

CROSS TIMBERS WATER SUPPLY CORPORATION

Dear Builders,

Effective with new Residential/Commercial building permits issued in the Town of Copper Canyon, Town of Bartonville and the Town of Double Oak, Cross Timbers Water Supply will require two inspections during construction prior to receiving the Certificate of Occupancy.

Inspection 1 – Will be the (CSI) customer service inspection, done during mechanical inspection prior to insulation and sheetrock being installed.

Inspection 2 – Will be water meter box/backflow inspection report, done during the final inspection prior to calling for the C/O inspection.

Please call CTWS office at 940-584-0780 to schedule an inspection. Inspection requests received between 8:30am to 11:00am can be done on same day if requested. Inspections request received from 11:00am to 4:30pm will be scheduled for next day.

Thank you,
Chad Wolf
General Manager
Cross Timbers Water Supply

Texas Administrative Code

<u>TITLE 30</u>	ENVIRONMENTAL QUALITY
<u>PART 1</u>	TEXAS COMMISSION ON ENVIRONMENTAL QUALITY
<u>CHAPTER 344</u>	LANDSCAPE IRRIGATION
<u>SUBCHAPTER E</u>	BACKFLOW PREVENTION AND CROSS-CONNECTIONS
RULE §344.51	Specific Conditions and Cross-Connection Control

- (a) Before any chemical is added to an irrigation system connected to any potable water supply, the irrigation system must be connected through a reduced pressure principle backflow prevention assembly or air gap.
- (b) Connection of more than one water source to an irrigation system presents the potential for contamination of the potable water supply if backflow occurs. Therefore, connection of any additional water source to an irrigation system that is connected to the potable water supply can only be done if the irrigation system is connected to the potable water supply through a reduced-pressure principle backflow prevention assembly or an air gap.
- (c) Irrigation system components with chemical additives induced by aspiration, injection, or emission system connected to any potable water supply must be connected through a reduced pressure principle backflow device.
- (d) If an irrigation system is designed or installed on a property that is served by an on-site sewage facility, as defined in Chapter 285 of this title (relating to On-Site Sewage Facilities), then:
 - (1) all irrigation piping and valves must meet the separation distances from the On-Site Sewage Facilities system as required for a private water line in §285.91(10) of this title (relating to Minimum Required Separation Distances for On-Site Sewage Facilities);
 - (2) 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 as defined in §344.50 of this title (relating to Backflow Prevention Methods); and
 - (3) any water from the irrigation system that is applied to the surface of the area utilized by the On-Site Sewage Facility system must be controlled on a separate irrigation zone or zones so as to allow complete control of any irrigation to that area so that there will not be excess water that would prevent the On-Site Sewage Facilities system from operating effectively.

Source Note: The provisions of this §344.51 adopted to be effective January 1, 2009, 33 TexReg 5713

Figure 6.1: Regulations regarding backflow prevention and cross-connections. (continued)

specifically to help PWS personnel with this task is available for purchase. An online search for this software will give you an idea of the options available. An alternative is for you to develop your own electronic tracking system—for example, using a spreadsheet program.

8. Landscape Irrigation

Rules for landscape irrigation in 30 TAC 344 may have an impact on a PWS's cross-connection control program because they have requirements for backflow prevention as well as detailed installation requirements for backflow prevention assemblies. Typically, irrigation systems are a direct cross-connection to the potable-water supply, which requires backflow prevention. Some typical hazards posed by an irrigation system are:

- Organisms (parasites, insect larvae, pathogens) living in the water of the irrigation system.
- Exposure of the sprinkler heads to fertilizers, herbicides, or pesticides in the yard.
- Exposure of the sprinkler heads to fecal material from animals living on the site (dogs, cats, rodents, farm animals).
- Direct connection of chemical additives to the irrigation system.
- Connection of alternative water sources (creeks, rainwater harvesting systems, lakes, private wells, stock tanks, etc.).

Backflow will introduce these elements into the potable-water supply at the site and possibly into the water main. Backflow is especially problematic when pathogenic organisms are introduced into the potable-water supply and may propagate to produce waterborne illness.

The backflow requirements for irrigation systems make it logical that the landscape-irrigation rules and the rules on cross-connection control and backflow prevention are interrelated. PWSs that have not considered the impact of these rules may need to take action to learn about them and implement additional protective measures within their cross-connection control program.

To assist public water suppliers, the TCEQ has published *Landscape Irrigator's Rule Compilation* (RG-470), available online at <www.tceq.texas.gov/publications/rg_rg-470.html>.

You can telephone the TCEQ Landscape Irrigation Program at 512-239-5296 or visit its Web page at <www.tceq.texas.gov/goto/lawn>

In order to conserve water, many irrigation systems are supplied with reclaimed water. RG-470 addresses the use of reclaimed water for irrigation systems. It describes requirements for backflow prevention, color coding, and necessary signs. "Reclaimed water" is defined in 30 TAC 210. It refers to wastewater that is discharged under a TCEQ "210 Permit" for beneficial use. If the beneficial use involves human contact, the water is considered Type 1 reclaimed water; if not, the water is called Type 2 reclaimed water.

Many irrigation systems are installed on sites that have an on-site sewage facility (such as a septic tank). The existence of the OSSF elevates the classification of the irrigation system to a health hazard requiring the installation of an RP. 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. To address this, the current version of the landscape-irrigation rules states:

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. [30 TAC 344.52(a)]

Historically, this regulation was taken to mean that systems that were installed before 2009 were essentially grandfathered until they required "major maintenance, alteration, repair, or service." When the backflow preventer 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.

Licensed irrigators may install backflow prevention assemblies on irrigation systems. The irrigator must use the correct type of assembly taking into account:

- the hydraulic conditions (back pressure)
- hazard analysis
- testing requirements
- installation requirements

Though a licensed irrigator may install the device, it must be tested by a licensed BPAT upon installation.

9. Education and Training

PWS staff education is important to every aspect of a program. Training, a specific kind of education, is even more critical. Training gives an individual the critical information needed to carry out specific tasks. Specific personnel will require specific training, but backflow, what a cross-connection is, and how contaminated water from a customer's premises can get into the potable water supply, are important concepts **all** personnel need to comprehend. Contamination involving backflow is usually discovered through water quality complaints, and understanding the details of cross-connection control measures is a necessity. Following are two examples emphasizing the importance of trained water-system staff:

Example 1

Personnel at a particular PWS receive basic training on some concepts of cross-connection control. The meter readers, repair personnel, and anyone having a field job are requested to inform the program coordinator of any potential hazards they notice—such as auxiliary water sources or extensive plumbing work.

A meter reader observes that large pieces of equipment are being brought into a facility. The coordinator makes inquiries and determines that the facility has totally changed the type of work it conducts, and will now be using water using equipment that has contaminants under pressure for various processes. It will now need an RP installed at the meter. Without the knowledge and actions of the field personnel, the potable-water supply would have been vulnerable to the contamination hazards at that facility.

Example 2

A water-quality inspector receives a complaint of tiny bubbles in the water at a restaurant. Upon investigating, the inspector finds what appears to be air in the water and tells the restaurant personnel to flush their internal piping system and the PWS will open the fire hydrants to flush any air out of the water main. This doesn't solve the problem. Many times what appears to be air in the water at restaurants is actually carbon