

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners **Date:** September 2, 2016

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

From: L'Oreal Stepney, Deputy Director
Office of Water

Docket No.: 2015-1532-RUL

Subject: Commission Approval for Proposed Rulemaking
Chapter 290, Public Drinking Water
Revised Total Coliform Rule Plus (RTCR Plus)
Rule Project No. 2015-035-290-OW

Background and reason(s) for the rulemaking:

Under 40 Code of Federal Regulations (CFR) §142.10, the Texas Commission on Environmental Quality (TCEQ) must adopt rules at least as stringent as the federal rules to maintain primacy over the Public Water System Supervision Program in Texas. The federal Revised Total Coliform Rule (RTCR) was promulgated by the United States Environmental Protection Agency (EPA) on February 13, 2013. The RTCR increases public health protection through the reduction of potential pathways of entry for fecal contamination into the distribution system of public water systems (PWSs). This rulemaking proposes to amend existing state rules in 30 Texas Administrative Code Chapter 290 for consistency with the RTCR, align current state rules with federal regulations and to clarify and streamline additional existing state rules.

Scope of the rulemaking:

The proposed amendments will revise Chapter 290, §§290.38, 290.42, 290.46, 290.47, 290.102 - 290.104, 290.106 - 290.119, 290.121, 290.122, 290.272, and 290.275, to provide rule language that is consistent with the RTCR, including the EPA's primacy revision crosswalk (Crosswalk). The EPA's Crosswalk details the rule requirements of the RTCR and provides a tool to compare the federal and proposed state regulations. The proposed amendments provide consistency with other federal provisions and address the EPA's comments on the federal Ground Water Rule (GWR), and provide clarification for existing state rules.

A.) Summary of what the rulemaking will do:

This rulemaking proposes to amend Chapter 290 for consistency with the RTCR and address the EPA's comments on the GWR.

Additionally, this rulemaking proposes to align current state rules to provide consistency and updates for other federal provisions including:

- Lead and Copper Rule (LCR);
- Total Organic Carbon (TOC) Rule;
- Public Notice (PN) Rule requirements;
- disinfection and analytical requirements for chlorine dioxide and chlorite; and
- other federal monitoring and reporting requirements concerning TOC and submission of laboratory analyses and reports to the executive director.

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This rulemaking also proposes to amend Chapter 290 to provide clarification and streamline existing state rules including:

- disinfection treatment and monitoring requirements for PWSs that utilize a groundwater source;
- PWS ownership reporting requirements;
- boil water notice (BWN) reporting and requirements for special precautions, protective measures, BWNs, and special investigation requirements for elevated turbidity levels and for failure to provide compliance data;
- nitrite monitoring requirements;
- disinfection operating reports;
- continuous turbidity monitoring and reporting requirements; and
- well recordkeeping requirements.

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

RTCR

TCEQ is proposing amendments to Chapter 290 to provide rule language that is consistent with the RTCR, including the EPA's Crosswalk. The EPA's Crosswalk details the federal rule requirements of the RTCR and provides a tool to compare the federal and proposed state regulations.

The following provisions are being proposed to be consistent with the RTCR.

- Add definitions in accordance with 40 CFR §141.2.
- Specify requirements concerning the maximum contaminant level (MCL) for *Escherichia coli* (*E. coli*) and identify the best technology, treatment techniques, or other means available for achieving compliance with the MCL for *E. coli* in accordance with 40 CFR §141.63.
- Update monitoring, reporting, and recordkeeping requirements concerning the *E. coli* MCL and treatment technique violations, approved seasonal system start-up procedures, microbial sampling, and assessments in accordance with 40 CFR §141.405(b)(4) and §141.861(b).
- Establish that the executive director cannot grant variances and exemptions from the MCL for *E. coli* and treatment technique requirements in accordance with 40 CFR §141.4.
- Specify the coliform sampling requirements and clarify the MCL goals (*E. coli*) for microbiological contaminants in accordance with 40 CFR §141.52 and §141.853.
- Update the PN requirements to include the form, manner, and frequency of notice in accordance with 40 CFR Part 141, Subpart Q.
- Establish and clarify that all PWSs will be required to measure residual disinfectant concentrations within their distribution system in accordance with existing residual disinfectant monitoring requirements in addition to measuring residual disinfectant concentrations at the same time and place that their monthly total coliform samples are collected in accordance with 40 CFR §141.74(c)(3)(i) and §141.132.
- Establish treatment technique violations, associated corrective actions, compliance determinations, and that PWSs are required to ensure that Level 1 and 2 assessments are conducted to identify the possible presence of sanitary defects

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and defects in distribution system coliform monitoring practices in accordance with 40 CFR §141.859.

- Clarify and include the updated federal analytical methods which specify that PWSs are required to conduct total coliform and *E. coli* analyses in accordance with the analytical methods or alternative methods in accordance with 40 CFR §141.21 and §141.852.
- Specify that PWSs are required to include repeat in addition to routine microbial monitoring locations in a Sample Siting Plan which shall be included with the PWS's overall monitoring plan. Require PWSs to identify a monthly microbial monitoring schedule and all groundwater sources in the Sample Siting Plan and if these sources are planned for use as repeat microbial monitoring locations in accordance with 40 CFR §141.853.
- Revise the Consumer Confidence Report (CCR) requirements and update the appendices to include new definitions, violations, health effects language, *E. coli* analytical data, and assessment criteria in accordance with 40 CFR Part 141, Subpart O.

GWR

The EPA conducted a primacy review of the TCEQ's adopted GWR revisions, and on March 10, 2014, the EPA provided comments outlining additional revisions needed. TCEQ is proposing to revise Chapter 290 to be consistent with the GWR in response to these comments.

The following provisions are being proposed to be consistent with the GWR.

- Add and update definitions in accordance with 40 CFR §§141.2, 141.400, and 141.402.
- Include the phrase "or other fecal indicator" when referring to *E. coli* to address virus removal required for 4-log treatment in accordance with 40 CFR §141.402 and §141.403.
- Establish and clarify the raw source sampling requirements in the event of an *E. coli* detection at the groundwater source which allows the executive director to either require PWSs to collect an additional five source samples in the event of an *E. coli* detection at the source or to conduct corrective action activities to address the *E. coli* detection in accordance with 40 CFR §141.402 and §141.403.
- Establish that the executive director may approve alternative raw sampling locations at a groundwater source if the sampling location is representative of the water quality of that well source in accordance with 40 CFR §141.402.
- Establish the PN requirements associated with assessment source monitoring for microbial contaminants in accordance with 40 CFR §141.402.
- Clarify the GWR applicability for PWSs in accordance with 40 CFR §141.400.
- Establish and clarify the required corrective actions in the event of an *E. coli*-positive source sample or the identification of a significant deficiency; clarify additional corrective actions required by the executive director; clarify that corrective action is required for triggered source monitoring and deficiencies, but not for assessment source monitoring or portions of a distribution system which is served by a surface water source; clarify corrective action applicability and PN

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requirements concerning corrective action to address contamination at groundwater sources when significant deficiencies are identified; clarify and address the utilization of membrane filtration for virus removal; clarify that the discontinuation of 4-log treatment must be made by written request to the executive director; and clarify the notification process in the event a significant deficiency is identified in accordance with 40 CFR §141.403.

C.) Updates to state regulations to be consistent with federal regulations:

LCR

- Establish and clarify the sampling frequency requirements for water quality parameters (WQPs); and clarify that PWSs are required to collect two tap samples for applicable WQPs during each monitoring period from each required number of monitoring sites in accordance with 40 CFR §141.87.
- The proposed rulemaking clarifies the requirements for public education materials and corrects a typographical error in §290.117(i)(4)(B)(i) - (iii) concerning reduced nine-year tap sampling requirements to provide consistency with 40 CFR §141.85.
- The proposed rulemaking establishes the sampling frequency for WQPs in §290.117(e) to provide consistency with 40 CFR §141.87.
- The proposed rulemaking will include additional WQPs parameters in §290.117(e) which are based on EPA's March 2016 *Optimal Corrosion Control Treatment Evaluation Technical Recommendations for Primacy Agencies and Public Water Systems* guidance document.
- The proposed rulemaking establishes and provides clarification for PWSs with pre-existing state-approved waivers establishing that the waivers are no longer valid to provide consistency with 40 CFR §141.86 under the Lead and Copper Rule Minor Revisions (LCRMR). The amendment specify that the PWSs that were granted pre-existing waivers are eligible for the reduced nine-year tap water waiver if the system meets the criteria outlined in the LCRMR, and that PWSs are required to re-apply for the waiver every nine years.

TOC

- The proposed rulemaking clarifies how the TOC running annual average is calculated for quarterly drinking water compliance calculations to provide consistency with 40 CFR §141.135(c)(1)(i) - (v).

PN

- The proposed rulemaking clarifies and characterizes the three PN tiers which take into account the seriousness of the violation or situation and any potential adverse health effects that may be involved and provides the definition of each tier and specific PN requirements for each of the three tiers for which the violation or situation applies to provide consistency with 40 CFR §141.201 and §141.202.

Chlorine Dioxide and Chlorite Analytical Requirement

- The proposed rulemaking revises the current analytical requirements to add the EPA approved methods for the analysis of chlorine dioxide and chlorite to provide consistency with 40 CFR §141.131.

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Sample Analyses Reporting

- The proposed rulemaking revises and adds language in §§290.102, 290.106 - 290.109, and 290.113 - 290.115 to clarify the reporting requirements for PWSs concerning the submission of laboratory analyses and reports to the executive director to provide consistency with 40 CFR §141.31.

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

Disinfection

- The proposed rulemaking clarifies the association between Chapter 290, Subchapters D and F disinfection treatment and monitoring requirements for PWSs that use a groundwater source.

Change of Ownership

- The proposed rulemaking clarifies the reporting requirements for PWSs which require the new owner of a PWS to provide notification to the executive director when a change in ownership occurs. Additionally, the reference to Chapter 291 has been removed which relates to the notification requirements by utilities.

BWN

- The proposed rulemaking clarifies the BWN delivery requirements to cross-reference Chapter 290's Subchapters D and F methods regarding PNs. The proposed rulemaking also establishes requirements to rescind a BWN, revises mandatory BWN language, and adds mandatory language to rescind a BWN. The proposed rulemaking also establishes and specifies discretionary actions required by the executive director concerning special precautions, protective measures, and BWNs. The proposed rulemaking will establish requirements by the executive director concerning special precautions, protective measures, BWNs, and special investigations regarding elevated turbidity levels at surface water and groundwater under the influence of surface water treatment systems and for failure by a PWS to submit compliance data for these treatment systems to the executive director.

Nitrate/Nitrite Monitoring

- The proposed rulemaking corrects a typographical error in §290.106(c)(3) regarding the initial monitoring frequency for inorganic compounds except asbestos.

Nitrite Monitoring

- The proposed rulemaking clarifies the monitoring requirements for nitrite in accordance with the term "compliance cycle" as described in §290.103(3) and §290.106(c)(7)(A). In addition, the proposed rulemaking requires all PWSs to monitor for inorganic chemicals at the time designated by the executive director during each compliance period during each nine-year compliance cycle.

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Disinfection Level Quarterly Operating Report (DLQOR)

- The proposed rulemaking clarifies the PN requirements for PWSs that use groundwater or purchased water sources and that violate the treatment technique requirements for residual disinfectant levels. The proposed amendments clarify that PWSs that use groundwater sources are required to issue a PN for failing to maintain minimum residual disinfectant levels.

Continuous Turbidity Monitoring

- The proposed rulemaking clarifies the required span of data that the turbidity equipment is required to capture for continuous turbidity monitoring and clarifies that capping the turbidity equipment is a violation. The proposed rulemaking will establish conditions when the executive director requires PWSs to conduct special precautions, protective measures, BWNs, and special investigations regarding elevated turbidity levels at surface water and groundwater under the influence of surface water treatment systems and for failure by a PWS to submit compliance data to the executive director for these treatment systems.

Well Recordkeeping

- The proposed rulemaking will amend §290.46(n)(3) to clarify the record keeping requirements for PWSs concerning well completion data as required by §290.41(c)(3)(A).

Statutory authority:

These amendments proposed under the Texas Water Code (TWC), §5.102, which establishes the commission's general authority necessary to carry out its jurisdiction; TWC, §5.103, which establishes the commission's general authority to adopt rules; TWC, §5.105, which establishes the commission's authority to set policy by rule; and Texas Health and Safety Code (THSC), §341.031, which allows the commission to adopt rules to implement the federal Safe Drinking Water Act, 42 United States Code, §§300f to 300j-26; and THSC, §341.0315, which requires PWSs to comply with commission rules adopted to ensure the supply of safe drinking water.

Effect on the:

A.) Regulated community:

RTCR and GWR

- The proposed rulemaking to implement federal requirements will affect all PWSs in Texas but does not create a group of affected persons who were not affected previously. The costs to perform these requirements are difficult to estimate and would vary due to the difference and variability in size, type, and configuration of each PWS.

LCR

- The proposed rulemaking will affect all community and nontransient noncommunity PWSs in Texas but does not create a group of affected persons who were not affected previously. This rulemaking will require PWSs to collect two tap samples for applicable WQPs during each monitoring period from each required

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number of monitoring sites based on population. These requirements are not expected to result in a significant fiscal impact for the agency or PWSs. Additionally, the proposed rulemaking will require PWSs to sample for WQPs more frequently and will require PWSs to sample for additional WQPs which are based on EPA's March 2016 *Optimal Corrosion Control Treatment Evaluation Technical Recommendations for Primacy Agencies and Public Water Systems* guidance document to assist PWSs in further assessing the corrosivity of the water within their distribution system. These requirements are not expected to result in a significant fiscal impact for the agency but are expected to result in a moderate fiscal impact for PWSs.

BWN

- The proposed rulemaking to implement additional staff recommendations will affect all PWSs in Texas but does not create a group of affected persons who were not affected previously. This rulemaking may require PWSs to issue BWNs to customers at the discretion of the executive director in addition to pre-existing requirements. PWSs will also be required to provide boil water rescind notices to customers. These requirements are not expected to result in a significant fiscal impact for the agency or PWSs.

B.) Public:

RTCR

- The impact of the proposed rulemaking upon the public is anticipated to be minimal. The proposed rulemaking may provide a decrease in the number of certain types of PNs issued to customers due to PWSs having more flexibility in PN delivery methods. These cost savings may be offset by potential cost increases if PWSs are required to conduct infrastructure improvements based on assessments and associated corrective actions required under the RTCR. The additional federal requirements are not anticipated to significantly increase overall costs to the public.

PN

- The impact of the proposed rulemaking upon the public is anticipated to be minimal. The proposed rulemaking would provide an improved mechanism for PWSs to delivery compliance information to customers and would allow community PWSs to include certain Tier 3 PNs in the PWSs annual CCR. The proposed rulemaking may provide a potential cost savings to the public and is not anticipated to significantly increase overall costs to the public.

LCR

- The impact of the proposed rulemaking upon the public is anticipated to be minimal. The proposed rulemaking will require PWSs to collect additional tap samples for applicable WQPs and would provide PWSs improved data to assist them in further assessing the corrosivity of their water within their distribution system. The additional federal requirements are not anticipated to significantly

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increase overall costs to the public. The proposed rulemaking will require PWSs to sample for WQPs more frequently and will require PWSs to sample for additional WQPs which are based on EPA's March 2016 *Optimal Corrosion Control Treatment Evaluation Technical Recommendations for Primacy Agencies and Public Water Systems* guidance document to assist them in further assessing the corrosivity of the water within their distribution system. The additional state requirements are not anticipated to significantly increase overall costs to the public.

BWN

- The impact of the proposed rulemaking upon the public is anticipated to be minimal. The proposed rulemaking would provide clear and consistent notification to the public when PWSs are under a BWN. The proposed rulemaking is not anticipated to significantly increase overall costs to the public.

DLQOR

- The impact of the proposed rulemaking upon the public is anticipated to be minimal. The proposed rulemaking would allow the public to be more informed about the quality of their drinking water. The proposed rulemaking is not anticipated to significantly increase overall costs to the public.

C.) Agency programs:

RTCR

- The impact of the proposed rulemaking would require the Office of Water (OW) to revise the text of its public education materials as well as its correspondence provided to PWSs that commit violations or are subject to compliance requirements associated with the RTCR. The OW would be required to modify and enhance its compliance programs to implement the RTCR provisions. The Office of Compliance and Enforcement (OCE) would be affected by the requirement for inspections, data entry, and correspondence to the regulated community. The OCE will conduct enhanced investigations of community distribution systems on a discretionary basis with a target of once every five years in addition to the currently required Comprehensive Compliance Investigations conducted at PWSs once every three years. An enhanced evaluation of the distribution system would include, but not be limited to, a review of the RTCR, nitrification, and lead/copper monitoring plans, as well as a review of the sample analysis and sampling locations, monthly operating reports, and other supporting compliance documents. Investigations will be conducted based on findings of previous investigations, compliance with distribution requirements, sampling results, complaints, and regional staff knowledge. It is anticipated that OCE's Enforcement Division will receive information requests about the proposed amendments as well as a minimal increase in enforcement caseloads. As referenced in the RTCR Plus rule project fiscal note, at this time the agency does not have sufficient staff resources to implement the proposed rules. The agency may request additional funding in the next legislative session or reallocate resources to fund the proposed changes. Fourteen full-time equivalent employees will be required.

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GWR

- The impact of the proposed rulemaking would affect OCE due to EPA's additional emphasis on the identification of significant deficiencies in PWSs distribution system. This impact is anticipated to be minimal, but would require additional compliance monitoring activities by OCE regarding corrective action schedules and would result in a minimal increase in OCE's enforcement caseloads. The impact of the proposed rulemaking would require the OW to conduct additional compliance monitoring activities associated with the GWR raw source sampling requirements; however, any impact is anticipated to be minimal.

LCR

- The impact of the proposed rulemaking would require the OW to conduct additional compliance monitoring activities associated with the LCR WQPs sampling requirements; however, any impact is anticipated to be minimal. The proposed rulemaking would require the OW to conduct additional compliance monitoring activities associated with the LCR WQPs sampling requirements; however, any impact is anticipated to be minimal.

DLQOR

- The impact of the proposed rulemaking would require the OW to conduct additional compliance monitoring activities associated with PNs; however, any impact is anticipated to be minimal.

Stakeholder meetings:

The OW has provided training and outreach efforts for stakeholders concerning the RTCR requirements at 14 events including the 2014 and 2015 Public Drinking Water Conference, 2015 and 2016 RTCR PWS Training Workshops, and the 2013 - 2016 Drinking Water Advisory Work Group meetings. The OW in partnership with the Texas Section American Water Works Association, Texas Rural Water Association, Texas Water Utilities Association, and Red River Authority of Texas has provided RTCR training and outreach efforts to stakeholders during 2015 - 2016 sponsored events. The OW also provided RTCR training and outreach efforts to stakeholders during the 2016 TCEQ Environmental Trade Fair and Conference. In addition, the OW is scheduled to provide future RTCR training and outreach efforts to stakeholders during the RTCR rulemaking and implementation process.

As a result of these training events, the OW has received generally positive feedback from stakeholders concerning the RTCR and other federal and state provisions. The OW has gained valuable insight and recommendations concerning methods and processes to streamline and provide consistency with the implementation of the RTCR and other federal and state provisions. The OW has developed program documents to assist PWSs in obtaining compliance with the RTCR requirements and has made revisions to these documents based on stakeholder input and recommendations.

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Potential controversial concerns and legislative interest:

RTCR

- The RTCR adds corrective action and treatment technique requirements for PWSs, requiring PWSs or a third party approved by the executive director to conduct assessments in response to coliform monitoring triggers. These assessments are anticipated to involve additional costs as well as time commitments by PWSs. The reasonableness of RTCR's required state-approved startup procedure for PWSs that operate on a seasonal basis could be controversial regarding what is considered reasonable; however, the proposed revisions meet the federal primacy requirements.
- The executive director does not intend to include the RTCR's option for allowing PWSs serving 1,000 or fewer people to conduct reduced coliform monitoring on a quarterly or annual basis. This determination is based on the statutory provision under the THSC, §341.033(d) which requires PWSs that furnish drinking water to less than 25,000 persons to submit to the commission, during each monthly period of the PWSs operation, at least one specimen of water taken from the PWS for bacteriological analysis. This requirement will continue to be implemented in Texas and PWSs serving 1,000 or fewer people may want to seek a reduced microbial sampling schedule.

BWN

- The proposed rulemaking may require PWSs to issue BWNs to customers at the discretion of the executive director in addition to pre-existing requirements. PWSs will be required to provide boil water rescind notices to customers.

Special Precautions, Protective Measures, and BWNs

- The proposed rulemaking will allow the executive director to initiate a special investigation after a PWS fails to submit surface water treatment or groundwater under the influence of surface water treatment compliance data to the commission and will require the PWS to issue a BWN to customers under these specific conditions.

Will this rulemaking affect any current policies or require development of new policies?

The impact of the proposed rulemaking will require the OW to modify and enhance compliance programs and policies to implement the RTCR provisions and staff recommendations. The OCE will be required to revise their inspection procedures, data entry, correspondence, and enforcement policies to implement the RTCR provisions and staff recommendations.

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

The EPA could directly implement the RTCR and GWR provisions. This option will prevent the agency from obtaining primary enforcement authority for these rules which could also impact federal funding for administering the state drinking water program.

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Key points in the proposal rulemaking schedule:

Anticipated proposal date: September 21, 2016
Anticipated *Texas Register* publication date: October 7, 2016
Anticipated public hearing date: November 1, 2016
Anticipated public comment period: October 7 - November 7, 2016
Anticipated adoption date: March 8, 2017

Agency contacts:

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Attachments

Federal Register, EPA 40 CFR Parts 141 and 142 - Volume 78 No. 30, National Primary Drinking Water Regulations: Revisions to the Total Coliform Rule (pages 10270 - 10365)

Federal Register, EPA 40 CFR Parts 141 and 142 - Volume 79 No. 38, National Primary Drinking Water Regulations: Minor Corrections to the Revisions to the Total Coliform Rule (pages 10665 - 10670)

Federal Register, EPA 40 CFR Parts 141 and 142 - Volume 79 No. 38, National Primary Drinking Water Regulations: Minor Corrections to the Revisions to the Total Coliform Rule (pages 10752 - 10754)

cc: Chief Clerk, 2 copies
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