



**Cross-Connection Control
and
Backflow Prevention Program**

September 11, 2009

Revised January 2017

- F Customers electing to install a reduced pressure principle backflow assembly at the fire hydrant meter will be required to have the assembly tested by a licensed backflow prevention assembly tester at the time the meter is set.
- G Customers electing to use a reduced pressure principle backflow assembly permanently installed on the water transporting vehicle will be required to have the assembly tested by a licensed backflow prevention assembly tested annually and T&M Report submitted to 7KH7HPV:DWHU&RPSDQ prior to meter installation.

5-5 Procedures on New Facilities

The requirement for installation of backflow prevention assemblies by a new customer of 7KH7HPV:DWHU&RPSDQ shall be issued in conjunction with their request for water service from the Customer Service department. Customer Service Inspection of the premises and some discussion with the owner or their representative may be necessary to determine actual or potential hazards and the resulting backflow assembly requirement.

5-5.1 Water Service Application

The customer's application for water service shall include a mechanical layout or general provisions as outlined in this Program. If the size and type of assembly is not shown 7KH7HPV:DWHU &RPSDQ may so specify. Upon installation and testing of the approved backflow prevention assembly or air gap arrangement, a record of the installation will be made by 7KH7HPV:DWHU&RPSDQ.

5-5.2 Customer Service Inspections

In accordance with the TCEQ's rules which became effective January 1, 1997, a Customer Service Inspection Certificate shall be completed prior to providing continuous water service to new construction, on any existing service when the water purveyor has reason to believe that cross-connections or other unacceptable plumbing practices exists, or after a material improvement, correction or addition to the private plumbing facilities. 7KH7HPV:DWHU &RPSDQ will require a Customer Service Inspection Certificate to be completed by a qualified licensed Customer Service Inspector prior to 7KH7HPV:DWHU&RPSDQ providing continuous water service. The inspection certificate shall include all backflow prevention assemblies installed on the various cross-connection hazards and submitted to 7KH7HPV:DWHU&RPSDQ within 10 business days for recordation.

5-6 Procedures on Existing Facilities

In the case of an existing service, the following general procedures will be utilized.

5-6.1 Inspection Procedure-Field Survey

After complete premises inspection by a Cross-Connection Control Representative, a notice advising the customer of backflow prevention assembly requirements will be issued.

5-6.2 Customer Service Department

Any customer request for a change on a commercial service or on a residential service where the change is due to an irrigation system, well or other potential cross-connection will be handled by the Customer Service Department. Each request will be routed by the Customer Service Department to a Cross-Connection Control Representative to ensure compliance with this Program.

5-7 Reclaimed Water System

5-7.1 Procedures for Reclaimed Water System

Reclaimed water is treated sewage effluent (wastewater) that undergoes further treatment to improve its quality. Reclaimed water may be utilized in landscape irrigation systems, but requires safeguards to be put in place and maintained at all times to ensure public health and safety. In some areas of the The Texas Water Company system, reclaimed water is available to customers for landscape irrigation purposes only. Although reclaimed water systems are a tremendous conservation resource, they do pose risks if they are improperly installed and/or maintained.

5-7.1.1 Reclaimed Water System Backflow Prevention

Reclaimed water is non-potable, so a reclaimed water system must be protected by an RP installed at the domestic meter. The installation shall conform to this Program and The Texas Water Company Standard Specification and Standard Details for backflow preventer installation.

5-7.1.2 Customer Responsibility

- a) Customers must install a reduced pressure principle backflow assembly at the domestic meter and have tested by a licensed backflow prevention assembly tester and submit the T&M Report prior to the reclaim meter being set. In addition to having the Customer Service Inspection performed upon completion of construction.
- b) Customers are required to post signs specifying the use of reclaimed water. Signs must be a minimum of an eight inch by eight inch, in English and Spanish, prominently posted on/in the area that is being irrigated, that reads: "RECLAIMED WATER—DO NOT DRINK" and "AGUA DE RECUPERACIÓN—NO BEBER."
- c) There should be no locations on the site where ponding could occur or where reclaimed water overspray could contact any human, food or drinking areas. The irrigation system should not spray water across property lines that do not belong to the irrigation system's owner. Standard hose bibs should not be used on the reclaim water system. All reclaimed water piping, valve, meters, control and equipment should be installed using purple components and clearly labeled. Reclaimed water lines should be separated from potable

water lines, following the same requirements for the separation of potable water lines from sewage lines.

5-8 Irrigation System with On-Site Sewage Facility

5-8.1 On-Site Sewage Facility (OSSF)

An On-Site Sewage Facility is a treatment facility which is used only for the disposal of sewage produced on the site which the system is located. Aerobic Septic Systems and Conventional Septic Systems are classified as On-Site Sewage Facilities and are typically located at business and residential facilities where public sewage is not available.

5-8.2 Irrigation System with On-Site Sewage Facility Backflow Prevention

Any property that is serviced by an On-Site Sewage Facility and has a landscape irrigation system or sprinkler system is considered a health hazard, and must be protected by a reduced pressure principle assembly.

- a) §344.50(c) Backflow prevention devices used in applications designated as health hazards must be tested upon installation and annually thereafter.
- b) §344.50(d)(2) "If an irrigation system is designed or installed on a property that is served by an on-site sewage facility," "any connections using a private or public potable water source must be connected to the water source through a reduced pressure principle backflow prevention assembly".
- c) §344.52(c) the backflow prevention device must be "tested prior to being placed in service and the test results provided to the local water purveyor and the irrigation system's owner or owner's representative within ten business days of testing of the backflow prevention device".

5-8.3 Irrigation System with OSSF Grandfather Clause

Before 2009, a Double-Check Valve Assembly was allowed on irrigation systems installed on sites that also had an OSSF. As a result, there are currently installed irrigation systems that do not have the correct backflow prevention assembly. Systems that were installed before 2009 are essentially grandfathered until they can no longer be repaired in line and must be replaced; it must be upgraded to the required RP. Since 2009, those installing irrigation systems on sites that also have an OSSF must be aware of the change in the required backflow prevention and install the RP. (TCEQ RG-478)

- a) §344.52(c) "If an irrigation system is connected to a potable water supply and requires major maintenance, alteration, repair, or service, the system must be connected to the potable water supply through an approved, properly installed backflow prevention method as defined in this title before any major maintenance, alteration, repair, or service is performed."

Appendices

Appendix I Customer Service Inspection Agreement



Customer Service Inspection Agreement

I. PURPOSE. CANYON LAKE WATER SERVICE COMPANY (CLWSC) 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 Customer Service Inspection 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 CLWSC will begin service.

II. SERVICE AGREEMENT. The following are the terms of the Customer Service Inspection Agreement between

CANYON LAKE WATER SERVICE COMPANY and _____
(the Customer).

- A. CLWSC 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 his property to be inspected for possible cross-connections and other potential contamination hazards. These inspections shall be conducted by CLWSC 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 CLWSC's normal business hours.
- C. The Customer shall, at his expense, have a Customer Service Inspection (CSI) performed upon completion of new construction, major renovation or expansion of facilities or upon CLWSC's request at an existing service where contaminant hazards are suspected. The original inspection certificate shall be provided to CLWSC within 10 business days of the CSI.
- D. CLWSC shall notify the Customer in writing of any cross-connection or other potential contamination hazard which has been identified during the initial CSI or the periodic re-inspection.
- E. The Customer shall immediately remove or adequately isolate any potential cross-connections or other potential contamination hazards on his premises.
- F. The Customer shall, at his expense, properly install, test, and maintain any backflow prevention device required by CLWSC and the Texas Commission on Environmental Quality. The original report of all test and maintenance records shall be provided to CLWSC within 10 business days of the test.

III. ENFORCEMENT. If the Customer fails to comply with the terms of the Customer Service Inspection Agreement, CLWSC shall, at its option, terminate service. Any expenses associated with the enforcement of this agreement shall be billed to the Customer.

Service Address: _____

CSI DUE DATE: _____

If the due date is not indicated CSI will be due 30 days from the date of this agreement.

CUSTOMER'S SIGNATURE: _____ DATE: _____

Canyon Lake Water Service Company
P.O. 1742 Canyon Lake, Texas 78133
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Appendix II Customer Service Inspection Agreement-Commercial



Customer Service Inspection Agreement-Commercial

I. PURPOSE. CANYON LAKE WATER SERVICE COMPANY (CLWSC) 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 Customer Service Inspection 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 CLWSC will begin service.

II. SERVICE AGREEMENT. The following are the terms of the Customer Service Inspection Agreement between

CANYON LAKE WATER SERVICE COMPANY and _____
(the Customer).

- A. CLWSC 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 his property to be inspected for possible cross-connections and other potential contamination hazards. These inspections shall be conducted by CLWSC 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 CLWSC 's normal business hours.
- C. The Customer shall, at his expense, have a Customer Service Inspection (CSI) performed upon completion of new construction, major renovation or expansion of facilities or upon CLWSC's request at an existing service where contaminant hazards are suspected. The original inspection certificate shall be provided to CLWSC within 10 business days of the CSI.
- D. CLWSC shall notify the Customer in writing of any cross-connection or other potential contamination hazard which has been identified during the initial CSI or the periodic re-inspection.
- E. The Customer shall immediately remove or adequately isolate any potential cross-connections or other potential contamination hazards on his premises.
- F. The Customer shall, at his expense, properly install, test, and maintain any backflow prevention device required by CLWSC and the Texas Commission on Environmental Quality. The original report of all test and maintenance records shall be provided to CLWSC within 10 business days of the test.

III. ENFORCEMENT. If the Customer fails to comply with the terms of the Customer Service Inspection Agreement, CLWSC shall, at its option, terminate service. Any expenses associated with the enforcement of this agreement shall be billed to the Customer.

IV. BACKFLOW PREVENTION. In accordance with the CLWSC Cross-Connection Control and Backflow Prevention Program, Potential Cross-Connection and Backflow Prevention Assembly:

- Fire Line with RPZ Fire Line with DCVA Fire Line Bypass with _____
- Well with RPZ Well with Air Gap
- Irrigation with RPZ (OSSF) Irrigation with DCVA (No OSSF)
- Other _____ with: RPZ DCVA PVB RPZ-Detector DCVA-Detector
- Other _____ with: RPZ DCVA PVB RPZ-Detector DCVA-Detector

Service Address: _____

CSI DUE DATE: _____
If the due date is not indicated CSI will be due 30 days from the date of this agreement.

CUSTOMER'S SIGNATURE: _____ DATE: _____

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Appendix III Customer Service Inspection Certificate



Customer Service Inspection Certificate

CLWSC use:
 Name of PWS _____ PWS ID No. _____

Address of Service _____ Date of Inspection _____

Customer Name _____ Contact No. _____

Reason for Inspection:	New Construction.....	<input type="checkbox"/>
	Existing service where contaminant hazards are suspected.....	<input type="checkbox"/>
	Major renovation or expansion of distribution facilities.....	<input type="checkbox"/>

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
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 principle 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 and prior to January 4, 2014.	<input type="checkbox"/>	<input type="checkbox"/>
5. Plumbing installed after January 4, 2014 bears the expected labeling indicating ≤0.25% lead content. If not properly labeled, please provide written comment.	<input type="checkbox"/>	<input type="checkbox"/>
6. No solder or flux which contains more than 0.2% lead exists in private water distribution facilities installed on or after July 1, 1988.	<input type="checkbox"/>	<input type="checkbox"/>

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

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

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.

Certificate shall include all backflow prevention assemblies installed on the various cross-connection hazards present:

Potential Cross-Connection Hazards:	<input type="checkbox"/> On-Site Sewage	<input type="checkbox"/> Sprinkler System	<input type="checkbox"/> Well/Private Water Supply
	<input type="checkbox"/> Swimming Pool	<input type="checkbox"/> Fire Line	<input type="checkbox"/> Other Hazards Present _____
Backflow Preventer(s):	<input type="checkbox"/> RPZ	<input type="checkbox"/> DCV	<input type="checkbox"/> Other Assembly _____

Inspector Title _____ Registration Type/Number _____

Signature of Inspector _____ Contact Number _____

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Appendix IV Backflow Prevention Assembly Test and Maintenance Report



Backflow Prevention Assembly Test and Maintenance Report

CLWSC use:
 Name of PWS _____ PWS ID No _____

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

Address of Service _____ Date of Inspection _____

Customer Name _____ Contact Number _____

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

Type of Assembly	
<input type="checkbox"/> Reduced Pressure Principle	<input type="checkbox"/> Reduced Pressure Principle-Detector
<input type="checkbox"/> Double Check Valve	<input type="checkbox"/> Double Check Valve-Detector
<input type="checkbox"/> Pressure Vacuum Breaker	<input type="checkbox"/> Spill-Resistant Pressure Vacuum Breaker

Manufacture _____ Size _____

Model Number _____ Located At _____

Serial Number _____

Is the assembly installed in accordance with manufacture recommendations and CLWSC standards? Yes No

	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 Leak	Held at _____ psid Closed Tight Leak	Open at _____ psid Did not open	Open at _____ psid Did not open	Held at _____ psid Leaked
Repairs and Materials					
Test After Repair	Held at _____ psid Closed Tight Leak	Held at _____ psid Closed Tight Leak	Open at _____ psid Did not open	Open at _____ psid Did not open	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 _____ Certified Tester No. _____

Firm Contact No _____

Signature of Certified Tester _____

*TEST RECORDS MUST BE KEPT FOR AT LEAST THREE YEARS

** USE ONLY MANUFACTURED'S REPLACEMENT PARTS

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Appendix V Fire Line Backflow Prevention Assembly Test and Maintenance Report



Fire Line Backflow Prevention Assembly Test and Maintenance Report

CLWSC use:
 Name of PWS _____ PWS ID No _____

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

Address of Service _____ Date of Inspection _____

Customer Name _____ Contact Number _____

The backflow prevention assembly detailed below has been tested and maintained as required by the commission regulations and 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 Valve-Detector
 Spill-Resistant Pressure Vacuum Breaker

Manufacture _____ Size _____

Model Number _____ Located At _____

Serial Number _____

Flow test was performed within the past twelve months and full flow documentation is attached? Yes No

The system has been placed back in operation upon completion of testing. Yes No

Is the assembly installed in accordance with manufacture recommendations and CLWSC standards? Yes No

	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 Leak	Held at _____ psid Closed Tight Leak	Open at _____ psid Did not open	Open at _____ psid Did not open	Held at _____ psid Leaked
Repairs and Materials					
Test After Repair	Held at _____ psid Closed Tight Leak	Held at _____ psid Closed Tight Leak	Open at _____ psid Did not open	Open at _____ psid Did not open	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 _____ Certified Tester No. _____

Firm Contact No _____

Signature of Certified Tester _____

*TEST RECORDS MUST BE KEPT FOR AT LEAST THREE YEARS

** USE ONLY MANUFACTURED'S REPLACEMENT PARTS

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