

Texas Commission on Environmental Quality

Interoffice Memorandum

To: Commissioners

Date: May 31, 2016

Thru:  Richard A. Hyde, P.E., Executive Director

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

From: Linda Brookins, Division Director 
Water Supply

Subject: Rulemaking Draft Concept and Initiation Memo
Public Drinking Water, Chapter 290

Suggested short title: Revised Total Coliform Rule Plus (RTCR Plus)

Introduction and reasons for the rulemaking: This rulemaking proposes to amend Chapter 290: for consistency with the federal Revised Total Coliform Rule (RTCR); to address the United States Environmental Protection Agency's (EPA) comments on the federal Ground Water Rule (GWR); and other federal provisions, including:

- Lead and Copper Rule;
- Total Organic Carbon Rule;
- public notice requirements;
- disinfection and analytical requirements; and
- other federal monitoring and reporting requirements.

In addition, this rulemaking proposes to amend Chapter 290 to provide clarification and streamline existing State rules including:

- State monitoring and ownership reporting requirements;
- boil water notice reporting and requirements for special precautions, protective measures, boil water notifications, and special investigation requirements for elevated turbidity levels and for failure to provide compliance data;
- disinfection operating reports; and
- well recordkeeping requirements.

Scope of the proposed rule:

A. Scope required by federal regulations or State statutes:
State statutes: None.

Federal regulations:

RTCR — Under Title 40, Code of Federal Regulations (40 CFR) §142.10, the 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 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). Greater public health protection is anticipated under the RTCR as it requires PWSs that are vulnerable to microbial contamination to identify and address problems. The TCEQ is proposing revisions to Chapter 290 to provide rule language that is consistent with the federal RTCR, including the EPA's primacy revision crosswalk (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 RTCR's implementation date for PWSs is April 1, 2016. Due to an open section conflict with an ongoing rulemaking, the Office of Water requested an extension from the EPA on this rule's implementation and was approved by EPA on March 4, 2015. States with an approved extension must submit complete and final program revision packages to the EPA by February 13, 2017.

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

The scope of the proposed **federal revisions** includes changes to the following:

§290.38 and §290.103

RTCR — Add new definitions as required by the EPA's Crosswalk of 40 CFR §141.2.

GWR — Add and update definitions needing clarification for consistency with the federal GWR.

§§290.41 - 290.46

RTCR — Update for consistency with 40 CFR §141.63(e) while identifying the best technology, treatment techniques or other means available for achieving compliance with the maximum contaminant level (MCL) for total coliforms.

GWR — The existing rules reference *Cryptosporidium* and *Giardia* removal but do not reference virus removal, which is required for 4-log treatment under the GWR. To address the EPA's request and remain consistent with federal regulations, the phrase "or other fecal indicators" is proposed to be included when referring to *Escherichia coli* (*E. coli*).

§290.46

RTCR — Add or update operating records and reporting timeframes as required by 40 CFR §141.405(b)(4) and §141.861(b).

§§290.46, 290.102, 290.106 - 290.109, and 290.113 - 290.115
Operating Records and Reports — Amend language in §290.46(f) to provide consistency with 40 CFR §141.31 (Subpart D). The language will clarify reporting requirements for laboratory analyses and reports.

Sample Analyses Reporting — Add language in § 290.102 and amend language in §§290.106 - 290.109 and, §§290.113 - 290.115 to provide consistency with 40 CFR §141.31 (Subpart D). The language will clarify reporting requirements for laboratory analyses and reports.

§290.102

RTCR — Update variances and exemptions as described in 40 CFR §141.4.

§§290.104, 290.109, 290.122, 290.272, and 290.275

RTCR — Add language to include provisions required in 40 CFR Part 141 (Subpart Y) explaining the coliform sampling requirements for the RTCR. Add language to clarify the MCL goals (*E. coli*) for microbiological contaminants.

GWR — Add raw source sampling requirements in the event of an *E. coli* detection at the source. Under the federal GWR, States can require PWSs to collect an additional five source samples in the event of an *E. coli* detection at the source; alternatively, States can immediately require corrective action. The executive director's staff had elected to immediately require corrective action instead of requiring additional source sampling. The EPA has requested TCEQ clarify this policy in its rules. To address this and remain consistent with federal regulations, the phrase "or other fecal indicators" is proposed to be included when referring to *E. coli*. Additionally, language will be proposed to allow for alternative raw sampling locations when a raw well sampling tap is not accessible for monitoring. Existing §290.41(c)(3)(M) requires PWSs to have a raw sampling tap at each well. The EPA requested TCEQ add language referencing alternative sampling locations to be consistent with the federal rule. Potential alternative sampling site requests by PWSs will be reviewed on a case-by-case basis. The TCEQ also proposes adding language referencing the public notification (PN) requirements associated with assessment source monitoring. Section 290.109(g) refers to PN for microbial contaminants; however, the EPA requested a reference to the assessment source monitoring citation in §290.109(c)(4)(E).

§§290.106 - 290.118, 290.121 and 290.122

RTCR — Update the PN requirements based on 40 CFR Part 141 (Subpart Q) to include the form, manner, and frequency of notice.

PN Requirements — The proposed changes will characterize the tiers of PN requirements in accordance with 40 CFR §141.201. PN requirements are divided into three tiers, to take into account the seriousness of the violation or situation and of any potential adverse health effects that may be involved. Proposed revisions to Chapter 290 rules will provide the definition of each tier and specific public notice requirements for each of the three tiers to which the violation or situation applies.

§290.110

RTCR — Add language including the provisions required in 40 CFR §141.74(b)(6)(i) and (c)(3)(i), and §141.132(c)(1)(i) explaining the disinfectant residual monitoring requirements. The added language will specify that all PWSs will be required to measure residual disinfectant concentrations within their distribution system at specific intervals in addition to measuring residual disinfectant concentrations at the same time and place that their monthly total coliform samples are collected.

§290.112

Total Organic Carbon Rule — Add language to specify how the running annual average is calculated for consistency with 40 CFR §141.135(c)(1)(i) - (v) for quarterly drinking water compliance calculation.

§290.116

RTCR — Update the applicability statement in response to RTCR changes. Add language including treatment technique requirements and compliance determinations in accordance with 40 CFR §141.859. The language will require PWSs to ensure that Level 1 and 2 Assessments are conducted to identify the possible presence of sanitary defects and defects in distribution system coliform monitoring practices.

GWR — Clarify the applicability statement in response to EPA comments. Clarify required corrective actions in the event of an *E. coli*-positive source sample or the identification of a significant deficiency. TCEQ requested and was granted approval from the EPA to include two additional corrective actions under §290.116; however, the EPA has since requested the TCEQ include rule language explaining that the requirement of one of these additional approved corrective actions is in addition to one of the original GWR corrective actions. The proposed changes will also clarify that corrective action is required for triggered source monitoring and deficiencies, but not for assessment source monitoring. Additionally, the proposed changes will clarify that corrective action is not required in the surface water portion of the distribution system. The proposed changes will combine corrective action applicability language for clarification and add language that PWSs must notify the public annually until significant deficiencies are corrected or contamination is addressed. The proposed changes will also add language to: 1) address the utilization of membrane filtration for virus removal; 2) explain that the discontinuation of 4-log treatment must be made

by written request; and 3) explain the notification process in the event of a significant deficiency.

§290.117

Lead and Copper — Add language to §290.117 for consistency with 40 CFR §141.85 and correct a typographical error in §290.117(k)(2)(B)(ii) and (iii). Add language to §290.117(e) to establish the sampling frequency for water quality parameters (WQP) to provide consistency with 40 CFR §141.87. Add language to §290.117(e) to include additional WQPs parameters which are based on the March 2016 EPA *Optimal Corrosion Control Treatment Evaluation Technical Recommendations for Primacy Agencies and Public Water Systems* guidance document. Add language to §290.117 for consistency with 40 CFR §141.86. Under the Lead and Copper Rule Minor Revisions (LCRMR), the EPA established a reduced nine-year tap water waiver that allows small systems to collect both lead and copper tap samples at a frequency of once every nine years at a reduced number of sites. This is a new provision under the LCRMR and supersedes pre-existing waivers that were granted for lead and copper tap monitoring. The added language will provide clarification that systems with State-approved waivers that were granted are no longer valid in accordance with the federal provision. The systems that were granted the pre-existing waivers will be eligible for the reduced nine-year tap water waiver if the system meets the federal criteria outlined in the LCRMR and will be required to re-apply for the waiver every nine years.

§290.119

RTCR — Revise the reference in the existing 290 rule to include required federal analytical methods referenced in 40 CFR §141.21(f) and 40 CFR §141.852. The added language will specify that PWSs conduct total coliform and *E. coli* analyses in accordance with the analytical methods or alternative methods listed in 40 CFR §141.852.

§290.121

RTCR — Include additional sampling locations in a PWS's monitoring plan as required in 40 CFR §141.853 to identify repeat sample sites and source water sites.

§290.272 and §290.275

RTCR — Revise the Consumer Confidence Report requirements based on 40 CFR Part 141 (Subpart O) and update the appendices to include new definitions, assessment criteria, and transitioning requirements as outlined in 40 CFR Part 141 (Subpart O).

§§290.42, 290.110, 290.111 and 290.114

Chlorine Dioxide and Chlorite Analytical Requirement — Revise the current analytical requirement to add the EPA approved methods.

B. Additional staff recommendations:

§290.42 and §290.110

Disinfection Requirements — The proposed changes will clarify the association between Subchapter D and Subchapter F disinfection treatment and monitoring requirements for PWSs that utilize a groundwater source.

§290.46

Change of Ownership Requirements — Add language to clarify §290.46(p)(1) that a new owner of a PWS provide notification when a change in ownership occurs. Additionally, the reference to Chapter 291 relating to the requirements for notification by utilities will be removed.

§§290.46, 290.47 and 290.122

Boil Water Notice (BWN) Requirements — The proposed changes will amend the BWN delivery requirements to cross-reference Chapter 290's Subchapter D and F methods regarding PN as there are no delivery requirements currently within Subchapter D. The proposed rulemaking will establish BWN delivery and rescind requirements and revise mandatory BWN language in Subchapter D. The proposed rulemaking will establish requirements by the executive director concerning special precautions, protective measures, boil water notifications, 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 public water system to submit compliance data for these treatment systems to the State.

§290.106

Nitrate/Nitrite Monitoring — The proposed change will correct a typographical error in §290.106(c) regarding the initial monitoring frequency for inorganic compounds (IOC) except asbestos. The existing rule states that a customer must comply with MCLs for antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide, fluoride, nitrate, ***nitrate***, nitrate and nitrite (total), mercury, selenium, and thallium. The proposed change will instead state that a customer must comply with MCLs for antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide, fluoride, nitrate, ***nitrite***, nitrate and nitrite (total), mercury, selenium, and thallium.

§290.103 and §290.106

Nitrite Monitoring — The proposed changes will clarify monitoring requirements for nitrite in accordance with the term "compliance cycle" as described in §290.103(3) and §290.106(c)(7).

§290.110

Disinfection Level Quarterly Operating Report (DLQOR) — Amend language in §290.110 (g)(3)(B) and §290.122(b) to specify the PN requirements for groundwater and purchased water systems that violate the treatment technique regulations. The proposed changes will clarify that groundwater

systems are required to issue a PN for failing to maintain minimum residual disinfectant levels.

§290.111

Continuous Turbidity Monitoring — The proposed rulemaking will clarify the required span of the turbidity equipment to be captured for continuous turbidity monitoring and clarify that capping the turbidity equipment is a violation. The proposed rulemaking will establish requirements by the executive director concerning special precautions, protective measures, boil water notifications, 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 public water system to submit compliance data for these treatment systems to the State.

§290.46

Well Recordkeeping — The proposed rulemaking will amend §290.46(n)(3) to clarify the record keeping requirements for public water systems concerning well completion data as required by §290.41(c)(3)(A).

Potential controversial concerns and legislative interest:

Federal regulations:

RTCR — The RTCR adds corrective action and treatment technique requirements for PWSs, requiring PWSs conduct assessments (either by the TCEQ, the PWS, or a third party) in response to coliform monitoring triggers. These assessments may involve additional costs as well as time commitments by PWSs, which tend to be controversial. 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 will meet the federal primacy requirements.

The TCEQ does not intend to include RTCR's optional alternative methods for repeat sample collection to prevent confusion regarding the repeat sampling requirements. The TCEQ will continue to require repeat samples to be collected in accordance with existing regulations which require they be collected proximate to the original total coliform positive sample. This will prevent undue confusion of repeat sampling requirements which is more protective of public health because repeats sample collection sites will be directly associated to the total coliform positive site. The TCEQ also does not intend to include RTCR's optional decreased monitoring eligibility because that option is not as protective of public health as the requirement to monitor on a monthly basis. These options are controversial as PWS may want to implement the reduced monitoring and conduct repeat sampling at alternative sites.

Additional staff recommendations:

BWN Requirements — PWSs will be required to use one of several BWN delivery methods.

Nitrate/Nitrite Monitoring — The proposed change will correct a typographical error in §290.106(c)(3) to clarify that the analytes are covered under the inorganic rule.

Special Precautions, Protective Measures, and Boil Water Notifications — The proposed change will allow the executive director to initiate a special investigation after a public water system fails to submit surface water treatment or groundwater under the influence of surface water treatment compliance data to the State and will require the public water system to issue a boil water notice to customers.

Potential alternatives:

The EPA could directly implement the federal RTCR and GWR rules. This alternative would require that TCEQ provide additional training for staff to adequately implement the federal requirements.

Effect on the:

A) Regulated community:

Federal regulations:

RTCR — PWSs will be minimally affected by this rulemaking. The Office of Water's Water Supply Division (WSD) will provide guidance using a combination of existing rule language and the federal rules. Although the proposed RTCR rule changes may be significant, the additional federal requirements are not anticipated to significantly increase overall costs to the regulated community.

GWR — The GWR provides the TCEQ the option to allowing PWSs to collect five additional source samples instead of conducting a corrective action when the PWS collects an *E. coli* or other fecal indicator positive at the source when there is a distribution positive sample result. The proposed change may provide a cost savings to PWSs if the additional five samples are negative for *E. coli* or other fecal indicators. The additional five samples would be an added sampling cost for PWSs; however, PWSs can weigh the additional sampling costs against the cost of conducting corrective actions to determine the best solution for a PWSs unique situation, thus allowing for more local control.

PN Requirements — The proposed changes will align Chapter 290 with the federal rules and allow PWSs to meet compliance through the use of alternative notification methods, which may result in a significant cost savings for the PWSs.

LCR — The proposed changes will require a PWS to conduct lead and copper sampling on a three-year reduced monitoring schedule. Based on analyses results, a PWS may apply for a nine-year monitoring waiver and reapply at the end of every nine years. The proposed changes will require PWSs to sample for WQPs more frequently and will require PWSs to sample for additional WQPs which are based on the March 2016 EPA *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.

Additional staff recommendations:

BWN Requirements — The proposed rule change will offer more flexibility for PWSs to deliver BWNs.

DLQOR — The proposed changes will affect PWSs through an increase in the PN requirements, allowing for a more open and transparent policy when informing the public of the quality of the PWSs drinking water.

B) Public:

Federal regulations:

RTCR — The impact of the proposed changes upon the public is anticipated to be minimal. There may be a decrease in the number of PNs sent due to PWSs no longer having a total coliform MCL; however, this savings will be offset by potential cost increases if PWSs are required to conduct infrastructure improvements based on the assessment.

PN Requirements — The proposed changes will provide an improved mechanism for delivery of compliance information to PWS customers and would allow PWSs to include Tier III PNs in the system's annual Consumer Confidence Report. Tier III PNs are issued for violations that do not have a direct impact on human health.

Additional staff recommendations:

BWN Requirements — The proposed rule change will provide clear and consistent notification to PWS customers when they are under a BWN.

DLQOR — The proposed rule change will allow the public to be more informed about the quality of their drinking water.

C) Agency programs:

Federal regulations:

RTCR — The WSD would change the text of its public education materials as well as its correspondence provided to systems that commit violations or that have situations associated with the RTCR. The Office of Compliance & Enforcement's (OCE's) Program Support Section will not be affected by the requirement for inspections, data entry, and correspondence to the regulated community. It is anticipated that OCE's Enforcement Division will receive information requests about the proposed changes as well as a minimal increase in enforcement caseloads.

GWR — It is anticipated that the EPA's preferred additional emphasis on the identification of significant deficiencies in the distribution system will have an impact on OCE. This impact is: anticipated to be minimal; will require additional tracking by

OCE regarding corrective action schedules; and will result in a minimal increase in OCE's enforcement caseloads. There will be additional tracking by the WSD associated with allowing PWSs to collect five additional raw samples after an *E. coli*-positive source sample; however, any impact is anticipated to be minimal.

Additional staff recommendations:

DLQOR — The proposed changes will require additional tracking of PNs by the WSD; however, this workload impact is anticipated to be minimal.

Proposed schedule and constraints:

Due to open section conflicts with Rule Project No. 2015-020-290-OW, the earliest this rulemaking could be scheduled for its proposal agenda is January 2016. The following schedule does not reflect the impact of any rulemaking required to address legislation passed during the 84th Texas Legislature, 2015.

Anticipated Proposal Date: September 21, 2016
Anticipated Public Comment Period: October 7, 2016 – November 7, 2016
Anticipated Adoption Date: March 1, 2017

Planned stakeholder involvement:

The WSD has provided training and outreach efforts for stakeholders concerning the provisions of the RTCR federal requirements at fourteen events during the 2014 and 2015 Public Drinking Water Conference, 2015 and 2016 RTCR Public Water System Training Workshops, and the 2013 - 2016 Drinking Water Advisory Work Group meetings. In addition, the WSD 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 WSD has provided RTCR training and outreach efforts to stakeholders during the 2016 TCEQ Environmental Trade Fair and Conference. In addition, the WSD is planning 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 WSD has received valuable insight and recommendations from stakeholders concerning methods and processes to streamline and provide consistency with the implementation of the federal RTCR and other federal and state provisions. The WSD has developed programmatic documents to assist PWSs in obtaining compliance with the federal RTCR requirements and has made revisions to these documents based on stakeholder input and recommendations.

Statutory authority:

Texas Health and Safety Code, Chapter 341.

Direction and Guidance: *[To be completed at ED briefing.]*

Rule or Non-Rule Project number: 2015-035-290-OW

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attachments:

Federal Register, February 13, 2013, Vol. 78, No. 30, Pgs. 10270 - 10365 (RTCR Final Rule)
Federal Register, February 26, 2014, Vol. 79, No. 38 Pgs. 10665 - 10670 (Minor Corrections to the Revisions to the Total Coliform Rule)

NOTE: TR will submit electronic notice to the following after ED Briefing:

Marshall Coover
Stephen Tatum
Office of General Counsel