

Revised Total Coliform Rule (RTCR) Non-Community Water Systems

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Outline



- Major Changes from TCR to RTCR
- NCWS Rule Structure
- Transitioning from TCR to RTCR Monitoring
- NCWS Monitoring Structure
- Seasonal Systems
- L1 and L2 Assessments/Triggers
- Integration of GWR, RTCR and Current State Practices
- RTCR Violations
- RTCR Training/Guidance

Major TCR→RTCR Changes (All Systems)



TCR	RTCR
<ul style="list-style-type: none">• Maximum Contaminant Level (MCL) for Total Coliform (TC) including E. coli and fecal coliform; <u>No</u> assessment or corrective action required• Acute violation based on E. coli <u>and</u> fecal coliform• Routine monitoring required based on system size and type• PN required for monthly TC and acute E. coli violations	<ul style="list-style-type: none">• Treatment Technique based on TC and E. coli Monitoring and MCL for E. coli; Assessment and corrective action required based on monitoring results• Acute violation based on E. coli <u>only</u>• Routine monitoring required based on system size and type<ul style="list-style-type: none">• Reduction in repeats, no additional routine monitoring for systems on monthly monitoring [verify]• PN required for failure to conduct assessments/implement correct actions; and for acute (E. coli) violations

NCWS Rule Structure



- NCWSs transition into RTCR on current schedules and monitoring frequencies
 - States review/confirm or change monitoring frequency during future site visit/sanitary survey
- Subsequent monitoring frequencies depend on 'clean compliance history'
- Seasonal systems must comply with State-designated start-up procedures and monitor during most vulnerable time period
- Flexibility for States on Assessments
 - L1 assessments via phone or email.
 - State or PWS can complete assessment form.

Transition Monitoring



- Maintains the routine (baseline) sampling structure of TCR
- Allows systems to transition from TCR to RTCR on their existing TCR monitoring frequency
 - Systems on annual or quarterly monitoring remain on annual or quarterly monitoring
 - After transition, systems must meet additional criteria to remain on annual or quarterly monitoring
- The monitoring frequency must be re-evaluated during sanitary surveys

Seasonal Systems



- Definition of a seasonal system is based on depressurization or dewatering (as opposed to number of quarters/days system in operation)
- Requires seasonal systems to have State-designated start-up procedures
- Systems must sample during high vulnerability periods

L1 Assessments



Triggers:

- For a system collecting at least 40 samples per month, more than 5.0% of samples collected are TC(+)
- For a system collecting fewer than 40 samples per month, more than one sample is TC(+)
- The PWS fails to take every required repeat sample after any single routine total coliform-positive sample
- **Assessment:**
 - Conducted by the PWS
 - A basic examination of the source water, treatment, distribution system and relevant operational practices

L2 Assessments



- Triggers:
 - Violation of the RTCR MCL for *E. coli*
 1. The system has an *E. coli* (+) repeat sample following a TC (+) routine sample
 2. The system has a TC (+) repeat sample following an *E. coli* (+) routine sample
 3. The system fails to take all required repeat samples following an *E. coli* (+) routine sample
 4. The system fails to test for *E. coli* when any repeat sample tests (+) for TC
 - Two Level 1 triggers in a 12 month period
 - For NCWS (GW) serving $\leq 1,000$ on annual monitoring, a Level 1 trigger in each of 2 consecutive years

L2 Assessments



- Conducted by the State or a party approved by the State (could be the PWS if qualified and approved by the State)
- A more in-depth examination of the system and its monitoring and operational practices

L1 & L2 Assessment Elements



- Atypical events that may affect distributed water quality or indicate that distributed water quality was impaired
- Changes in distribution system maintenance and operation that may affect distributed water quality, including water storage
- Source and treatment considerations that bear on distributed water quality
- Existing water quality monitoring data
- Inadequacies in sample sites, sampling protocol, and sample processing

Corrective Actions



The PWS must correct all sanitary defects found during the assessment

- Sanitary defects and corrective actions must be described in the assessment form the PWS must submit to the State within 30 days of the assessment trigger
- A timetable for any corrective actions not already completed must also be in the form. The State will determine a schedule after consulting with the PWS
- The form may also indicate that no sanitary defects were found
- The State determines if the assessment is sufficient



- RTCR/GWR Dual Sampling
 - Retains allowances for dual use samples to satisfy RTCR/GWR monitoring requirements
- Current State Practices
 - Acknowledges Current State Practices and Partnerships for Conducting follow-up for TC+ Results
- Flexibility for States to Tailor Assessments & Corrective Actions (RTCR/GWR)

Violations, PN, CCR



Comparison of TCR and RTCR Rule Provisions

TCR (current)	RTCR
<ul style="list-style-type: none">• Violation of EC/FC MCL – acute violation, Tier 1 PN• PWS must notify State re: single EC/FC (+) result.• Violation of monthly TC MCL – Tier 2 PN• M&R violation – Tier 3 PN	<ul style="list-style-type: none">• Violation of EC MCL – Tier 1 PN<ul style="list-style-type: none">▪ Failure to take repeat samples following an EC (+) routine sample is also an MCL violation▪ PWS must notify State re: single EC (+) result• Monthly TC MCL violation is dropped – triggers Assessment and Corrective Action (A/CA) instead<ul style="list-style-type: none">• A TT violation occurs when a PWS fails to conduct required A or CA – Tier 2 PN• M&R violations will be tracked separately – Tier 3 PN• PN/CCR Language - TC health effects language changed to reflect failure to conduct A or CA

Annual Monitoring No Disinfection



- Annual RTCR TC sample
- Annual site visits or voluntary L2 assessment
- Seasonal start-up procedures
- L1/L2 assessments & corrective action
- Triggered quarterly RTCR monitoring
- Triggered monthly RTCR monitoring
- GWR monitoring (triggered/additional)
- Repeat/additional routine RTCR monitoring
- 12 month clean compliance history and one additional State-specified measure to return to annual monitoring

Annual Monitoring Disinfection



- Annual RTCR TC sample
- Annual site visits or voluntary L2 assessment
- Seasonal start-up procedures
- L1/L2 assessments & corrective action
- Triggered quarterly RTCR monitoring
- Triggered monthly RTCR monitoring
- **GWR disinfection (compliance) monitoring**
- Repeat/additional routine RTCR monitoring
- 12 month clean compliance history and one additional State-specified measure to return to annual monitoring

Quarterly Monitoring No Disinfection



- Quarterly RTCR TC sample
- Repeat/additional routine/**replacement routine** RTCR samples
- Seasonal start-up procedures
- L1/L2 assessments & corrective action
- Triggered monthly RTCR monitoring
- GWR monitoring (triggered/additional)
- 12 month clean compliance history and one additional State-specified measure to return to annual monitoring



- Quarterly RTCR TC sample
- Repeat/additional routine/**replacement routine** RTCR samples
- Seasonal start-up procedures
- L1/L2 assessments & corrective action
- Triggered monthly RTCR monitoring
- **GWR disinfection (compliance) monitoring**
- 12 month clean compliance history and one additional State-specified measure to return to annual monitoring

Annual/Quarterly Monitoring



- **Repeats:** One full set of 3 repeats per TC+ routine sample.
- **Additional Routine Samples:** Systems on quarterly or annual monitoring with one or more TC+ samples must collect at least 3 routine samples during the next month unless waived by the State:
 - The State, or an agent approved by the State, performs a site visit before the end of the next month in which the system provides water to the public.
 - The State has determined why the sample was total coliform-positive and has established that the system has corrected the problem or will correct the problem before the end of the next month in which the system serves water to the public.



- **Replacement routine samples for systems on quarterly monitoring**
 - States have flexibility to not count monitoring violations towards eligibility for a TNCWS to remain on quarterly monitoring or to return to quarterly monitoring ***as long as the system collects the make-up sample by the end of the next monitoring period.***



- Monthly RTCR TC sample
- Seasonal start-up procedures
- Repeat Samples
- GWR monitoring (triggered/additional)
- L1/L2 assessments & corrective action



- Monthly RTCR TC sample
- Seasonal start-up procedures
- Repeat Samples
- **GWR disinfection (compliance) monitoring**
- L1/L2 assessments & corrective action

Training/Guidance - 2013



1. Webcast: RTCR overview
2. Assessments and Corrective Action Guide
3. “Draft” RTCR Small Systems Guidance (Systems $\leq 1,000$)
4. Guide/tool for Small System NCWS serving $\leq 1,000$
5. State Implementation Guide—Interim “**Draft**”
6. Quick Ref. Guide (QRG)
7. Placards
8. Laboratory QRG/Factsheet
9. Primacy guidance and templates

Training/Guidance – 2014/2015



- 1.State Implementation Guide--Interim **“Final”**
- 2.Sampling procedure guide
- 3.RTCR Articles
- 4.Factsheets
- 5.Sanitary Survey Guide