

(q) Special precautions, protective measures, and boil water notices. Special precautions, protective measures, and boil water notices shall [must] be instituted by the public water system [owner or responsible official] in the event of low distribution pressures (below 20 pounds per square inch (psi)), water outages, microbiological samples found to contain *Escherichia coli* (*E. coli*) (or other approved fecal indicator) [coliform organisms], failure to maintain adequate disinfectant [chlorine] residuals, elevated finished water turbidity levels, or other conditions which indicate that the potability of the drinking water supply has been compromised. Special precautions, protective measures, and boil water notices are corrective or protective actions which shall be instituted by the public water system to comply with the requirements of this subsection.

(1) Boil water notices and rescind notices. A public water system shall issue a boil water notice to customers throughout the distribution system or in the affected area(s) of the distribution system as soon as possible, but in no case later than 24 hours after the public water system has met any of the criteria described in paragraphs (2) - (5) of this subsection. Boil water notices shall be issued to customers by using one or more of the Tier 1 delivery methods as described in §290.122(a)(2) of this title (relating to Public Notification) and using the applicable boil water notice language and format specified in Figure: 30 TAC §290.47(c)(1) and (2) of this title [Boil water notifications must be issued to the customers within 24 hours using the prescribed notification format as specified in §290.47(c) of this title]. A copy of this notice shall be provided to the executive director within 24 hours or no later than the next business day after issuance by the public water system and shall be accompanied with a signed Certificate of

Delivery. The boil water notice shall be multilingual where [Bilingual notification may be] appropriate based upon local demographics. Once the boil water notice [notification] is no longer in effect, the public water system shall notify customers throughout the distribution system or in the affected area(s) of the distribution system that the boil water notice has been rescinded using the language and format specified in Figure: 30 TAC §290.47(c)(3) of this title [must be notified in a manner similar to the original notice]. A public water system shall not rescind a boil water notice and/or notify customers that the boil water notice has been rescinded until the public water system has met all of the applicable requirements as described in paragraph (6) of this subsection.

(2) Boil water notices for low distribution pressures. The flowchart found in §290.47(e) of this title shall be used to determine if a boil water notice shall [notification must] be issued by the public water system to customers in the event of a loss of distribution system pressure. [If a boil water notice is issued under this section, it 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.]

(3) Boil water notices for *E. coli* (or other approved fecal indicator) maximum contaminant level (MCL) violations. A public water system shall issue a boil water notice

to customers for a violation of the MCL for *E. coli* (or other approved fecal indicator) as described in §290.109(b)(1) of this title.

(4) [(3)] Boil water notices for turbidity requirements. A public water system shall issue a boil water notice to customers [notification shall be issued] if the combined filter effluent turbidity of the finished water, produced by a treatment plant that is treating surface water or groundwater under the direct influence of surface water, is above the turbidity level requirements as described in §290.122(a)(1)(B) of this title, specifically: [surface water treatment plant exceeds 5.0 NTU. The boil water notice shall remain in effect until the water entering the distribution system has a turbidity level below 1.0 NTU, the distribution system has been thoroughly flushed, 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.]

(A) a combined filter effluent turbidity level above 5.0 NTU;

(B) a combined filter effluent turbidity level above 1.0 NTU at a treatment plant using membrane filters;

(C) a combined filter effluent turbidity level above 1.0 NTU at a plant using other than membrane filters at the discretion of the executive director after consultation with the public water system; or

(D) failure of a public water system with treatment other than membrane filters to consult with the executive director within 24 hours after a combined filter effluent reading of 1.0 NTU.

(5) [(4) Other] Actions which may be required by the executive director. Special precautions, protective measures, and boil water notices may be required at the discretion of the executive director and shall be instituted by the public water system, upon written notification to the public water system, and shall remain in effect until the public water system meets the requirements of subparagraph (C) of this paragraph and paragraph (6) of this subsection.

(A) At the discretion of the executive director, and upon notification, a public water system shall institute special precautions, protective measures, and boil water notices as described under this subsection. Circumstances warranting the exercise of such discretion may include:

(i) the public water system has failed to provide required compliance information to the executive director as described in §290.110(e) and §290.111(h) of this title and the failure results in the inability of the executive director to determine compliance as described in §290.110(f) and §290.111(i) of this title;

(ii) special precautions, protective measures, and/or boil water notices are necessary to comply with the requirements of this title to prevent or correct a potential or actual health hazard, as described in §290.38 of this title, to public water system customers; or

(iii) the public water system has failed to maintain adequate disinfectant residuals as described in subsection (d) of this section and as described in §290.110 of title.

(B) The executive director will provide written notification to the public water system in the event a public water system is required to institute special precautions, protective measures, or issue boil water notices to customers at the discretion of the executive director. Upon receipt of written notification by the executive director, the public water system shall implement special precautions, protective measures, or issue boil water notices to customers within 24 hours or within the time period specified by the executive director.

(C) At the discretion of the executive director, the public water system shall provide any required information to the executive director to document that the public water system has met the requirements for special precautions, protective measures, and boil water notices as required under this paragraph.

(6) Required actions prior to rescinding a boil water notice. A public water system shall notify customers throughout the distribution system or in the affected area(s) of the distribution system that a boil water notice has been rescinded after the public water system has met the requirements of this paragraph. The executive director may provide written notification to the public water system once the public water system has provided required compliance documentation to the executive director. A boil water notice issued under the requirements of this subsection shall remain in effect until the public water system has provided required compliance documentation to the executive director which establishes that the public water system has met the following requirements, as applicable:

(A) water distribution system pressures in excess of 20 psi are consistently being maintained throughout the distribution system in accordance with the flowchart found in §290.47(e) of this title;

(B) affected area(s) of the distribution system have been thoroughly flushed until a minimum of 0.2 mg/L free chlorine residual or 0.5 mg/L chloramine residual (measured as total chlorine) is present and is consistently being maintained in each finished water storage tank and throughout the distribution system as described in subsection (d) of this section;

(C) finished water entering the distribution system, produced by a treatment plant that is treating surface water or groundwater under the direct influence

of surface water, has a turbidity level that is consistently being maintained below 1.0 NTU;

(D) actions required by the executive director under paragraph (5) of this subsection have been met and the public water system is operating in accordance with §290.110(e) and (f) and §290.111(h) and (i) of this title as described in paragraph (5)(A)(i) of this subsection; and

(E) water samples for microbiological analysis, marked as "special" on the laboratory sample submission form, were collected from representative locations throughout the distribution system or in the affected area(s) of the distribution system within 24 hours or no later than the next business day once the public water system has met all other applicable requirements of this paragraph and the water samples collected for microbiological analysis are found negative for coliform organisms. The water samples described in this subparagraph shall be analyzed at laboratories in accordance with §290.119 of this title (relating to Analytical Procedures).

(F) A public water system shall notify customers throughout the distribution system or in the affected area(s) of the distribution system that a boil water notice has been rescinded within 24 hours or no later than the next business day, using the language and format specified in Figure: 30 TAC §290.47(c)(3) of this title, once the public water system has met the requirements of this paragraph. The public water system shall provide a copy of the "boil water notice rescinded" notice and a copy of the

associated microbiological laboratory analysis results, as required by subparagraph (E) of this paragraph, to the executive director within ten days after the public water system has issued the rescind notice to customers in accordance with §290.122(f) of this title.

(r) Minimum pressures. All public water systems shall be operated to provide a minimum pressure of 35 psi throughout the distribution system under normal operating conditions. The system shall also be operated to maintain a minimum pressure of 20 psi during emergencies such as fire fighting. As soon as safe and practicable following the occurrence of a natural disaster, a public water system that is an affected utility shall maintain a minimum of 35 psi throughout the distribution system during an extended power outage.

(s) Testing equipment. Accurate testing equipment or some other means of monitoring the effectiveness of any chemical treatment or pathogen inactivation or removal processes must be used by the system.

(1) Flow-measuring devices and rate-of-flow controllers that are required by §290.42(b) and (d) of this title (relating to Water Treatment) shall be calibrated at least once every 12 months. Well meters required by §290.41(c)(3)(N) of this title [(relating to Water Sources)] shall be calibrated at least once every three years.

(2) Laboratory equipment used for compliance testing shall be properly calibrated.