

The Texas Natural Resource Conservation Commission (commission) adopts amendments to §§290.42, 290.44, 290.46, and 290.47 relating to the rules and regulations for public water supply systems.

Section 290.47 is adopted with changes to the proposed text as published in the September 13, 1996, issue of the *Texas Register* (21 TexReg 8805). Amendments to §§290.42, 290.44 and 290.46 are adopted without changes and will not be republished.

EXPLANATION OF ADOPTED RULE

The purpose of the adopted rules is to clarify when a boil water notice to customers is required and to specify other responses to a drop in pressure in water distribution lines required of public water suppliers. This has been accomplished by revisions to §290.46(s) and by the addition of an appendix that diagrams decisions and corrective action that a public water supply system must take in response to a drop in water distribution system pressure. The adopted rules also correct typographical errors.

TAKINGS IMPACT ASSESSMENT

The commission has prepared a Takings Impact Assessment for these rules pursuant to the Texas Government Code, §2007.043. The specific purpose of the rules is to protect the health, safety and welfare of the public. The rules will substantially advance this specific purpose by providing additional guidance as to what a public water supplier must do in response to a loss of pressure in all or part of the water distribution system. The promulgation and enforcement of these rules will not adversely affect private real property.

GENERAL COMMENTS

Written comments were provided by seven commenters. Written testimony in support of the proposed rules was provided by: ECO Resources, Inc., and The Independent Water and Sewer Companies of Texas. Written testimony which questioned certain sections, or requested clarification was provided by the City of Odessa, the Dallas Water Utilities, the Fort Worth Water Department, MTS Utilities Management, and the Texas Municipal League. The following paragraphs summarize the written comments received.

The City of Odessa suggested that the language of §290.46(s) should be clarified to state whether boiled water notices must be issued in cases of low distribution pressures that may result from causes other than maintenance, repair, or emergency incidents as noted in the flowchart, §290.47(h).

The commission disagrees with the comment. As stated in §290.46(s), special precautions, including a boil water notification, must be issued for cases of low distribution pressures (below 20 pounds per square inch (psi)), water outages, repeated unacceptable microbiological samples or failure to maintain adequate chlorine residuals. The commission intends that any one of those conditions will give rise to the requirement for taking the specified special precautions.

Regardless of the cause of low distribution pressure, the public water supplier must institute special precautions, under the adopted rule.

The Dallas Water Utilities and the Fort Worth Water Department suggested that the flow chart showing the public water supplier response to loss of water pressure, §290.47(h), should specify which AWWA standard is referenced.

The commission disagrees with the comment. The AWWA standard is referenced in §290.44(f), and the term “AWWA standards,” as used in the rules, is defined in §290.38 as the latest edition of the applicable standards as approved and published by the American Water Works Association, 666 W. Quincy Avenue, Denver, Colorado 80235. The standards are not further specified in the rules, because the AWWA is continually revising the standards, and in the process, renumbering the standards. The AWWA standards are sufficiently well organized, captioned, and indexed so that it is clear which standard covers disinfection of water mains.

The Fort Worth Water Department and the Texas Municipal League comment that under the AWWA standard, no disinfection is required when repairs are made to mains that remain full of pressurized water, and these commenters suggest that the rule follow AWWA standards in this respect.

The commission recognizes that the AWWA standards do not require disinfection of repaired mains where the main remained filled with pressurized water. The commission disagrees that the adopted rule does not make a similar allowance. As described in the flowchart, in the event that the pressure never drops below 20 psi during the incident, the public water supplier need only complete the repair and restore normal pressure. Under those circumstances, no disinfection is required.

The City of Fort Worth Water Department and the Texas Municipal League suggest that the flowchart state that the repaired main can be returned to service prior to completion of bacteriological testing. The Dallas Water Utilities and MTS Utilities Management interpreted the proposed rule as requiring a completed bacteriological sample analysis before the main is placed back into service.

The commission has always intended that a repaired main could be returned to service prior to completion of bacteriological testing. Accordingly, language has been inserted into the flowchart to clarify that the repaired main can be returned to service when bacteriological samples are first taken; the public water supplier need not wait until all bacteriological samples are negative.

The City of Fort Worth and the Texas Municipal League suggested requiring bacteriological testing after only some repairs, such as repairs on major lines, high risk repairs, or on a random basis, or only for new lines. These commenters suggest that the rule will increase the number of required bacteriological tests.

The commission disagrees. The rule does not require bacteriological testing for repairs where the pressure does not drop below 20 psi. Furthermore, the amended version of the rule has the same requirements for bacteriological testing after repairs as the prior version of this rule. The commission does not intend for the amended rule to increase the required number of bacteriological tests. The commission does intend to retain the requirement for bacteriological tests at the conclusion of all repairs, where the pressure dropped below 20 psi, in order to provide a record for determining the disinfection procedure's effectiveness.

The Dallas Water Utilities questioned whether all disinfection options allowed by the AWWA standard for water main disinfection were allowed under the rule.

The commission intends, as stated on the flow diagram, to allow all disinfection options specified in the AWWA Standard, including the tablet method, continuous-feed method, and slug method.

The Dallas Water Utilities questioned whether flushing was intended to be required on all repairs.

The commission intends, as indicated on the flow diagram, in accordance with the AWWA standard, to require flushing on all repairs because it is the “most practical means of removing contamination introduced during repairs.” The AWWA standard requires flushing to “be started as soon as the repairs are completed and shall be continued until discolored water is eliminated.”

MTS Utilities Management questioned whether the special precautions rule is intended to apply to individual customer service lines. They suggest that exclusion of customer lines from application of the rule is appropriate.

The commission agrees. In keeping with the definition of public water system contained in §290.38 (Definitions) only distribution facilities under control of the operator are intended to be included in the definition of public water system, and thus subject to the rules. The commission does not intend the special precautions section, §290.46(s), to apply to drops in pressures in individual customer service lines.

MTS Utilities Management questioned how the utility is to determine whether the distribution line is fully or partially dewatered. They suggested that when in doubt the utility should err on the side of safety and assume the line is dewatered.

The commission agrees. For the majority of water main repairs, whether the distribution line is fully or partially dewatered will be immediately apparent. In those situations where there is some doubt, the suggested response is appropriate.

MTS Utilities Management questioned what should be the procedure in distribution lines that did not have an entry point for disinfectant. They suggested that a special tap could be cut in the main.

The commission agrees. Under the rule as written, this is an acceptable approach to the problem. Where an acceptable disinfectant entry point is not available, the public water system may also wish to consider the slug method of disinfection.

MTS Utility Management questioned what should be done if no approved laboratories for bacteriological sample testing is open at the time of repair. They suggested that the public water system schedule as many repairs as possible during normal lab hours. For those repairs made after hours and on weekends, they suggest collecting the bacteriological samples at the earliest available opportunity within lab hours and holding times.

The commission agrees. Under the rule as written this is an acceptable approach where no approved laboratories for bacteriological sample testing are open at the time of repair.

STATUTORY AUTHORITY

The amended sections are adopted under Texas Water Code, §5.103, which provides the commission the authority to adopt and enforce rules necessary to carry out its powers and duties under the laws of this state. The sections are also adopted under the Texas Health and Safety Code, Chapter 341, Subchapter C, which governs sanitary standards for drinking water, protection of public water supplies, and bodies of water.

No other statute or codes are affected by the adopted amendments.

§290.42. Water Treatment.

(a) - (d) (No change.)

(e) Disinfection.

(1) - (3) (No change.)

(4) Disinfection equipment shall be selected and installed so that continuous and effective disinfection can be secured under all conditions.

(A) - (F) (No change.)

(G) The use of disinfectants other than chlorine will be considered on a case-by-case basis under the exception guidelines of §290.39(i) of this title (relating to General Provisions).

(5) - (11) (No change.)

(f) - (j) (No change.)

§290.44. Water Distribution.

(a) - (b) (No change.)

(c) Minimum water line sizes. These are minimum requirements for domestic flows only and do not consider fire flows. These requirements should be exceeded when the registered professional engineer deems it necessary. It should be noted that the required sizes are based strictly on the number of customers to be served and not on the distances between connections or differences in elevation or the type of pipe. No new water line under two inches in diameter will be allowed to be installed in a public water system distribution system. These minimum line sizes do not apply to individual customer service lines.

Maximum Number of Connections	Minimum Line Size (inches)
10	2
25	2.5
50	3
100	4
150	5
250	6
> 250	8 and larger

(d) - (i) (No change.)

§290.46. Minimum Acceptable Operating Practices for Public Drinking Water Systems.

(a) - (r) (No change.)

(s) Special Precautions. In the event of low distribution pressures (below 20 psi), water outages, repeated unacceptable microbiological samples or failure to maintain adequate chlorine residuals, special precautions must be instituted by the water system owner or responsible official. A flowchart has been provided to guide water system owners and operators in taking appropriate action in the above situations. This flowchart can be found in §290.47(h) of this title (relating to Appendices). If the flowchart indicates that a boil water notification is required, the system must notify its customers within 24 hours using the prescribed notification format as specified in §290.47 (e) of this title (relating to Appendices). A copy of this notice shall be provided to the executive director. Bilingual notification may be appropriate based upon local demographics. Boil water notices shall remain in effect until water distribution pressures in excess of 20 psi can consistently be maintained, a minimum of 0.2 mg/l free chlorine residual or 0.5 mg/l chloramine residual (measured as total chlorine) is present throughout the system and water samples collected for microbiological analysis are found negative for coliform organisms. Once the above conditions are met, the customers must be notified in a manner similar to the original notice. Other protective measures may be required at the discretion of the executive director.

(t) - (y) (No change.)

§290.47. Appendices.

(a) - (g) (No Change.)

(h) Appendix H. Special Precautions Flowchart.

This agency hereby certifies that the sections as adopted have been reviewed by legal counsel and found to be a valid exercise of the agency's legal authority.

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