

TEXAS SUNSET ADVISORY COMMISSION

Honorable Glenn Hegar, Jr, Chair  
Lamont Jefferson, Esq., Public Member

FOR THE RECORD:

I am WILLIAM M. ALDRUP, and I have been in the landscape irrigation industry over 12 years. I currently hold two licenses issued by the Texas Commission on Environmental Quality [TCEQ] a Landscape Technician License, No. IT-1212 and a Backflow Prevention Assembly Tester License [BPAT] No. BP-1346.

I am also a member of the TCEQ Cross-Connection Control Subcommittee which meets once a quarter at the TCEQ Campus in Austin. The next scheduled meeting of the Subcommittee is Wednesday, December 1, 2010, if you would like to join us.

My concern is the "requirement" for the installation of a y-strainer on landscape irrigation systems. Living over the Edwards Aquifer, I am acutely aware of the need to protect this valuable source of water supply. The problem of having y-strainers on landscape irrigation systems does not apply to just the San Antonio Metropolitan area but to every water purveyor in the State of Texas.

The American Backflow Association, San Antonio Chapter's website [abpa-sa.org] states: "Backflow is the undesirable reversal of flow of non-potable water or other substances through a cross-connection and into the piping of a public water system or consumer's potable water system. There are two types of backflow... backpressure backflow and backsiphonage."

Section 344.50 of Title 30, Texas Administrative Code (TAC) Chapter 344, Rules for Landscape Irrigation, SUBCHAPTER E BACKFLOW PREVENTION AND CROSS-CONNECTIONS states:

(a) Any irrigation system that is connected to a public or private potable water supply must be connected through a commission-approved backflow prevention method. The backflow prevention device must be approved by the American Society of Sanitary Engineers; or the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California; or the Uniform Plumbing Code; or any other laboratory that has equivalent capabilities for both the laboratory and field evaluation of backflow prevention assemblies. The backflow prevention device must be installed in accordance with the laboratory approval standards or if the approval does not include specific installation information, the manufacturer's current published recommendations.

There are four backflow prevention assemblies used by the landscape irrigation industry. They are: Reduced pressure principle, Pressure vacuum breakers, Atmospheric vacuum breakers, and Double check valve backflow prevention assemblies.

Section (e) of 344.50 allows for the use of a double-check assembly “If there are no conditions that present a health hazard double check valve backflow prevention assemblies may be used to prevent backflow...” and if the double check is installed below ground a y-strainer must be install on the inlet side of the double check valve.

*(e) If a double check valve is installed below ground:*

- (1) test cocks must be plugged, except when the double check valve is being tested;
- (2) test cock plugs must be threaded, water-tight, and made of non-ferrous material;
- (3) a y-type strainer is installed on the inlet side of the double check valve;*
- (4) there must be a clearance between any fill material and the bottom of the double check valve to allow space for testing and repair; and
- (5) there must be space on the side of the double check valve to test and repair the double check valve.

Of the four methods of backflow prevention on a landscape irrigation system the double check valve assembly is the only one that “**requires**” the use of a y-strainer and then **only** if the double check valve assembly is installed “**below**” ground. If the double check valve assembly were to be installed “**above**” ground there would be no “**requirement**” under 344.50 for a y-strainer to be installed. This is an oxy-moron.

**FIRST:** The “**requirement**” for the use of the y-strainer is only mandatory for landscape irrigation systems. Backflow prevention assemblies are “**required**” on many different domestic and industrial applications such as: soda machines, car washes, many different medical units. The list has over 100 separate applications.

There is **NO** other requirement for the installation of a y-strainer on any other application in the plumbing industry except on a landscape irrigation system and then only when installed “**below ground**”.

**SECOND:** If a double-check valve assemble is installed above ground there is no “**requirement**” under 344.50 for a y-strainer. If the problem is with the use of a double-check valve assembly, why isn’t it also “**required**” to be installed when the device is above ground?

**THIRD:** There is **NO** “**current**” recognized backflow prevention assembly testing laboratory or manufacturer of double-check valve assemblies “**requires**” the installation of a y-strainer before the double-check valve assembly. By TCEQ own Standards this is a violation of 344.50(a).

**FOURTH:** The Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California, has determined: “*The term backflow means any unwanted flow of used or non-potable water or substance from any domestic, industrial or institutional piping system into the pure potable water distribution system.*”

The purpose of a y-strainer is to remove trapped particles that have entered into the public water system and have them “trapped” with-in the y-strainer. The y-strainer is then maintained by its owner by removing the sealed cap on the end of the y-strainer and clearing the debris contained in the y-strainer’s bowl.

When a double-check valve assembly is installed below ground level it is placed approximately twelve [12] inches below the surface in a plastic container or valve box. In heavy rain or over watering this box or container acts as water holding device. Fecal matter or fertilizer that is on the lawn often is collected in the backflow box.

When either a fire department attaches their fire engines to a nearby hydrant or there is a water main break in the area, if the cap on the y-strainer is not placed on there correctly (i.e.) tightly or is cross threaded the fecal matter or fertilizer can be back-siphoned into the domestic (pure) water supply causing contamination to the public drinking water.

It is not a problem of IF backsiphonage will occur. But when and to what extent.

**SOLUTION:** There is a quick and easy solution to remedy this problem and prevent the potential polluting of the public supply.

All that needs to be done is for the Chairman of the Texas Commission on Environmental Quality have the Executive Director issue a letter to the effect; pending revision of Title 30, Texas Administrative Code (TAC) Chapter 344, Rules for Landscape Irrigation, Subchapter E Backflow Prevention and Cross-connections, y-strainers SHALL no longer be installed on below ground double-check backflow prevention assemblies.

For the Legislature: The Legislature should in act a stature that repeals 344.50 (e) (3); “a y-type strainer is installed on the inlet side of the double check valve.” So this problem no longer exists.

Respectfully submitted:  
WILLIAM M. ALDRUP