



# Bacteriological Monitoring of Drinking Water: Revised Total Coliform Rule (RTCR)

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## **Abbreviations to Know**

RTCR - Revised Total Coliform Rule

TC - Total Coliform

EC - E. coli

PN – Public Notice

CCR - Consumer Confidence Report

TT – Treatment Technique

MCL – Maximum Contaminant Level

L1A – Level 1 Assessment L2A – Level 2 Assessment

Not All Bacteria Is Bad

**Overlapping Rules** 

**Major Rule Differences** 

Old TCR

- Non-acute TC MCL
- Acute violation based on E. coli and fecal coliform
- Monitoring violation for failure to collect repeat samples
- M&R and MCL Violation Types

### RTCR

- No longer a TC MCL; assessment triggered
- Acute violation based on E. coli only
- No additional sampling the following monitoring period (\*community water supplies only)
- M, R, TT, and MCL Violation Types

## **Routine Monitoring**

- All CWS must sample for TC monthly
- Must be analyzed by certified drinking water lab
- TC+ samples must be tested for E. coli

### Sampling Site Plans (SSP)

- 1. Supply's responsibility to update sample siting plan for DEQ review
- 2. All supplies need to adhere to SSP

# Sample Submission

- PLEASE BE ACCURATE!
- 30-hour clock!
- WSSN
- Site codes, purpose, date, time, etc.
- Follow SSP nomenclature

## **Total Coliform-Positive Monitoring**

For every positive routine compliance sample:

- Three repeat samples required within 24 hours
  - o Original Location
  - Upstream (within 5 service connections)
  - Downstream (within 5 service connections)

- Record chlorine residuals for all repeat samples
- Triggered source sample(s) is(are) required for each routine TC+
  - o Groundwater sources only
- Confirm that lab tests every TC+ result for E. coli
- Consecutive supplies must inform the wholesale supplier (TC+)
- If EC+, supply must contact DEQ within 24 hours R325.10704c, R325.10739

## **Special Purpose Samples**

- Construction, repair samples, etc.
  - o Shall not be used to determine RTCR compliance\*\*
  - \*\*Unless the sample is collected at SSP compliance location\*\* R 325.10704c(2)

#### **Assessments**

- Applies "find and fix" approach
- Identify avenues of contamination
- Level 1 assessment
- Level 2 assessment

### **Corrective Actions**

- Completed within 30 days
  - o Exceptions
- TT Violation for failure to complete corrective action

### No Defects Identified? - OK

- System must document this conclusion in the assessment
- Supporting evidence may be required
- Corrective actions may include activities such as flushing or disinfection

## **Level 1 Assessment Triggers**

- Supplies collecting ≥40 samples per month:
- >5% of routine & repeat TC+ samples in a month
- Failure to collect every repeat sample

- Supplies collecting <40 samples per month:
- 2 or more routine & repeat TC+ samples in a month
- Failure to collect every repeat sample R 325.10704i

#### **Level 1 Assessments**

- Completed by the owner or operator
- Assessment <u>and</u> corrective actions completed <u>within</u> 30 days
- Corrective action plan schedule in place if unable to complete in 30 days

#### **Level 1 Assessment Review**

- Is it complete?
- Is it accurate?
- Did it identify a likely cause?
- Defects corrected or has a schedule to complete the correction been submitted?



## **Level 2 Assessment Triggers**

- E. coli Maximum Contaminant Level (MCL)
- Second L1 triggered within a rolling 12-month period R 325.10704i

### **Level 2 Assessments**

- Completed by DEQ
- Assessment and corrective actions completed within 30 days

#### Assessment - Common Causes

- Lack of communication between management and operator
- Failing to collect all repeat samples
- Multiple TC-positive samples
- "Double" triggers
- E. coli MCL
- Second level 1 in 12 months

#### **Violations**

- Maximum Contaminant Level (MCL) E.coli
- Treatment Technique
- Monitoring
- Reporting
  R 325.10704i

## E. coli MCL Violation

### **Public Notices**

- Tier 1
  - o 24 hours (E. coli MCL)
- Tier 2
  - 30 days (TT violations)
- Tier 3
  - 12 months (M/R violations)

# RTCR recordkeeping

5-year retention
 R 325.11506, R325.11509,R325.11510

### **CCR** requirements

- Required language needs to be included in annual CCR
- Level 1 assessment
- Level 2 assessment
- E. coli MCL / level 2 assessment
  R 325.10413 (12)(g)

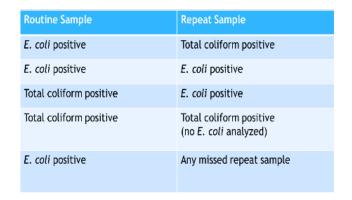
## Visit Our Website

- www.michigan.gov/deq
- RTCR link on the Community Water Supply page

## **Reporting To MDEQ**

## **RTCR Analyst Contact Info**

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## District Emailboxes

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