

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners **Date:** January 2, 2015

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

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

Docket No.: 2014-0615-RUL

Subject: Commission Approval for Proposed Rulemaking
Chapter 290, Public Drinking Water
HB 1600, §2.96, and SB 567, §§1, 4, 95, and 96; Federal Revisions; and
Staff-Initiated Rule Efficiencies
Rule Project No. 2013-046-290-OW

Background and reason(s) for the rulemaking: This rulemaking proposes to amend Chapter 290:

- for consistency with Texas Water Code (TWC), §12.013 and Chapter 13, as amended during the 83rd Legislature, 2013, by §2.96 of House Bill (HB) 1600 by Representative Byron Cook, and §§1, 4, 95, and 96 of Senate Bill (SB) 567 by Senators Kirk Watson and Robert Nichols, related to transfer of the utilities and rates program to the Public Utility Commission of Texas (PUC);
- to implement federal changes to the lead and *Escherichia Coli* (*E. coli*) thresholds; and
- to provide clarification on and streamlining of existing rules, including:
 - desalination;
 - chloramination;
 - plan review submittal process;
 - enforceability of exceptions; and
 - other drinking water matters.

Scope of the rulemaking:

A.) Summary of what the rulemaking will do:

State statutes – HB 1600 and SB 567 amended TWC, §12.013 and Chapter 13, transferring the utilities and rates program from the TCEQ to the PUC, effective September 1, 2014. This rulemaking proposes to remove a requirement in existing §290.39(j)(3) as the TCEQ no longer has jurisdiction over Certificates of Public Convenience and Necessity (CCNs). The majority of the rule changes to implement HB 1600 and SB 567 will occur under Rule Project No. 2013-057-291-OW.

Federal regulations

Reduction of Lead in Drinking Water Act – The federal requirement for lead content of pipes, pipe fittings, and plumbing fittings and fixtures was reduced from 8.0% to 0.25%, effective January 4, 2014, as announced in 2011 to allow time for manufactures to change their products. TCEQ's public drinking water rules only apply to public water systems (PWSs). PWSs will now need to procure plumbing fixtures that comply with the allowable

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lead level, but because the federal act applies to all manufacturers, there should only be products that meet the criteria on the market.

E. coli Threshold – The federal Long Term 2 Enhanced Surface Water Treatment Rule (LT2) required PWSs with surface water, or groundwater under the influence of surface water, sources to monitor for *Cryptosporidium*. The United States Environmental Protection Agency (EPA) gave states the discretion to allow small PWSs — those with a population less than 10,000 — to monitor for *E. coli* instead. The TCEQ adopted the alternate monitoring process and established an *E. coli* trigger level of 50 *E. coli*/100 milliliters or 10 *E. coli*/100 milliliters based on the water source. Subsequent federal guidance established an *E. coli* trigger level of 100 *E. coli*/100 milliliters, no matter the water's source. By raising the TCEQ's *E. coli* trigger level, fewer small PWSs have monitored for *Cryptosporidium* because the higher level is more commonly achieved.

Additional staff recommendations – The staff-initiated changes to Chapter 290 are necessary to formalize existing procedures into the rules, while also clarifying requirements and streamlining existing agency practices. The items that will formalize existing procedures include: adding the requirements of existing well design standards to the rule, and changing the tank design requirements to clarify tank types. To clarify the rules, the TCEQ is proposing to add additional criteria to help PWSs find all of the criteria within a rule while also incorporating the necessary elements into the design, instead of trying to add the criteria at a later date. To ensure consistency in the pipe encasement design, the TCEQ's water and wastewater requirements for water distribution pipe crossings will be expanded to include other subsections of the rule. The rest of the staff-initiated changes propose streamlining existing practices on: the process for submitting plans; TCEQ's ability to cite a violation for failure to comply with a condition of a granted exception; allowing the use of chloramines without an exception; allowing the use of desalination technology without obtaining an exception; and adding additional options for overflow pipe outlets without needing an exception.

B.) Scope required by federal regulations or state statutes:

State statutes – This rulemaking proposes to implement HB 1600 and SB 567 by removing a requirement in existing §290.39(j)(3) as the TCEQ no longer has jurisdiction over CCNs.

Federal regulations

Reduction of Lead in Drinking Water Act – This rulemaking proposes to amend §§290.41, 290.44, 290.46, and 290.47 for consistency with the federal reduction in the lead content of pipes, pipe fittings, and plumbing fittings and fixtures from 8.0% to 0.25%.

E. coli Threshold – The TCEQ has been applying the revised *E. coli* trigger level since it was released by the EPA in 2010. This rulemaking proposes to amend §290.111 to be consistent with federal guidance and continue providing additional monitoring cost savings to small PWSs.

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C.) Additional staff recommendations that are not required by federal rule or state statute:

Process for Approving Desalination Technology – This rulemaking proposes to amend §§290.38, 290.39, 290.42, 290.45, and 290.46 to allow the use of desalination technologies for chemical removal without an exception request, which is required when approving the use of innovative/alternate treatment technologies. The use of reverse osmosis membranes and other desalination technologies for water treatment has been in use for decades. Over 15,000 desalination plants were in use worldwide in 2002. Following extensive input from the regulated community and interested stakeholders, this rulemaking proposes to establish design, operation, maintenance, monitoring, and reporting standards.

Chloramine Disinfection Criteria – The existing rule only allows the use of disinfectants other than chlorine within PWS distribution systems under the exception guidelines of §290.39. As the use of chloramines has become a common practice among PWSs, this rulemaking proposes to amend §§290.39, 290.41 – 290.43, 290.46, 290.47, 290.110, 290.111, and 290.116 to allow the use of chloramines without requiring an exception review by including the design, operation, maintenance, monitoring, and documentation criteria within the rules to simplify the process for the TCEQ and PWSs. In the proposal, the executive director's staff is seeking public comment on the placement of sample taps in relation to chloramine chemical injection.

Modification of the Plan Review Submittal Process – Existing §290.39 instructs PWSs to first notify the TCEQ of significant changes and then submit plans and specifications upon the TCEQ's request. This rulemaking proposes to amend §290.39 by: requiring PWSs to submit plans and specifications for significant changes to reduce confusion in the regulated community and to reduce staffs' processing time currently spent issuing requests for the submission of plans and specifications, and simplifying the criteria for a change to be considered significant.

Enforceability of Exceptions – Under existing §290.39(l)(2), if a PWS does not meet the requirements of a granted exception, the exception can be revoked through a time-consuming, cumbersome process. To streamline this process and ensure that PWSs follow the conditions established in the granted exception, this rulemaking proposes to clarify that failing to follow the conditions of a granted exception is a violation.

Clarification for Well Construction Review Process – This rulemaking proposes to amend §290.41 to incorporate language from an existing standard into the rule and to provide specific cementing requirements for PWS wells to consolidate the requirements into one location, thus making them more accessible to the PWSs.

Alternative Appurtenances for Overflow Devices – The existing rule requires a "gravity-hinged and weighted cover" at the end of the overflow pipe on water storage tanks. Other designs have also proven to be effective at preventing backflow and the entrance of

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contaminants; however, a PWS must apply for a case-by-case exception to use the other devices. This rulemaking proposes to amend §290.43 to streamline the process for PWSs proposing to use other devices and reduce staffs' time currently spent reviewing these exception requests.

Water Storage – This rulemaking proposes to amend §290.43 to remove the sentence referencing American Water Works Association (AWWA) Standard D103 in response to a rule petition which was denied during the May 8, 2013, agenda; during that agenda, staff was directed to consider amending the rule during a subsequent rulemaking.

Water Distribution Crossings – During a rule change in 1995, language applicable to waterlines crossing under wastewater lines was added into §290.44 which conflicted with the requirement for wastewater lines in 30 TAC §217.53. This rulemaking proposes to amend §290.44 for consistency with §217.53 to be protective of public health.

Statutory authority: TWC, §§5.102, 5.103, 5.105, 12.013 and Chapter 13; and Texas Health and Safety Code, Chapter 341.

Effect on the:

A.) Regulated community: The TCEQ regulates approximately 7,000 PWSs, including PWSs owned by units of local, state and federal government, as well as for profit businesses or individually owned PWSs. This rulemaking does not create a new group of affected persons.

State statutes — There will be no fiscal impact on the regulated community from the proposed amendment implementing the transfer of the CCN program to the PUC.

Federal regulations

Reduction of Lead in Drinking Water Act – PWSs with an existing stockpile of plumbing materials that do not meet the 0.25% lead level will not be able to install these materials. As the Reduction of Lead in Drinking Water Act was enacted in January 2011, PWSs were given advance notice of the federal change, allowing them the opportunity to use their stockpiled materials. Because of this advanced notice, any impact from this proposed rulemaking upon the regulated community is expected to be minimal.

E. coli Threshold – There is no impact anticipated upon the regulated community as the TCEQ has followed the federal guidance since its issuance.

Additional staff recommendations

Process for Approving Desalination Technology — Placing the desalination requirements in the rule may reduce expenses and construction time for PWSs.

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Chloramine Disinfection Criteria — By allowing the use of chloramines without an exception request, the regulated community can save their staffs' time and efforts currently spent on requesting the exception from the TCEQ.

Modification of the Plan Review Submittal Process — The proposed rule change will provide a more efficient submittal process for the regulated community and will clarify the definition of a "significant change," which has caused confusion in the past for the regulated community.

Enforceability of Exceptions — The proposed rule change will allow a PWS to provide the corrective action for a specific violation, instead of reapplying for a revoked exception.

Clarification for Well Construction Review Process — By placing the PWS well construction requirements in the rule, PWSs will have one location to find information about well design, thus making them more accessible to the PWSs.

Alternative Appurtenances for Overflow Devices — Allowing the use of alternative appurtenances would permit PWSs to use these designs without requesting an exception, which will reduce time and expenses for the PWSs that choose an alternative design.

Water Storage — PWSs will be allowed more flexibility when designing water storage tanks by allowing tanks of other materials approved by the AWWA. The proposed change will also reduce confusion in the regulated community by removing the reference to one specific standard, D103.

Water Distribution Crossings — This proposed rule will align the TCEQ's water and wastewater requirements for water distribution pipe crossings and provide PWSs with consistency in the TCEQ's applicable rules which will also help PWSs protect public health by ensuring that wastewater lines are not located over waterlines.

B.) Public:

State statutes — The proposed amendment will not impact the public.

Federal regulations — Any costs or cost avoidance experienced by the PWSs may be passed on to the public. The impact of this proposed rulemaking upon the public is anticipated to be minimal.

Additional staff recommendations — Any cost savings experienced by the PWSs are anticipated to be minimal and may be passed on to the public.

C.) Agency programs:

State statutes — No impact is anticipated from the proposed amendment.

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Federal regulations — There will be minimal impact to the TCEQ's programs. Staff might have to respond to questions from PWSs about the federal changes.

Additional staff recommendations — The staff-initiated rule efficiencies will save TCEQ staff resources by removing, clarifying, or streamlining TCEQ processes, while affording staff the opportunity to concentrate their efforts on other, more complex innovative treatment reviews. The Occupational Licensing Section will begin reviewing reverse osmosis and nanofiltration membrane specific training courses and events. Those meeting current requirements for training credit will be approved.

Stakeholder meetings: On May 9 and June 3, 2014, the TCEQ met with interested stakeholders, including representatives of PWSs, government agencies, design engineers, membrane vendors, and other interested participants, to solicit input on a proposed rule change for approving desalination technology without obtaining an exception as required under existing §290.42(g) in addition to other proposed rule revisions. With the exception of treatment for pathogen control and the treatment of seawater (both of which have unique challenges), the stakeholder process developed a path for PWSs and their design engineers to use rule-based criteria to demonstrate that the desalination process would be effective, reliable and safe. With that goal in mind during the stakeholder meetings, TCEQ staff presented a discussion outline that included plant design, engineering report, capacity requirements, operator licensing, operating records and reports, and instrument calibration.

Among the stakeholders, there was a consensus that the modeling tools of the membrane vendor were sufficiently developed to allow these models as a basis for configuring a nanofiltration or reverse osmosis system. The TCEQ has an existing process for allowing these modeling tools for the design of brackish groundwater systems, but not for the treatment of any primary contaminants. In an effort to allow the most flexibility to a design engineer, many stakeholders were resistant to design rules that prescribed defined trigger limits for maintenance/cleaning activities and for when (and how frequently) performance monitoring data was collected (such as conductivity). The general consensus was to allow the design engineer to present the engineering arguments supporting these decisions in an engineering report and then to validate some or most of those decisions within a second report once the plant is placed into service.

Once consensus for the engineering submittal process was achieved, the stakeholders' discussion then focused on addressing the general criteria for plant operations, operator licensing, and capacity. As a result of the stakeholder meetings, TCEQ staff received sufficient feedback supporting the development of the proposed rule for desalination to meet the majority of the regulated community's concerns while remaining protective of public health.

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Potential controversial concerns and legislative interest: During the 83rd Legislative Session, 2013, there were many desalination bills filed. The legislature, interested stakeholders, and the regulated community continue to express interest in using desalination to treat water and produce a new drinking water source without undertaking an exception process.

Will this rulemaking affect any current policies or require development of new policies? This proposed rulemaking merely formalizes existing policies into Chapter 290; no additional policies are planned for development.

What are the consequences if this rulemaking does not go forward? Are there alternatives to rulemaking?

State statutes – Without approval, Chapter 290 will be inconsistent with existing state statutes. If not adopted within this rulemaking, the removal of a requirement in existing §290.39(j)(3) related to CCNs could be addressed in Rule Project No. 2013-057-291-OW.

Federal regulations – The TCEQ could implement both federal changes, lead content and LT2 sampling, directly from the federal law or guidance. If TCEQ implements from federal law or guidance, TCEQ would need to assure that field investigators know to enforce the federal requirements, not the state requirements, for these two items.

Additional staff recommendations – Instead of proposing design, operation, maintenance, and recordkeeping rules, the TCEQ could continue requiring the submission of exception requests which can be supported by computer models instead of physical studies for desalination that meets primary drinking water standards.

Key points in the proposal rulemaking schedule:

Anticipated proposal date: January 21, 2015

Anticipated *Texas Register* publication date: February 6, 2015

Anticipated public hearing date (if any): February 26, 2015

Anticipated public comment period: February 6, 2015 – March 10, 2015

Anticipated adoption date: June 17, 2015

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Attachments

HB 1600, §2.96

SB 567, §§1, 4, 95, and 96

Federal Regulations for Lead and *E. coli*

EPA's *Summary of the Reduction of Lead in Drinking Water Act*, located at:

<http://water.epa.gov/drink/info/lead/upload/epa815s13003.pdf>

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