necessary.

2.) All fireline assemblies must be tested by fireline testers only.

3.) All fireline assemblies shall be installed in a vault at the point of connection with the City's water system unless otherwise permitted by the City.

SECTION 3.12 Retrofitting

Approved testable backflow prevention assemblies, which shall be commensurate with the degree of hazard as determined by an inspector, shall be immediately installed on all actual or potential cross connections, regardless of the date the potential hazard was created. Existing AVBs, which are inspected annually and are functioning properly, do not have to be replaced. In the event an AVB needs to be replaced, it must be replaced with a mechanically testable backflow prevention assembly.

ARTICLE IV PROCEDURES

SECTION 4.01 General

1.) The procedures outlined in this Policy are based on the principle of containment of all actual and potential contamination hazards within the customer's system.

2.) A customer may request approval from the City for a proposed deviation from or exception to the standards in this Policy. The City may approve a deviation or exception only if it does not involve an increased risk of contamination to the City's water system.

SECTION 4.02 Access to Premises

- 1.) Every person provided water service by the City directly or indirectly shall permit the City representative to enter their premises and buildings for the purpose of inspecting pipes and fixtures and the manner in which the water is used to determine compliance with this Policy.
- 2.) If a customer refuses to allow access to City representatives for an inspection or a water use survey, the City may either refuse or discontinue the customer's water service or assume that a high contamination hazard exists, and therefore require the highest degree of protection on the customer's system.
- 3.) Any temporary or permanent obstruction to safe and easy access to the assembly for the purposes of this Policy shall be promptly removed by the water user at the written or verbal request of the City, and shall not be replaced. The costs of clearing such access shall be borne by the user.
- 4.) Any and all costs associated with premise isolation or containment protection shall be the sole responsibility of the property owner, lessee and/or agent.

SECTION 4.03 New Facilities.

- 1.) All new facilities are required to comply with the requirements of this Policy. Compliance by a new City water system customer with the requirements for installation of one or more backflow prevention assemblies will be verified in conjunction with the customer's application for water service, or with the customer's building and plumbing permits.
- 2.) The City may require field inspection of the customer's premises, in addition to plan submittal and review, to determine the actual or potential hazards and backflow prevention assembly requirements.
- 3.) In accordance with TCEQ's Regulations and Requirements, the City will require a customer service inspection certification in all of the following:
 - (a) Prior to providing continuous water service to new construction;
 - (b) Prior to providing continuous water service when a change in property ownership, lessee or rental;
 - (c) On any existing service when the City has reason to believe that cross connections or other unacceptable plumbing practices exist; and
 - (d) After any substantial improvement, alteration, correction, or addition to a customer's system.

SECTION 4.04 Existing Facilities

- 1.) Inspection procedure - The City may inspect the existing facilities of all City water system customers that do not have a record of backflow prevention assembly installation on file. After the inspection is completed, the City will provide a written notice to the customer advising of the backflow prevention assembly requirements for the customer's system.
- 2.) Building inspections - Plan review. Plans submitted to the building inspections department for approval of plumbing modifications, or additions to an existing plumbing system, will be reviewed by the City to determine the type of backflow prevention method or assembly required. The method and type of assembly required and location will be noted on the plans.

SECTION 4.05 Records and Testing

- 1.) In order to assure that backflow prevention assemblies continue to operate satisfactorily, each customer that is required to use an assembly is required to have periodic testing of the assembly

performed in accordance with this Policy. All assemblies must be tested at the time of installation, and at the time of any repair or relocation. All tests and repairs must be performed by a certified tester. The tester must complete a test and maintenance report form and submit the form to the City.

2.) Time schedule. All assemblies must be tested in accordance with the schedule specified **Appendix C***.

*The City may require devices to be tested at more frequent intervals based upon imminent public health and Safety hazards that may exist.

3.) Random Testing- City personnel may tag assemblies in a manner that will determine if the assemblies have been tested as required or request periodic tests on assemblies at random locations to ensure that acceptable test standards are being followed by certified testers.

SECTION 4.06 Right-of-Way Encroachment

1.) No person shall install or maintain a backflow prevention assembly upon or within any City right-of-way except as provided by this Section.

2.) A backflow prevention assembly required by this Policy may be installed upon or within any City right-of-way only if the owner proves to the City that there is no other feasible location for installing the assembly, and installing it in the right-of-way will in no way interfere with the City's use of the right-of-way. The City retains the right to approve the location, height, depth, enclosure and other requisites of the assembly prior to its installation.

3.) Any assembly or portion of an assembly which extends aboveground shall be located no closer than four (4) feet to the back of the curb.

4.) A property owner shall, at the request of the City and at the owner's sole expense, relocate a backflow prevention assembly which encroaches upon any City's right-of-way when such relocation is necessary for street or utility construction or repairs or for purposes of public safety.

SECTION 4.07 Cost of Compliance

Unless otherwise stated in this Policy, the cost and expense of complying with this Policy shall be the responsibility of the property owners, their lessees, or agents. These costs include, but are not limited to, purchasing, installation, testing, repair, replacement and maintenance of the assembly. These costs shall include point-of-use and premises isolation assemblies. Any cost incurred by the City to enforce this Policy is the responsibility of the property owners and their lessees.

SECTION 4.08 Disconnection

Failure, refusal or inability on the part of a customer or user to comply with any provision of this Policy will constitute grounds for the City to refuse to provide or to discontinue water service.

SECTION 4.09 Enforcement

1.) The Public Works Director or his/her designee is hereby authorized to enforce the provision of this Policy by any one or more of the enforcement mechanisms set forth in this Policy.

2.) The inspectors, agents or representatives of the City charged with enforcement of this Policy, shall be deemed to be performing a governmental function for the benefit of the general public, and neither the City, nor the individual inspector, agent or representative of the City engaged in inspection, or endorsement activities under this Policy, when acting in good faith and without malice, shall ever be held

liable for any loss or damage, whether real or asserted, caused, or alleged to have been caused, as a result of the performance of such governmental function.

3.) Failure on the part of any customer to discontinue the use of all cross connections, and to physically separate cross connections, is sufficient cause for the immediate discontinuance of public water service to the premises by the City.

APPENDIX A.



CITY OF HASLET WATER SERVICE AGREEMENT

I. PURPOSE

The City of Haslet is responsible for protecting the drinking water supply from contamination or pollution which could result from improper private water distribution system construction or configuration. The purpose of this service agreement is to notify each customer of the restrictions which are in place to provide such protection. The utility enforces these restrictions to ensure the public health and welfare. Each Customer must sign this agreement before the City of Haslet will begin service. In addition, when service to an existing connection has been suspended or terminated, the City of Haslet will not re-establish service unless it has a signed copy of this agreement.

II. RESTRICTIONS The following unacceptable practices are prohibited by State regulations:

- A. No direct connection between the public drinking water supply and potential source of contamination is permitted. Potential sources of contamination shall be isolated from the public water system by an air-gap or an appropriate backflow prevention device.
- B. No cross-connection between the public drinking water supply and a private water system is permitted. These potential threats to the public drinking water supply shall be eliminated at the service connection by the installation of an air-gap or reduced pressure-zone backflow prevention device.
- C. No connection which allows water to be returned to the public drinking water supply is permitted.
- D. No pipe or pipe fitting which contains more than 8% lead may be used for installation or repair of plumbing at any connection which provides water for human use.
- E. No solder or flux which contains more than 0.2% lead can be used for installation or repair of plumbing at any connection which provides water for human use.

III. SERVICE AGREEMENT

The following are the terms of the service agreement between the City of Haslet and the Customer:

- A. The City of Haslet will maintain a copy of this agreement as long as the Customer and/or the premises are connected to the Water System.
- B. The Customer shall allow the property to be inspected for possible cross-connections, other potential contamination hazards and water meter operation/ testing. These inspections shall be conducted by the City of Haslet or its designated agent prior to initiating new water service, when there is reason to believe that cross-connections or other potential contamination hazards exist, or after any major changes to the private water distribution facilities. The inspections shall be conducted during the City of Haslet's normal business hours.
- C. The City of Haslet shall notify the Customer in writing of any cross-connection or other potential contamination hazard which has been identified during the initial inspection or the periodic re-inspection.
- D. The Customer shall immediately remove or adequately isolate any potential cross-connection or other potential contamination hazards on the premises.
- E. The Customer shall, at his expense, properly install, test, and maintain any backflow prevention device required by the City of Haslet. Copies of all testing and maintenance records shall be provided to the City of Haslet.
- F. The Customer shall comply with the requirements of the City of Haslet Water Conservation and Drought Contingency Plan.

- G. The Customer shall conform to the City of Haslet adopted Plumbing Code requirements.
- H. The Customer shall pay the City of Haslet for services provided in this agreement at the rates and upon the terms and conditions set forth in the rate schedule and any future amendments adopted by the City of Haslet.
- I. All water shall be metered by water meters furnished, installed and owned by the City of Haslet. The meter is for the sole use of the Customer and is to serve water to only one dwelling or only one business and does not permit extension of pipe or pipes to transfer water from one property to any other, nor share, resell, sub-meter water to any other persons, dwelling, business, property, etc.
- J. The Customer shall install, at his own expense, a service line from the water meter to the point of use in accordance with all City of Haslet rules and regulations.
- K. The Customer shall hold the City of Haslet harmless from any and all claims or demands for damages to real or personal property occurring from the point the Customer connects to the water meter to the final point of use by the Customer,
- L. The City of Haslet shall have the right to locate a water meter and the piping necessary to connect the water meter on the property or the Customer at a point to be chosen by the City of Haslet and shall have access to its property and equipment located on the Customer's premises at all reasonable times for any purpose connected with or in the furtherance of its business operations and upon discontinuance of service shall have the right to remove any of its property and equipment from the Customer's premises.
- M. The Customer shall notify the City of Haslet of any change in land use, building expansion or replacement, or any activities that are expected to significantly increase or modify water service requirements prior to such occurrence.
- N. The Customer shall be in compliance with the City of Haslet Zoning Ordinance if within the City Limits or be classified as a legal non-conforming use before connection to the Water System is approved.
- O. Service extensions or water/sewer system upgrades required to provide service to Customer shall be in accordance with the City's Subdivision Ordinance and Extension Policy.

IV. ENFORCEMENT

If the Customer fails to comply with the terms of the Water Service Agreement, the City of Haslet shall, at its option, either, terminate service or properly install, test and maintain an appropriate backflow prevention device at the service connection. Any expenses associated with the enforcement of this agreement shall be billed to the customer.

Customer's acknowledgement:

Name (please print)	Signature	Date
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Company

Address	City	State	Zip
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APPENDIX B.

SCHEDULE OF FEES

Annual Tester Registration Fee	\$40.00
Processing Fee (per assembly tested or inspected)	\$10.00
Testing Fee for Backflow Devices on Residential Irrigation Systems	Reserved for future
Report Processing Fee for Backflow Devices (Payable to the City 3rd Party Contractor)	\$35.00
Plumbing Permit	
Customer Service Inspection (CSI)	

APPENDIX C

Assessment of Hazard and Selection of Assemblies

Copied from TCEQ publication RG-478, Backflow Requirements [from 30 TAC 290.47 (f)]

The following table lists many common hazards. It is not an all-inclusive list of the hazards that may be found connected 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
Commercial car wash facilities	Health	RPBA or AG
Commercial laundries	Health	RPBA or AG
Cold storage facilities	Health	RPBA or AG
Connection to sewer pipe	Health	AG
Dairies	Health	RPBA or AG
Docks and dockside facilities	Health	RPBA or AG
Dye works	Health	RPBA or AG
Food and beverage processing plants	Health	RPBA or AG
Hospitals, morgues, mortuaries, medical clinics, dental clinics, veterinary clinics, autopsy facilities, sanitariums, and medical labs	Health	RPBA or AG
Metal manufacturing, cleaning, processing, and fabrication plants	Health	RPBA or AG
Microchip fabrication facilities	Health	RPBA or AG
Paper and paper products plants	Health	RPBA or AG
Petroleum processing or 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 lift stations	Health	RPBA or AG
Sewage treatment plants	Health	RPBA or AG
Slaughter houses	Health	RPBA or AG
Steam plants	Health	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	Assessment of Hazard	Required Assembly
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
Connection to plating tanks	Health	RPBA
Connection to salt-water cooling systems	Health	RPBA
Connection to sewer pipe	Health	AG
Cooling towers with chemical additives	Health	AG
Cuspidors	Health	AVB or PVB
Degreasing equipment	Nonhealth†	DCVA
Domestic space-heating boiler	Nonhealth†	RPBA
Dye vats or machines	Health	RPBA
Fire-fighting system (toxic liquid foam concentrates)	Health	RPBA
Flexible shower heads	Nonhealth†	AVB or PVB
Heating equipment		
Commercial	Nonhealth†	RPBA
Domestic	Nonhealth†	DCVA
Hose bibbs	Nonhealth†	AVB
Irrigation systems		
with chemical additives	Health	RPBA
without chemical additives	Nonhealth†	DCVA, AVB, or PVB
Kitchen equipment—Commercial	Nonhealth†	AVB
Lab bench equipment	Health or Nonhealth†	AVB or PVB
Ornamental fountains	Health	AVB or PVB
Swimming pools		
Private	Nonhealth†	PVB or AG
Public	Nonhealth†	RPBA or AG
Sewage pump	Health	AG
Sewage ejectors	Health	AG
Shampoo basins	Nonhealth†	AVB
Specimen tanks	Health	AVB or PVB
Steam generators	Nonhealth†	RPBA
Steam tables	Nonhealth†	AVB
Sterilizers	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	AG 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, back-siphonage 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's is required.