



Revised Total Coliform Rule(RTCR) Frequently Asked Questions

NJDEP, Division of Water Supply & Geoscience, Bureau of Safe Drinking Water

1. What is the Revised Total Coliform Rule (RTCR)? Who does it apply to?

The RTCR is a revision to the 1989 Total Coliform Rule, a federal rule which protects the safety of drinking water in the United States. The RTCR became effective April 1, 2016. It amends the Total Coliform Rule by establishing a maximum contaminant level (MCL) for *E. coli* bacteria, a type of coliform bacteria, and uses total coliform as an indicator of system operation and conditions. It requires all public water systems (PWSs) – community, nontransient noncommunity, transient noncommunity, and a new type of public water system called “seasonal noncommunity” – to monitor for total coliform, perform assessments to identify sanitary defects, and take corrective action (“find and fix approach”) to address contamination.

2. Why is the Total Coliform MCL eliminated in the RTCR?

While the presence of total coliform (TC) is a good indicator of a potential sanitary defect that could provide a pathway for contamination into the distribution system, most coliform bacteria are not harmful to humans and do not pose an immediate health threat. One type of coliform bacteria, *E. coli*, is a more accurate indicator of fecal contamination and is a more immediate threat.

3. How often do routine RTCR samples need to be collected?

- Public water systems serving $\leq 1,000$ people
 - Community Water System (CWS)—1 sample/month¹
 - Noncommunity Water System—1 sample/quarter
 - “Seasonal” Noncommunity Water System —1 sample/month
- Public water systems serving $> 1,000$ people
 - Monthly at regular intervals throughout the month. The number of samples required per month is based on the population served by the water system and ranges between 2 samples per month and 480 samples per month.
 - Public water systems using ground water only, serving $\leq 4,900$ people, can collect samples on a single day ***if taken from different sites.***

4. Where should RTCR samples be taken?

- Sampling locations
 - Samples must be representative of the water in the distribution system

¹ If a community water system serves less than 100 service connections, the water system is not required to disinfect, but 2 total coliform samples must be taken at biweekly intervals.

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- See **Developing a Sample Siting Plan** (Sample Siting Plan) guidance document for more detail on selecting sample locations. The guidance document can be found on our website: <http://www.nj.gov/dep/watersupply/dws-sampreg.html>.
- Routine, repeat, and ground water source monitoring locations must be identified in the RTCR Sample Siting Plan.
- The updated **Developing a Sample Siting Plan** guidance document and the noncommunity RTCR sample siting plan templates for noncommunity systems on quarterly monitoring and seasonal water systems are available on the website: <http://www.nj.gov/dep/watersupply/dws-sampreg.html>.

RTCR Sample Siting Plans were required to be updated by 3/31/2016. The RTCR Sample Siting Plans must be available for on-site review by the NJDEP. In addition, the NJDEP is currently calling in selected water system sample siting plans for in-house review.

5. What happens if a routine sample comes back TC positive (+)?

- Continue the analysis of the original sample(s) to determine the presence of *E. coli*
- Collect 3 repeat samples or a “set” for each TC+ routine sample, within 24 hours of being notified by the laboratory, from:
 - original site
 - within 5 connections upstream, unless otherwise specified in sample siting plan
 - within 5 connections downstream, unless otherwise specified in sample siting plan
- If the following occurs:
 - Routine TC+; repeat EC+
 - Routine EC+; repeat TC+
 - Routine EC+; system fails to take all repeat samples
 - Repeat TC+; sample not tested for *E. coli*

An *E. coli* MCL Violation is issued and a Level 2 Assessment (see #6 below) and Tier 1 public notice (PN) is required.

- If the system collects ≥ 40 samples and more than 5.0% of the samples are TC+, or if the system collects <40 samples per month and two or more samples are TC+, a Level 1 or Level 2 Assessment is triggered. See #6, #7, and #8 below on Level 1 and Level 2 Assessments.
- Systems with a single service connection may be allowed to collect the required set of repeat samples over a 3-day period if taken from the same tap OR collect a larger volume container of at least 300 ml.
- Collect additional routine samples
 - 3 routine samples the following month if a noncommunity water systems on quarterly monitoring.
 - Collected at regular time intervals throughout month or on a single day if taken from different sites

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- Can be waived, but under limited circumstances

6. What is a Level 1 Assessment? What is a Level 2 Assessment?

When the presence of TC is confirmed, the RTCR requires that a water system conduct a “Level 1 Assessment” to identify sanitary defects that could provide pathways for entry of microbial contamination into the distribution system.

A more comprehensive “Level 2 Assessment” must be performed if *E. coli* are present or if a water system triggers the requirement to conduct a second Level 1 Assessment within a consecutive 12-month period. The water system must also conduct public notification for the Level 2 Assessment. If an assessment is not conducted, the NJDEP issues a Treatment Technique (TT) violation. A TT violation is issued when compliance activities intended to reduce the level of a contaminant in the drinking water are not performed.

7. How is a Level 1 Assessment triggered?

A Level 1 Assessment is triggered when either of the following conditions occurs:

- If a system collects <40 TC samples per month, two or more of the TC samples are positive in the same sampling period (include the results of all routine and repeat samples)
- If a system collects ≥40 TC samples, TC+ samples exceed 5.0% of total TC samples during a month
- Not all required repeat samples are collected after a routine TC+ sample

8. How is a Level 2 Assessment triggered?

A Level 2 Assessment is triggered when any of the following conditions occurs:

- An *E. coli* MCL violation
- A second Level 1 Assessment is triggered within a 12-month period

9. When does the 24- hour time limit start for collecting RTCR repeat samples?

The 24-hour time limit for collecting repeat samples starts when the water system is notified by their laboratory of the TC+ sample result

10. Are there extensions for RTCR repeat sampling?

Only in extreme weather conditions where the safety of the sample collector is a concern. A system may submit a request to the NJDEP for an extension of the 24-hour limit for collection of repeats. The NJDEP will approve these requests on a case-by-case basis if, due to extreme weather conditions, it is determined the health and safety of the sample collector is at risk.

11. Can my TC sample be invalidated?

The State (only) may invalidate a sample if:

- Lab establishes that improper sample analysis caused the TC+

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- State determines from repeat sample results that the TC+ was caused by domestic or other non-distribution system plumbing problem
- State finds that the TC+ is a result of something that does not reflect the water quality in the distribution system.
- Replacement samples must be collected for all invalidated samples within 24 hours.

12. Can a water system reduce their RTCR monitoring requirements?

The NJDEP did not adopt the discretionary reduced monitoring allowed by the Federal RTCR regulations for public water systems. Therefore, the NJDEP is not reducing the sampling frequency for public community water systems serving 25 to 1,000 persons to less than once per month and is not reducing the sampling frequency for public noncommunity water systems using only groundwater sources(s) and serving 25 to 1,000 persons (whether transient or nontransient) to less than once per quarter. In addition, the NJDEP is not reducing the frequency of monitoring for seasonal public noncommunity water systems to less than monthly.

13. When must a public water system increase monitoring?

- In addition to the increased monitoring that must occur in response to a TC+, noncommunity water systems serving $\leq 1,000$ people must **increase** their monitoring from quarterly to monthly following any of these events:
 - Treatment Technique Violation (see #6 above)
 - Level 2 Assessment (See # 8 above for how a Level 2 Assessment is triggered)
 - 2 RTCR monitoring violations in a rolling 12-month period
 - 1 RTCR monitoring violation and one Level 1 Assessment in a rolling 12-month period

14. What is a “Seasonal” Water System?

Seasonal water systems are public noncommunity water systems classified as seasonal because they are not operated as a public water system on a year-round basis and start up and shut down in their entirety, or in part, at the beginning and end of each operating season. This includes systems that remain pressurized during an off season but serve less than 25 persons, or depressurize a portion of the system but continues to serve water to the public. Seasonal water systems must collect a start-up sample before serving water to the public.

15. What is the Seasonal Water System Start-up Procedure?

In NJ, the start-up procedure requires each seasonal water system to collect a TC start-up sample from an area of the distribution system that was depressurized, or other State-approved location as specified in the Sample Siting Plan. The start-up sample must be collected and analyzed for TC within 30 days prior to opening and the results are required to be submitted to the NJDEP, Bureau of Safe Drinking Water on a *Seasonal Water System Start-Up Sample Procedure Certification of Completion* form **prior to opening**. The start-up sample location(s) are taken from an area of the distribution system that was depressurized or other area, as identified in the seasonal water system’s sample siting plan.

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- A seasonal water system start-up sample can be used to satisfy both the seasonal start-up procedure and the routine monthly monitoring schedule requirement provided that the start-up sample is **collected prior to serving water to the public** and is **taken in the same month that the system opens**. Note: to receive credit for both requirements, the start-up sample result must be submitted on *the Seasonal Water System Start-Up Procedure Certification of Completion* form via paper, and the laboratory must submit the sample result electronically using the NJDEP's E2-Drinking Water Reporting system (E2). The laboratory must submit the sample with "SSUP" added to the end of the sample ID number.
- If the start-up sample is TC+, it must be analyzed for *E. coli*.
 - Note: If the start-up sample is TC+ and *E. coli negative* and it is also your monthly routine monitoring sample, follow the steps outlined in #5 above.
- If the start-up sample is *E. coli positive*, the seasonal water system will be required to collect and analyze 3 TC repeat samples from the distribution system and one *E. coli* sample from each groundwater source, as per the federal Ground Water Rule (GWR). Repeat sample and groundwater source sample locations are identified in the seasonal water system's Sample Siting Plan.
 - If any repeat sample is positive for TC or *E. coli* the water system must conduct a Level 2 Assessment and correct any sanitary defects(s) identified.
 - If any groundwater source sample is *E. coli* positive, 5 additional ground water source water samples are required, unless the system immediately identifies the cause of contamination and implements corrective action. The ground water source samples are required to be taken to comply with the GWR.
 - If any of the 5 additional groundwater source water samples noted above are *E. coli* positive, the water system must consult with the NJDEP and implement NJDEP-approved corrective actions.
- **If any sample collected prior to the operating season is *E. coli* positive, the water system is prohibited from serving water to the public from the source from which the *E. coli* positive sample was taken until the NJDEP, or other administrative authority, has determined that the system has complied with the sampling and corrective action requirements and notifies the system in writing.**
- A seasonal water system must monitor monthly for all months they are in operation

16. Seasonal Water System Violations

- TT violations
 - Failure to complete state-approved start-up procedures prior to serving water to the public
- Reporting violations
 - Failure to submit certification of completion of start-up procedures

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17. What is a Treatment Technique Violation?

A Treatment Technique (TT) violation is issued when a water system fails to act or respond as required by the RTCR. When a TT violation occurs, a system must provide Tier 2 public notification to its customers.

A TT violation occurs when one of the following occurs:

- A water system fails to conduct or fully complete a required Level 1 or Level 2 Assessment within 30 days.
- A system fails to correct any sanitary defect by taking required corrective action within the required timeframe.
- A seasonal water system fails to complete state-approved start-up procedures (see #5 and #6 above).

18. What is a Monitoring Violation?

- Failure to take routine Total Coliform sample(s)
- Failure to analyze for *E. coli* following a TC+ routine sample

19. What are the Reporting Requirements and Violations?

Important RTCR Reporting Dates:

Systems must report to the State:	
REQUIREMENT	TIMING
<i>E. coli</i> MCL violation, or EC+ routine sample	By end of current business day
TT violation	By end of next business day
Completed Level 1 or 2 Assessment Report	Within 30 days of learning that the system has exceeded a TT trigger
Coliform monitoring violation	Within 10 days of learning of violation
Completion of corrective action, if occurring after submittal of an Assessment Report	When each corrective action is completed
Seasonal water system Certification of Compliance form with state-approved start-up procedures	Prior to serving water to the public