

## Petition to TCEQ for Rule Adoption

Date: 12/03/08

Submitted to:

Executive Director  
Texas Commission on Environmental Quality  
PO Box 13087  
Austin, TX 78711-3087

2008 DEC -3 PM 4:15

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TCEQ  
WATER SUPPLY DIVISION

Petitioners:

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Object of proposed rule:

To protect the groundwaters of the State of Texas from pollution or contamination.

Proposed rule:

All pumps that convey groundwater to the surface or subsurface via a private water well shall have an appropriate approved testable backflow prevention assembly(ies) or air gap(s) installed down stream of the pump(s) and upstream of any other appurtenances or branches. Each backflow prevention assembly must pass an operational test upon installation, repair, or replacement.

Authority under which proposed rule is to be promulgated:

Texas Water Code Title 2 (Water Administration) Subtitle D (Water Quality Control) Chapter 28 (Water Wells and Drilled or Mined Shafts) Subchapter B (Water Wells) states that "the commission may make and enforce rules and regulations for protecting and preserving the quality of underground water." (see attachment)

Allegation of injury or inequity from failure to adopt proposed rule:

Currently the Texas Department of Licensing and Regulation's Administrative Rules for Water Well Drillers and Water Well Pump Installers 16 TAC Chapter §76.1006 and §76.1007 requires all wells to have a single check valve installed. In the case where a well with chemical injection, Chemigation, or foreign

substance unit is added to a water delivery system the requirement is that a single check valve, a vacuum-relief device, and an automatic low pressure drain be installed. (see attachment)

These requirements do not meet industry backflow prevention standards prescribed by the 2006 Uniform Plumbing Code (§602, §603, table 6-2, and table 6-3), the 2006 International Plumbing Code (§608 and table 608.1), the American Water Works Association (M14 Recommended Practice for Backflow Prevention and Cross-Connection Control), or the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (Manual of Cross-Connection Control 9<sup>th</sup> Edition). Nor do the current requirements meet the standards that public water systems are held to under TCEQ's Chapter 290 Rules and Regulations (§290.44(h) and §290.46(j)). (see attachment)

According to TCEQ's Chapter 290.46(j) a customer service inspection certificate shall be completed prior to a public water supply customer receiving continuous water service. A customer service inspection is performed to identify and prevent cross-connections, potential contaminant hazards, and illegal lead materials. Currently there is no mechanism in place for private well owners to perform customer service inspections and few private well owners/operators are trained in backflow prevention.

Therefore it is the petitioners' contention that all private well users are in jeopardy and the Commission could be held liable for pollution or contamination of the groundwater by not requiring proper backflow protection at each private water well.

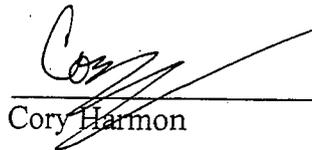
This proposed rule is an essential step towards protecting one of Texas's most precious natural resources... groundwater.

Respectfully submitted by:



\_\_\_\_\_  
Danny Lytle

and



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Cory Harmon

WATER CODE

CHAPTER 28. WATER WELLS AND DRILLED OR MINED SHAFTS

SUBCHAPTER B. WATER WELLS

Sec. 28.011. UNDERGROUND WATER: REGULATIONS. Except as otherwise provided by this code, the commission may make and enforce rules and regulations for protecting and preserving the quality of underground water.

Amended by Acts 1977, 65th Leg., p. 2207, ch. 870, Sec. 1, eff. Sept. 1, 1977. Renumbered from Sec. 28.002 by Acts 1983, 68th Leg., p. 651, ch. 148, Sec. 1, eff. May 18, 1983. Amended by Acts 1985, 69th Leg., ch. 795, Sec. 1.123, eff. Sept. 1, 1985; Acts 1993, 73rd Leg., ch. 914, Sec. 1, eff. Aug. 30, 1993.

# Texas Administrative Code

TITLE 16  
PART 4  
CHAPTER 76  
RULE §76.1006

ECONOMIC REGULATION  
TEXAS DEPARTMENT OF LICENSING AND REGULATION  
WATER WELL DRILLERS AND WATER WELL PUMP INSTALLERS  
**Technical Requirements -- Water Distribution and Delivery Systems**

(a) The licensee shall inform the landowner and well owner that the landowner and well owner are responsible for complying with the rules and regulations under the standards set forth in this chapter.

(b) A buried discharge line between the pump discharge and the pressure tank or pressure system in any installation, including a deep well turbine or a submersible pump, shall not be under negative pressure at any time. With the exception of jet pumps, a check valve or an air gap shall be installed in a water line between the well casing and the pressure tank. Either a check valve or an air gap, as applicable, shall be required on all irrigation well pumps whenever a pump is installed or repaired. All wells shall have either a check valve, or an air gap as applicable.

(c) Wells shall be vented with watertight joints except as provided by subsection (b) of this section.

(1) Watertight joints, where applicable pursuant to the provisions of this rule, shall terminate at least two (2) feet above the regional flood level or one (1) foot above the established ground surface or the floor of a pump room or well room, whichever is higher.

(2) The casing vent shall be screened and point downward.

(3) Vents may be offset provided they meet the provisions of this rule.

(4) Toxic or flammable gases, if present, shall be vented from the well. The vent shall extend to the outside atmosphere above the roof level at a point where the gases will not produce a hazard.

**Source Note:** The provisions of this §76.1006 adopted to be effective November 8, 2001, 26 TexReg 8814

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# Texas Administrative Code

TITLE 16

ECONOMIC REGULATION

PART 4

TEXAS DEPARTMENT OF LICENSING AND REGULATION

CHAPTER 76

WATER WELL DRILLERS AND WATER WELL PUMP INSTALLERS

RULE §76.1007

**Technical Requirements -- Chemical Injection, Chemigation, and Foreign Substance Systems**

(a) All irrigation distribution systems or water distribution systems into which any type of chemical (except disinfecting agents) or other foreign substances will be injected into the water pumped from water wells shall be equipped with an in-line, automatic quick-closing check valve capable of preventing pollution of the ground water. The required equipment shall be installed on all systems whenever a pump is installed or repaired or at the time of a chemical injection, Chemigation or foreign substance unit is added to a water delivery system or not later than January 1, 2000, if the well has a chemical injection, Chemigation, or foreign substance unit in the delivery system. The type of check valve installed shall meet the following specifications:

(b) The body of the check valve shall be constructed of cast iron, stainless steel, cast aluminum, cast steel, or of a material and design that provides a sturdy integrity to the unit and is resistant to the foreign substance being injected. All materials shall be corrosion resistant or coated to prevent corrosion. The valve working pressure rating shall exceed the highest pressure to which the valve will be subjected.

(c) The check valve shall contain a suitable automatic, quick-closing and tight-sealing mechanism designed to close at the moment water ceases to flow in the downstream or output direction. The device shall, by a mechanical force greater than the weight of the closing device, provide drip-tight closure against reverse flow. Hydraulic backpressure from the system does not satisfy this requirement.

(d) The check valve construction should allow for easy access for internal and external inspection and maintenance. All internal parts shall be corrosion resistant. All moving parts shall be designed to operate without binding, distortion, or misalignment.

(e) The check valve shall be installed in accordance with the manufacturer's specifications and maintained in a working condition during all times in which any fertilizer, pesticide, chemical, animal waste, or other foreign substance is injected into the water system. The check valve shall be installed between the pump discharge and the point of chemical injection or foreign substance injection.

(f) A vacuum-relief device shall be installed between the pump discharge and the check valve in such a position and in such a manner that insects, animals, floodwater, or other pollutants cannot enter the well through the vacuum-relief device. The vacuum-relief device may be mounted on the inspection port as long as it does not interfere with the inspection of other anti-pollution devices.

(g) An automatic low pressure drain shall also be installed between the pump discharge and the check valve in such a position and in such a manner that any fluid which may seep toward the well around the flapper will automatically flow out of the pump discharge pipe. The drain must discharge away from rather than flow into the water supply. The drain must not collect on the ground surface or seep into the soil around the well casing.

(1) The drain shall be at least three-quarter (3/4) inch in diameter and shall be located on the bottom of the horizontal pipe between the pump discharge and the check valve.

(2) The drain must be flush with the inside surface of the bottom of the pipe unless special provisions, such as a dam made downstream of the drain, forces seepage to flow into the drain.

(3) The outside opening of the drain shall be at least two (2) inches above the grade.

(h) An easily accessible inspection port shall be located between the pump discharge and the check valve, and situated so the automatic low-pressure drain can be observed through the port and the flapper can be physically manipulated.

(1) The port shall allow for visual inspection to determine if leakage occurs past the flapper, seal, seat, and/or any other components of the checking device.

(2) The port shall have a minimum four (4) inch diameter orifice or viewing area. For irrigation distribution systems with pipe lines too small to install a four-inch diameter inspection port, the check valve and other anti-pollution devices shall be mounted with quick disconnects, flange fittings, dresser couplings, or other fittings that allow for easy removal of these devices.

(i) Any check valve not fully meeting the specifications set forth in this section may on request to the Executive Director be considered for a variance.

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**Source Note:** The provisions of this §76.1007 adopted to be effective November 8, 2001, 26 TexReg 8814

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Texas Commission on Environmental Quality  
Chapter 290 - Public Drinking Water  
**290.44. Water Distribution.**

(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 a current license 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 Marshal'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 recordkeeping 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.**

(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 Appendices) 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 (TSBPE).

(B) Customer service inspectors who have completed a commission-approved course, passed an examination administered by the executive director, and hold current professional license 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 General Applicability).

(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 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.

