



INFORMATION FOR SEASONAL NON-COMMUNITY WATER SYSTEMS

Revised Total Coliform Rule – *Effective April 1, 2016*

The Public Water Supply Section (PWS Section) has adopted a new rule, Revised Total Coliform Rule (15A NCAC 18C .1539), that has elements in it that require your immediate attention. This new rule can be viewed on our website at: http://www.ncwater.org/files/rulesregs/Rules_Governing_Public_Water_Systems.pdf

Overview: The Revised Total Coliform Rule (RTCR) aims to protect public health by limiting the levels of microbial organisms in drinking water. The RTCR is a revision of the 1989 Total Coliform Rule, which systems must comply with until March 31, 2016. Starting April 1, 2016, all systems must comply with the requirements of the RTCR. Like the existing Total Coliform Rule, the RTCR requires systems to monitor for the presence of total coliforms and *E. coli* in drinking water. Total coliforms are a group of closely related bacteria that are natural and common inhabitants of soil and surface waters. Their presence in drinking water suggests that there has been a breach or failure in the water system (for example, a hole in the pipe); and pathogens, which are disease-carrying organisms, may have entered the drinking water. *E. coli*, on the other hand, is a type of bacteria that is a subset of total coliforms, most often fecal in origin (that is, from human or animal wastes). The presence of *E. coli*, therefore, can indicate that the water has been contaminated with fecal waste, which can contain pathogenic organisms. The RTCR takes a slightly more direct “find and fix” approach to bacteriological contamination and therefore, includes requirements for performing assessments and corrective action.

Key provisions of the RTCR include the following:

- Seasonal systems must perform a State-approved start-up procedure prior to serving water to the public.
- Total coliform maximum contaminant level (MCL) violations that require Tier 2 public notification are replaced with the requirement to conduct an assessment of your water system and perform corrective action.
- *E. coli* MCL violations still exist under the RTCR and still require Tier 1 (24-hour) public notice. In addition, an *E. coli* MCL violation will be issued if your system fails to collect all required repeat samples following an *E. coli*-positive routine sample. *E. coli* MCLs will also trigger the requirement to perform an assessment and corrective action.
- Increased routine monitoring (from quarterly to monthly) if triggered by specific events
- Reductions in the number of required repeat samples and additional temporary routine samples
- Triggers for conducting Level 1 and Level 2 Assessments
- Requirements and deadlines for completing Corrective Actions
- New violation types include treatment technique violations and reporting violations.

More detailed information on the RTCR’s requirements is provided below.

State-approved Start-up Procedure, §141.854(i)

Seasonal systems (those that do not serve water to the public all year, such as campgrounds or ski resorts) that do not remain fully pressurized in the offseason must complete a State-approved start-up procedure prior to serving water to the public.

Note: Our State-approved start-up procedures have recently been revised. The revised monitoring requirements now require that in addition to collecting all required total coliform and nitrate/nitrite compliance samples during the operating season, sample(s) must be collected and analyzed for total coliforms/disinfectant residual, and all results must be “absent” of total coliform bacteria prior to opening for the season and serving water to the public. The revised start-up checklist, certification and instructions are attached to this letter.

Sample Siting Plans, §141.853(a)(1)

You must review and update, as necessary, your written Sample Siting Plan that identifies sampling sites and a sample collection schedule that are representative of water throughout the distribution system. Routine, repeat, and ground water monitoring locations must be shown in the Sample Siting Plan. Seasonal systems on quarterly monitoring must also specify the time period for monitoring based

on site-specific considerations, such as highest demand or highest vulnerability to contamination. You must collect your compliance samples during this time period. Sample Siting Plans will be reviewed during sanitary surveys by the PWS Section's Regional Office representative. Sample Siting Plan Guidance and a template are available on our website.

Routine Monitoring

Initially, every water system will continue routine monitoring at the same frequency as before the RTCR's April 1, 2016 compliance date. For seasonal systems serving 1,000 persons or fewer, this will mean collecting one sample per quarter [§141.854(c)(1)]. Seasonal systems with populations greater than 1,000 must monitor monthly (while in operation) and collect the number of samples according to their population [§141.857(b)]. However, your routine monitoring schedules may change under the RTCR as outlined below.

Increased monitoring, §141.854(f)

It is very important to note that under the RTCR, if you are on a *quarterly* routine monitoring schedule, you will be required to begin monitoring *monthly* if your system is triggered to increased monitoring after any of the following events:

1. Your system triggers a Level 2 Assessment or two Level 1 Assessments in a 12-month period – see below for explanation of assessments;
2. Your system has an *E. coli* MCL violation;
3. Your system has a coliform treatment technique violation (including the failure to complete a State-approved start-up procedure); or
4. Your system has two monitoring violations or one monitoring violation and one Level 1 Assessment trigger in a rolling 12-month period.

Returning to quarterly monitoring, §141.854(g)

If your water system is placed on an (increased) *monthly* monitoring schedule, it may return to a *quarterly* monitoring schedule by meeting all of criteria below:

1. Within the last 12 months, the State has completed a sanitary survey or a site visit or your system has a voluntary Level 2 Assessment;
2. Be free of sanitary defects;
3. Have a protected water source; and
4. Have a clean compliance history for a minimum of 12 months.

Repeat Monitoring, §141.858

If a routine sample is positive for total coliform, the system must collect a set of three (3) repeat samples within 24 hours of being notified by your laboratory of the positive result(s). The repeat samples must be collected from the locations identified in the Sample Siting Plan. The State may extend the 24-hour limit if the system cannot collect the samples within 24 hours due to circumstances beyond its control. Contact the RTCR Rule Manager to request an extension.

Note: Failure to submit all required repeat samples within the State-approved deadline will trigger the requirement to perform an assessment.

Additional Routine Monitoring, §141.854(j)

Under the RTCR, a system on *quarterly* monitoring must collect three (3) additional (temporary) routine samples the month following a total coliform-positive routine sample (rather than the previously required 5 samples under the old TCR). This requirement is in addition to the requirement to collect repeat samples mentioned above. Additional (temporary) routine monitoring the following month is no longer required for systems that monitor *monthly*.

Note: A set of three repeat samples must be collected for every total coliform-positive additional (temporary) routine sample as described under Repeat Monitoring above.

Assessments, §141.859

An assessment is a new type of inspection required under the RTCR designed to determine why the water in your system was positive for coliform bacteria. A Level 1 Assessment is more general in scope, while a Level 2 Assessment is expected to be much more detailed. Assessments must be completed within 30 days of the trigger date.

A Level 1 Assessment is triggered by any one of the following:

- For systems taking ≥ 40 samples/month: Greater than 5% of samples are total coliform-positive; or
- For systems taking < 40 samples/month: Two or more total coliform-positive sample results; or
- Failure to take every required repeat sample after any single total coliform-positive sample within 24 hours (or within the extension approved by the State).

A Level 2 Assessment is triggered by any one of the following:

- *E. coli* MCL violation (includes failure to collect all required repeats following an *E. coli*-positive routine sample); or
- Second Level 1 trigger within rolling 12-month period (unless the State has determined the likely cause of the first Level 1 trigger and has established that the system has corrected the problem).

Assessment forms are available on our website. Contact your PWS Section's Regional Office representative for assistance in performing the assessments.

Corrective Actions, §141.859(c)

A system must correct any sanitary defects identified during assessments within 30 days or propose a timetable (subject to State approval) to complete corrective action on the form provided by the State.

Violations, §141.860 and Public Notification Tier Level

Four different types of violations exist under the RTCR:

- *E. coli* MCL violations (Tier 1 – within 24 hours);
- Treatment Technique Violations (Tier 2 – within 30 days);
- Monitoring Violations (Tier 3 – as soon as practical, but no longer than 12 months); and
- Reporting Violations (Tier 3 – as soon as practical, but no longer than 12 months).

New violation types to note are Treatment Technique Violations and Reporting Violations. Treatment Technique Violations include the failure to conduct the required assessment within 30 days of learning of the trigger, and the failure to correct all sanitary defects from the assessment within 30 days of learning of the trigger or in accordance with the schedule approved by the State. For Seasonal Systems, the failure to complete a State-approved start-up procedure prior to serving water to the public is also a Treatment Technique Violation. Reporting violations include the failure to submit your completed assessment form in a timely manner (after 30 days of learning of the trigger or later than the State-approved timeframe), and the failure to notify the State by the end of the day the analysis is completed of an *E. coli*-positive sample (results must be submitted electronically). For Seasonal Systems, the failure to submit a checklist and certification for performing a State-approved start-up procedure in a timely manner is also a reporting violation.