

Cross Connection Control Backflow Prevention

Customer Service Inspection Program *Outsourcing Inspections*

TCEQ Small Business and Local Government Assistance

*For assistance
1 800 447-2827*

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Cross Connection Control and Backflow Prevention Customer Service Inspection Program

Outsourcing Inspections

Under Texas Law¹, a customer service (CS) inspection is required for each service connection before continuous water service can be provided. Some Public Water Systems (PWS) may not be able to fund and train staff to perform customer service inspections routinely. An alternative to permanent staff is *Outsourcing CS Inspection Program*. This document will assist you in developing such a program.

What is Outsourcing CS Inspection Program?

Outsourcing CS inspection eliminates the need for funding and training staff to perform and administer the CS inspections. This program utilizes independently certified CS inspectors and Water Supply Specialists registered with your PWS. Your PWS verifies the continuous certification of the registered inspectors. A list of registered inspectors can be given to each customer for their inspection. The customer has the option of finding a certified inspector not registered with the PWS but must provide documentation that the individual is certified. The advantage to this program is:

1. Your PWS does not have to budget for a CS inspector wages or training.
2. Your customers receive a list of certified inspectors that your PWS has reviewed.
3. Your PWS can review the Customer Service Inspection Certification² to determine if appropriate controls have been installed.

¹ 30 TAC, §290.46 (j)

² 30 TAC, §290.47 (d)

How do I set up an Outsourcing CS Inspection Program?

Setting up an Outsourcing CS Inspection program is not difficult using these key steps.

- 1. Adopt an ordinance or service agreement.** A plumbing ordinance, regulations, or service agreement must be adopted³ authorizing a Cross Connection Control Program must be enacted through your governing agency. A Service Agreement⁴ and Customer Service Inspection Certificate² are provided in the TAC.
- 2. Set up a record keeping system.** Depending on the size of your PWS, a simple spread sheet listing customers that may need CSI, registered inspectors, and backflow devices required for each customer. These lists can track customer service inspections, certified inspectors, and backflow installations and testing.
- 3. Get some inspectors on Board.** Send an announcement requesting Certified CS Inspectors or Plumbing Inspectors with Water Supply Protection Endorsements register with your PWS to be included in the list sent to your customers. There are inspectors in your area that are already certified. You can search a database for the CS inspectors in your area at http://www.tceq.state.tx.us/nav/data/licensed_data.html or plumber with a Water Supply Protection Specialist Endorsement at <http://www.tsbpe.state.tx.us/>.
- 4. Do a Customer Survey.** Review your customer list and do a physical surveillance of connections to determine if there are existing or potential cross-connections. Send letters about the regulation to each customer that may require an inspection (A sample letter is enclosed.) The letter should tell them what they need to do with a list of approved inspectors, installers, and testers for your PWS. Give the letter and list to each new customer.
- 5. Monitor Compliance.** Set up a reporting and monitoring system so that you can tell when inspections, installations, and tests are performed. Have compliance dates set up for each customer.

Now you have your program set up. You have now protected your customers from potential health hazards.

³ TAC 30 §290.46(i)

⁴ 30 TAC, §290.47 (b)

Customer Service Inspector Finder

Search for a Customer Service Inspector or check on a license

1. Customer Service Inspector Licenses
<http://www5.tceq.state.tx.us/occe/olwe/>
2. Plumbers with a Water Supply Protection Specialist Endorsement
<http://www.tsbpe.state.tx.us/>

Regulatory Guidance

The following publications are available online or a hard copy can be ordered from TCEQ.

[A Public Water System Guide to Customer Service Inspections](#) RG -206

[Backflow Protection on Water-Based Fire Protection Systems](#) RG-345

Publications: How to Order

Single printed copies of all TCEQ publications are available free of charge, unless otherwise specified. Therefore, the prices noted in our catalog denote charges for orders of multiple printed copies.

To order single printed copies of publications:

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512/239-0028	fax order form to 512/239-4488	TCEQ Publications MC 195 P.O. Box 13087 Austin, TX 78711-3087

SAMPLE CUSTOMER SERVICE INSPECTION LETTER

[Public Water System Name]
[address]
[phone]

[Customer]
[address]

RE: Cross Connection and Backflow prevention Customer Service Inspections

Dear Customer

After reviewing our records, we have determined that you need to submit a Customer Service Inspection Certification and install any devices that will prevent backflow or contamination to the public water system from your internal system.

Enclosed is a list of Certified Customer Service Inspectors that have registered with us. You may engage any Certified Customer Service Inspector with a current license. We have reviewed the licenses of the inspectors on our list and have deemed them to be current as of _____. The inspector should have a certification card that demonstrates that they hold a current license.

The inspector should submit the official Certified Customer Service Inspection Certificate to us within thirty days of this notice. Our mailing address is:

Name
Address
city state

Sincerely

Public Works Manager

**SUBCHAPTER D: RULES AND REGULATIONS
FOR PUBLIC WATER SYSTEMS**
Effective February 19, 2004

Cross-Connection Control Program Requirements

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§290.38. Definitions.

The following words and terms, when used in this chapter shall have the following meanings, unless the context clearly indicates otherwise. If a word or term used in this chapter is not contained in the following list, its definition shall be as shown in Title 40 Code of Federal Regulations (CFR) §141.2. Other technical terms used shall have the meanings or definitions listed in the latest edition of *The Drinking Water Dictionary*, prepared by the American Water Works Association.

(1) **Air gap** -- The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water to a tank, fixture, receptor, sink, or other assembly and the flood level rim of the receptacle. The vertical, physical separation must be at least twice the diameter of the water supply outlet, but never less than 1.0 inch.

(2) **ANSI standards** -- The standards of the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018.

(3) **Approved laboratory** -- A laboratory certified and approved by the commission to analyze water samples to determine their compliance with maximum allowable constituent levels.

(4) **ASME standards** -- The standards of the American Society of Mechanical Engineers, 346 East 47th Street, New York, New York 10017.

(5) **ASTM standards** -- The standards of the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pennsylvania 19102.

(6) **Auxiliary power** -- Either mechanical power or electric generators which can enable the system to provide water under pressure to the distribution system in the event of a local power failure. With the approval of the executive director, dual primary electric service may be considered as auxiliary power in areas which are not subject to large scale power outages due to natural disasters.

(7) **AWWA standards** -- The latest edition of the applicable standards as approved and published by the American Water Works Association, 6666 West Quincy Avenue, Denver, Colorado 80235.

(8) **Certified laboratory** -- A laboratory certified by the commission to analyze water samples to determine their compliance with maximum allowable constituent levels.

(9) **Community water system** -- A public water system which has a potential to serve at least 15 residential service connections on a year-round basis or serves at least 25 residents on a year-round basis.

(10) **Connection** -- A single family residential unit or each commercial or industrial establishment to which drinking water is supplied from the system. As an example, the number of service connections in an apartment complex would be equal to the number of individual apartment units. When enough data is not available to accurately determine the number of connections to be served or being served, the population served divided by three will be used as the number of connections for calculating system capacity requirements. Conversely, if only the number of connections is known, the connection total multiplied by three will be the number used for population served. For the purposes of this definition, a dwelling or business which is connected to a system that delivers water by a constructed conveyance other than a pipe shall not be considered a connection if:

(A) the water is used exclusively for purposes other than those defined as human consumption (see human consumption);

(B) the executive director determines that alternative water to achieve the equivalent level of public health protection provided by the drinking water standards is provided for residential or similar human consumption, including, but not limited to, drinking and cooking; or

(C) the executive director determines that the water provided for residential or similar human consumption is centrally treated or is treated at the point of entry by a provider, a pass through entity, or the user to achieve the equivalent level of protection provided by the drinking water standards.

(11) **Contamination** -- The presence of any foreign substance (organic, inorganic, radiological or biological) in water which tends to degrade its quality so as to constitute a health hazard or impair the usefulness of the water.

(12) **Cross-connection** -- A physical connection between a public 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.

(13) **Disinfectant** -- Any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone added to the water in any part of the treatment or distribution process, that is intended to kill or inactivate pathogenic microorganisms.

(14) **Disinfection** -- A process which inactivates pathogenic organisms in the water by chemical oxidants or equivalent agents.

(15) **Distribution system** -- A system of pipes that conveys potable water from a treatment plant to the consumers. The term includes pump stations, ground and elevated storage tanks, potable water mains, and potable water service lines and all associated valves, fittings, and meters, but excludes potable water customer service lines.

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

(17) **Drinking water standards** -- The commission rules covering drinking water standards in Subchapter F of this chapter (relating to Drinking Water Standards Governing Drinking Water Quality and Reporting Requirements for Public Water Systems).

(18) **Elevated storage capacity** -- That portion of water which can be stored at least 80 feet above the highest service connection in the pressure plane served by the storage tank.

(19) **Emergency power** -- Either mechanical power or electric generators which can enable the system to provide water under pressure to the distribution system in the event of a local power failure. With the approval of the executive director, dual primary electric service may be considered as emergency power in areas which are not subject to large scale power outages due to natural disasters.

(20) **Groundwater** -- Any water that is located beneath the surface of the ground and is not under the direct influence of surface water.

(21) **Groundwater under the direct influence of surface water** -- Any water beneath the surface of the ground with:

(A) significant occurrence of insects or other macroorganisms, algae, or large-diameter pathogens such as *Giardia lamblia* or *Cryptosporidium*;

(B) significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions.

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

(23) **Human consumption** -- Uses by humans in which water can be ingested into or absorbed by the human body. Examples of these uses include, but are not limited to drinking, cooking, brushing teeth, bathing, washing hands, washing dishes, and preparing foods.

(24) **Interconnection** -- A physical connection between two public water supply systems.

(25) **Intruder-resistant fence** -- A fence six feet or greater in height, constructed of wood, concrete, masonry, or metal with three strands of barbed wire extending outward from the top of the fence at a 45 degree angle with the smooth side of the fence on the outside wall. In lieu of the barbed wire, the fence must be eight feet in height. The fence must be in good repair and close enough to surface grade to prevent intruder passage.

(26) **L/d ratio** -- The dimensionless value that is obtained by dividing the length (depth) of a granular media filter bed by the weighted effective diameter “d” of the filter media. The weighted effective diameter of the media is calculated based on the percentage of the total bed depth contributed by each media layer.

(27) **Licensed professional engineer** -- An engineer who maintains a current license through the Texas Board of Professional Engineers in accordance with its requirements for professional practice.

(28) **Maximum daily demand** -- In the absence of verified historical data or in cases where a public water system has imposed mandatory water use restrictions within the past 36 months, maximum daily demand means 2.4 times the average daily demand of the system.

(29) **Maximum contaminant level (MCL)** -- The MCL for a specific contaminant is defined in the section relating to that contaminant.

(30) **Milligrams per liter (mg/L)** -- A measure of concentration, equivalent to and replacing parts per million in the case of dilute solutions.

(31) **Monthly reports of water works operations** -- The daily record of data relating to the operation of the system facilities compiled in a monthly report.

(32) **National Fire Protection Association (NFPA) standards** -- The standards of the NFPA 1 Batterymarch Park, Quincy, Massachusetts, 02269-9101.

(33) **National Sanitation Foundation (NSF)** -- The NSF or reference to the listings developed by the foundation, P.O. Box 1468, Ann Arbor, Michigan 48106.

(34) **Noncommunity water system** -- Any public water system which is not a community system.

(35) **Nonhealth hazard** -- A cross-connection, potential contamination hazard, or other situation involving any substance that generally will not be a health hazard, but will constitute a nuisance, or be aesthetically objectionable, if introduced into the public water supply.

(36) **Nontransient noncommunity water system** -- A public water system that is not a community water system and regularly serves at least 25 of the same persons at least six months out of the year.

(37) **psi** -- Pounds per square inch.

(38) **Peak hourly demand** -- In the absence of verified historical data, peak hourly demand means 1.25 times the maximum daily demand (prorated to an hourly rate) if a public water supply meets the commission's minimum requirements for elevated storage capacity and 1.85 times the maximum daily demand (prorated to an hourly rate) if the system uses pressure tanks or fails to meet the commission's minimum elevated storage capacity requirement.

(39) **Plumbing inspector** -- Any person employed by a political subdivision for the purpose of inspecting plumbing work and installations in connection with health and safety laws and ordinances, who has no financial or advisory interest in any plumbing company, and who has successfully fulfilled the examinations and requirements of the Texas State Board of Plumbing Examiners.

(40) **Plumbing ordinance** -- A set of rules governing plumbing practices which is at least as stringent and comprehensive as one of the following nationally recognized codes:

(A) the International Plumbing Code; or

(B) the Uniform Plumbing Code.

(41) **Potable water customer service line** -- The sections of potable water pipe between the customer's meter and the customer's point of use.

(42) **Potable water service line** -- The section of pipe between the potable water main to the customer's side of the water meter. In cases where no customer water meter exists, it is the section of pipe that is under the ownership and control of the public water system.

(43) **Potable water main** -- A pipe or enclosed constructed conveyance operated by a public water system which is used for the transmission or distribution of drinking water to a potable water service line.

(44) **Potential contamination hazard** -- 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. Examples of potential contamination hazards are:

- (A) bypass arrangements;
- (B) jumper connections;
- (C) removable sections or spools; and
- (D) swivel or changeover assemblies.

(45) **Public drinking water program** -- Agency staff designated by the executive director to administer the Safe Drinking Water Act and state statutes related to the regulation of public drinking water. Any report required to be submitted in this chapter to the executive director must be submitted to the Texas Commission on Environmental Quality, Water Supply Division, MC 155, P.O. Box 13087, Austin, Texas 78711-3087.

(46) **Public health engineering practices** -- Requirements in this subchapter or guidelines promulgated by the executive director.

(47) **Public water system** -- A system for the provision to the public of water for human consumption through pipes or other constructed conveyances, which includes all uses described under the definition for drinking water. Such a system must have at least 15 service connections or serve at least 25 individuals at least 60 days out of the year. This term includes; any collection, treatment, storage, and distribution facilities under the control of the operator of such system and used primarily in connection with such system, and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Two or more systems with each having a potential to serve less than 15 connections or less than 25 individuals but owned by the same person, firm, or corporation and located on adjacent land will be considered a public water system when the total potential service connections in the combined systems are 15 or greater or if the total number of individuals served by the combined systems total 25 or greater at least 60 days out of the year. Without excluding other meanings of the terms "individual" or "served," an individual shall be deemed to be served by a water system if he lives in, uses as his place of employment, or works in a place to which drinking water is supplied from the system.

(48) **Sanitary control easement** -- A legally binding document securing all land, within 150 feet of a public water supply well location, from pollution hazards. This document must fully describe the location of the well and surrounding lands and must be filed in the county records to be legally binding.

(49) **Sanitary survey** -- An onsite review of the water source, facilities, equipment, operation and maintenance of a public water system, for the purpose of evaluating the adequacy for producing and distributing safe drinking water.

(50) **Service line** -- A pipe connecting the utility service provider's main and the water meter, or for wastewater, connecting the main and the point at which the customer's service line is connected, generally at the customer's property line.

(51) **Service pump** -- Any pump that takes treated water from storage and discharges to the distribution system.

(52) **Transfer pump** -- Any pump which conveys water from one point to another within the treatment process or which conveys water to storage facilities prior to distribution.

(53) **Transient noncommunity water system** -- A public water system that is not a community water system and serves at least 25 persons at least 60 days out of the year, yet by its characteristics, does not meet the definition of a nontransient noncommunity water system.

(54) **Uniform Fire Code** -- The standards of the International Conference of Building Officials, 5360 Workman Mill Road, Whittier, California, 90601-2298.

(55) **Wastewater lateral** -- Any pipe or constructed conveyance carrying wastewater, running laterally down a street, alley, or easement, and receiving flow only from the abutting properties.

(56) **Wastewater main** -- Any pipe or constructed conveyance which receives flow from one or more wastewater laterals.

§290.44. Water Distribution.

§290.44(h) Backflow, siphonage.

(1) No water connection from any public drinking water supply system shall be allowed to any residence or establishment where an actual or potential contamination hazard exists unless the public water facilities are protected from contamination.

(A) At any residence or establishment where an actual or potential contamination hazard exists, additional protection shall be required at the meter in the form of an air gap or backflow prevention assembly. The type of backflow prevention assembly required shall be determined by the specific potential hazard identified in §290.47(I) of this title (relating to Appendices).

(B) At any residence or establishment where an actual or potential contamination hazard exists and an adequate internal cross-connection control program is in effect, backflow protection at the water service entrance or meter is not required.

(I) An adequate internal cross-connection control program shall include an annual inspection and testing by a certified backflow prevention assembly tester on all backflow prevention assemblies used for health hazard protection.

(ii) Copies of all such inspection and test reports must be obtained and kept on file by the water purveyor.

(iii) It will be the responsibility of the water purveyor to ensure that these requirements are met.

(2) No water connection from any public drinking water supply system shall be connected to any condensing, cooling, or industrial process or any other system of nonpotable usage over which the public water supply system officials do not have sanitary control, unless the said connection is made in accordance with the requirements of paragraph (1) of this subsection. Water from such systems cannot be returned to the potable water supply.

(3) 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.

(4) All backflow prevention assemblies that are required according to this section and associated table located in §290.47(I) of this title shall be tested upon installation by a recognized backflow prevention assembly tester and certified to be operating within specifications. Backflow prevention assemblies which are installed to provide protection against health hazards must also be tested and certified to be operating within specifications at least annually by a recognized backflow prevention assembly tester.

(A) Recognized backflow prevention assembly testers shall have completed an executive director approved course on cross-connection control and backflow prevention assembly testing, pass an examination administered by the executive director, and hold current professional certification as a backflow prevention assembly tester.

(I) Backflow prevention assembly testers are qualified to test and repair assemblies on any domestic, commercial, industrial, or irrigation service.

(ii) Backflow prevention assembly testers may test and repair assemblies on firelines only if they are permanently employed by an Approved Fireline Contractor. The State Fire Marshall's office requires that any person performing maintenance on firelines must be employed by an Approved Fireline Contractor.

(B) Gauges used in the testing of backflow prevention assemblies shall be tested for accuracy annually in accordance with the University of Southern California's Manual of Cross-Connection Control or the American Water Works Association Recommended Practice for Backflow Prevention and Cross-Connection Control (Manual M14). Public water systems shall

require testers to include test gauge serial numbers on "Test and Maintenance" report forms and ensure testers have gauges tested for accuracy.

(C) A test report must be completed by the recognized backflow prevention assembly tester for each assembly tested. The signed and dated original must be submitted to the public water supplier for record keeping purposes. Any form which varies from the format specified in Appendix F located in §290.47(f) of this title must be approved by the executive director prior to being placed in use.

(5) The use of a backflow prevention assembly at the service connection shall be considered as additional backflow protection and shall not negate the use of backflow protection on internal hazards as outlined and enforced by local plumbing codes.

(6) At any residence or establishment where there is no actual or potential contamination hazard, a backflow prevention assembly is not required.

§290.46. Minimum Acceptable Operating Practices for Public Drinking Water Systems.

§290.46(i) Plumbing ordinance.

Public water systems must adopt an adequate plumbing ordinance, regulations, or service agreement with provisions for proper enforcement to insure that neither cross-connections nor other unacceptable plumbing practices are permitted. See §290.47(b) of this title (relating to Appendices). Should sanitary control of the distribution system not reside with the purveyor, the entity retaining sanitary control shall be responsible for establishing and enforcing adequate regulations in this regard. The use of pipes and pipe fittings that contain more than 8.0% lead or solders and flux that contain more than 0.2% lead is prohibited for installation or repair of any public water supply and for installation or repair of any plumbing in a residential or nonresidential facility providing water for human consumption and connected to a public drinking water supply system. This requirement may be waived for lead joints that are necessary for repairs to cast iron pipe.

§290.46(j) Customer service inspections.

A customer service inspection certificate shall be completed prior to providing continuous water service to new construction, on any existing service either when the water purveyor has reason to believe that cross-connections or other potential contaminant hazards exist, or after any material improvement, correction, or addition to the private water distribution facilities. Any customer service inspection certificate form which varies from the format found in §290.47(d) of this title (relating to Customer Service Inspection Certificate) must be approved by the executive director prior to being placed in use.

(1) Individuals with the following credentials shall be recognized as capable of conducting a customer service inspection certification.

(A) Plumbing Inspectors and Water Supply Protection Specialists licensed by the Texas State Board of Plumbing Examiners.

(B) Customer service inspectors who have completed a commission-approved course, passed an examination administered by the executive director, and hold current professional certification or endorsement as a customer service inspector.

(2) As potential contaminant hazards are discovered, they shall be promptly eliminated to prevent possible contamination of the water supplied by the public water system. The existence of a health hazard, as identified in §290.47(I) of this title, shall be considered sufficient grounds for immediate termination of water service. Service can be restored only when the health hazard no longer exists, or until the health hazard has been isolated from the public water system in accordance with §290.44(h) of this title (relating to Water Distribution).

(3) These customer service inspection requirements are not considered acceptable substitutes for and shall not apply to the sanitary control requirements stated in §290.102(a)(5) of this title (relating to Definitions).

(4) A customer service inspection is an examination of the private water distribution facilities 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. The customer service inspector has no authority or obligation beyond the scope of the commission's regulations. A customer service inspection is not a plumbing inspection as defined and regulated by the Texas State Board of Plumbing Examiners (TSBPE). A customer service inspector is not permitted to perform plumbing inspections. State statutes and TSBPE adopted rules require that TSBPE licensed plumbing inspectors perform plumbing inspections of all new plumbing and alterations or additions to existing plumbing within the municipal limits of all cities, towns, and villages which have passed an ordinance adopting one of the plumbing codes recognized by TSBPE. Such entities may stipulate that the customer service inspection be performed by the plumbing inspector as a part of the more comprehensive plumbing inspection. Where such entities permit customer service inspectors to perform customer service inspections, the customer service inspector shall report any violations immediately to the local entity's plumbing inspection department.

§290.47. Appendices.

§290.47(b) Appendix B. Sample Service Agreement.

Figure: 30 TAC §290.47(b)

SERVICE AGREEMENT

I. PURPOSE. The NAME OF WATER SYSTEM 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 this protection. The utility enforces these restrictions to ensure the public health and welfare. Each customer must sign this agreement before the NAME OF WATER SYSTEM will begin service. In addition, when service to an existing connection has been suspended or terminated, the water system 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 a 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 a 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 8.0% lead may be used for the 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 the 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 NAME OF WATER SYSTEM (the Water System) and NAME OF CUSTOMER (the Customer).

A. The Water System will maintain a copy of this agreement as long as the Customer and/or the premises is connected to the Water System.

B. The Customer shall allow his property to be inspected for possible cross-connections and other potential contamination hazards. These inspections shall be conducted by the Water System 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 Water System's normal business hours.

C. The Water System 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 reinspection.

D. The Customer shall immediately remove or adequately isolate any potential cross-connections or other potential contamination hazards on his premises.

E. The Customer shall, at his expense, properly install, test, and maintain any backflow prevention device required by the Water System. Copies of all testing and maintenance records shall be provided to the Water System.

IV. ENFORCEMENT. If the Customer fails to comply with the terms of the Service Agreement, the Water System 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 SIGNATURE: _____

DATE: _____

§290.47(d) Appendix D. Customer Service Inspection Certification.

Figure: 30 TAC §290.47(d)

Customer Service Inspection Certificate

Name of PWS _____ PWS I.D.# _____

Location of Service _____

Reason for Inspection:

New construction.....

Existing service where contaminant hazards are suspected

Major renovation or expansion of distribution facilities

I _____, upon inspection of the private water distribution facilities connected to the aforementioned public water supply do hereby certify that, to the best of my knowledge:

Compliance	Non-compliance		
<input type="checkbox"/>	<input type="checkbox"/>	1.	No direct connection between the public drinking water supply and a potential source of contamination exists. Potential sources of contamination are isolated from the public water system by an air gap or an appropriate backflow prevention assembly in accordance with Commission regulations.
<input type="checkbox"/>	<input type="checkbox"/>	2.	No cross-connection between the public drinking water supply and a private water system exists. Where an actual air gap is not maintained between the public water supply and a private water supply, an approved reduced pressure-zone backflow prevention assembly is properly installed and a service agreement exists for annual inspection and testing by a certified backflow prevention assembly tester.
<input type="checkbox"/>	<input type="checkbox"/>	3.	No connection exists which would allow the return of water used for condensing, cooling or industrial processes back to the public water supply.
<input type="checkbox"/>	<input type="checkbox"/>	4.	No pipe or pipe fitting which contains more than 8.0% lead exists in private water distribution facilities installed on or after July 1, 1988.
<input type="checkbox"/>	<input type="checkbox"/>	5.	No solder or flux which contains more than 0.2% lead exists in private water distribution facilities installed on or after July 1, 1988.

I further certify that the following materials were used in the installation of the private water distribution facilities:

Service lines	Lead	<input type="checkbox"/>	Copper	<input type="checkbox"/>	PVC	<input type="checkbox"/>	Other	<input type="checkbox"/>
Solder	Lead	<input type="checkbox"/>	Lead Free	<input type="checkbox"/>	Solvent Weld	<input type="checkbox"/>	Other	<input type="checkbox"/>

I recognize that this document shall become a permanent record of the aforementioned Public Water System and that I am legally responsible for the validity of the information I have provided.

Remarks:

Signature of Inspector

Registration Number

Title

Type of Registration

Date

§290.47(f) Appendix F. Sample Backflow Prevention Assembly Test and Maintenance Report.

Figure: 30 TAC §290.47(f)

The following form must be completed for each assembly tested. A signed and dated original must be submitted to the public water supplier for record keeping purposes:

BACKFLOW PREVENTION ASSEMBLY TEST AND MAINTENANCE REPORT

NAME OF PWS: _____
 PWS I.D.: # _____
 MAILING ADDRESS: _____
 CONTACT PERSON: _____
 LOCATION OF SERVICE: _____

The backflow prevention assembly detailed below has been tested and maintained as required by commission regulations and is certified to be operating within acceptable parameters.

TYPE OF ASSEMBLY

- Reduced Pressure Principle
- Double Check Valve
- Pressure Vacuum Breaker
- Reduced Pressure Principle-Detector
- Double Check-Detector
- Spill-Resistant Pressure Vacuum Breaker

Manufacturer _____ Size _____
 Model Number _____ Located At _____
 Serial Number _____

Is the assembly installed in accordance with manufacturer recommendations and/or local codes?

	Reduced Pressure Principle Assembly			Pressure Vacuum Breaker	
	Double Check Valve Assembly		Relief Valve	Air Inlet	Check Valve
	1st Check	2nd Check			
Initial Test	Held at _____ psid Closed Tight <input type="checkbox"/> Leaked <input type="checkbox"/>	Held at _____ psid Closed Tight <input type="checkbox"/> Leaked <input type="checkbox"/>	Opened at _____ psid Did not open <input type="checkbox"/>	Opened at _____ psid Did not Open <input type="checkbox"/>	Held at _____ psid Leaked <input type="checkbox"/>
Repairs and Materials Used					
Test After Repair	Held at _____ psid Closed Tight <input type="checkbox"/>	Held at _____ psid Closed Tight <input type="checkbox"/>	Opened at _____ psid	Opened at _____ psid	Held at _____ psid

Test gauge used: Make/Model _____ SN: _____ Calibration Date: _____

Remarks: _____

The above is certified to be true at the time of testing.

Firm Name _____ Certified Tester _____
 Firm Address _____ Cert. Tester No. _____ Date _____
 Firm Phone # _____

* TEST RECORDS MUST BE KEPT FOR AT LEAST THREE YEARS

** USE ONLY MANUFACTURER'S REPLACEMENT PARTS

§290.47(I) Appendix I. Assessment of Hazard and Selection of Assemblies.

Figure: 30 TAC §290.47(I)

Appendix I: 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 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	Recommended 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, 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