

# Texas Commission on Environmental Quality

## Interoffice Memorandum

**To:** Commissioners **Date:** January 19, 2018

**Thru:** Bridget C. Bohac, Chief Clerk  
Richard A. Hyde, P.E., Executive Director

**From:** L'Oreal Stepney, P.E., Deputy Director  
Office of Water

**Subject:** Consideration of a Petition for Rulemaking

**Docket No.:** 2017-1761-PET

**Project No.:** 2018-014-PET-NR

**Who Submitted the Petition:**

On December 18, 2017, the Texas Commission on Environmental Quality (TCEQ or commission) received a petition from the Dispensing Equipment Alliance (petitioner).

**What the Petitioner Requests:**

The petitioner requests that the commission amend 30 TAC §290.38(2) to modify the definition of "air gap" by using the American Society of Mechanical Engineers (ASME) A112.1.3 standard.

**Recommended Action and Justification:**

The executive director recommends that the commission deny the petition for rulemaking. The petitioner's proposed definition is not adequate to prevent contaminants from entering the distribution system, because it does not require air gaps of greater than one inch even for large diameter pipes. To protect public drinking water quality, the minimum air gap distance must be two times the diameter of the water supply outlet, but never less than one inch.

The commission's drinking water program is charged with preserving public health, safety, and welfare by ensuring that public drinking water supply systems:

- (1) supply safe drinking water in adequate quantities;
- (2) are financially stable; and
- (3) are technically sound.<sup>1</sup>

The executive director has determined that making a change to the TCEQ definition of "air gap" as requested by the petitioner could lead to a threat to public health at a public water system. The definition found in §290.38(2) includes a requirement for the minimum distance of the air gap (twice the diameter of the water supply outlet, but never less than 1.0 inch) and specifies the distance to extend from the overflow rim of the receptacle. Eliminating these requirements from the TCEQ definition could allow an inadequate air gap to be installed at a public water system. An inadequate air gap could lead to back-siphonage of a contaminant into the potable water supply.

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<sup>1</sup> Texas Health and Safety Code, §341.0315(a).

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Public water systems can have extensive facilities and serve thousands of homes. The supply and distribution piping system may have pipes that have large diameters. Back-siphonage can occur if there is a break in one or more of the water distribution lines. Air gaps of one inch on large diameter lines are not adequate to prevent contaminants from entering the distribution system. The vacuum will overcome the surface tension of the contaminant and create a siphon, drawing the contaminant into the potable water line.

The petition suggests that the ASME standard is suitable because it utilized an open process which included all interested parties. The commission adopted the current definition of “air gap” into §290.38 in 2000. The public had the opportunity to comment on the proposed definition as published in the *Texas Register* on April 21, 2000.<sup>2</sup> No public comments were received regarding the specific definition of “air gap” that was adopted by the commission.<sup>3</sup> Subsequently, the definition of “air gap” was incorporated into §290.38(2) effective September 13, 2000.<sup>4</sup>

The petitioner claims that the TCEQ’s definition for “air gap” in §290.38(2) does not use language that is based on a standard. In fact, the current TCEQ definition of “air gap” is consistent with drinking water industry standards for public water systems, including the American Water Works Association (AWWA) Manual *Backflow Prevention and Cross-Connection Control Recommended Practices*, the United States of Environmental Protection Agency (EPA) *Cross-Connection Control Manual*, and the University of Southern California’s *Manual of Cross-Connection Control*, 10th edition. Additionally, TCEQ’s definition is consistent with air gap requirements found in the 2012 International Plumbing Code and the 2009 Uniform Plumbing Code.

Texas Health and Safety Code (THSC), §341.031 provides that public drinking water must be free from deleterious matter and must comply with the standards established by the commission or the EPA. The commission is charged with the authority to adopt and enforce rules to implement the federal Safe Drinking Water Act.<sup>5</sup> Therefore, it is appropriate that TCEQ’s definition of “air gap” within its Chapter 290 regulations is consistent with the definition within the EPA *Cross-Connection Control Manual*.

Additionally, the ASME A112.1.3 standard is specific to “air gap fittings” for use with plumbing fixtures for industrial cleaning facilities and kitchen appliances. The standard is applicable to equipment with engineered air gaps while Chapter 290 provides design criteria for “physical air gaps” in different public drinking water facilities such as air gaps in ground storage tanks for systems purchasing treated water, piping systems removing filter backwash and chemical feed equipment.

Thus, the executive director finds AWWA’s definition of “air gap” to be the appropriate definition to utilize in the Public Drinking Water rules of Chapter 290.

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<sup>2</sup> April 21, 2000, issue of the *Texas Register* (25 TexReg 3421).

<sup>3</sup> September 8, 2000, issue of the *Texas Register* (25 TexReg 8894).

<sup>4</sup> *Id.*

<sup>5</sup> Texas Health and Safety Code, §341.031.

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**Applicable Law:**

- Texas Government Code, §2001.021, which establishes the procedures by which an interested person may petition a state agency for the adoption of a rule;
- 30 TAC §20.15, which provides such procedures specific to the commission;
- THSC, §341.031, which grants the TCEQ authority to adopt and enforce rules governing drinking water standards;
- Texas Water Code (TWC), §5.102, which establishes the commission's authority necessary to carry out its jurisdiction;
- TWC, §5.103, which sets forth the TCEQ's general rulemaking authority; and
- TWC, §5.105, which allows the TCEQ to establish and approve general policy by rule.

**Agency Contacts:**

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**Attachment:**

Petition

cc: Chief Clerk, 2 copies  
Executive Director's Office  
Erin Chancellor  
Stephen Tatum  
Jim Rizk  
Office of General Counsel  
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