Timeline

February 13, 2013	RTCR Adopted (FR 10269 Vol. 78, No. 30)
February 2, 2015	Montana Requests a Primacy Extension
February 13, 2015	Montana Receives the Primacy Extension
March 2016	Draft Rules Sent to EPA for Comment Postcards Sent to Sanitarians, Engineers, Operators, and Administrative Contacts Requesting Informal Comments on Rule Package
April 1, 2016	Rule Implemented Under EPA Authority
June or August 2016	Propose Rule Package to the BER
September or December 2016	Adopt Rule Package
February 13, 2017	Primacy Extension Deadline

Further information concerning the RTCR, and how it affects Montana systems, is available at http://deq.mt.gov/Water/PWSUB/pws/rtcr .

Level 2 Assessment

- A Level 2 Assessment is more thorough examination of the source water, treatment, distribution system, operations and sampling location.
- Level 2 Assessments will be conducted by the state.

Level 2 Triggers:

- A PWS incurs an *E. coli* MCL violation.
- A PWS has a second level 1 Assessment within a rolling 12 month period.

E. coli MCL Violation

E. coli MCL Violation Occurs with the Following Sample Result Combination	
If your routine is:	**And if your repeat is:**
EC+	TC+
EC+	Any missing sample
EC+	EC+
TC+	EC+
TC+	TC+ (but no *E. coli* analysis)

For additional information on the RTCR: Call the Safe Drinking Water Hotline at 1-800-426-4791; visit the EPA website at: http://water.epa.gov/lawsregs/rulesregs/sdwa/tcr/regulation_revision.cfm

Or contact Montana DEQ Public Water and Subdivision Bureau (contact info can be found on the back of this brochure).

A PWS will receive a Treatment Technique violation when any of the following occur:

- Failure to conduct a Level 1 or 2 Assessment within 30 days of notification.
- Failure to correct all sanitary defects from a Level 1 or 2 Assessment within 30 days of a notification or in accordance with a state-approved timeframe.
- Failure of a seasonal system to complete state-approved start-up procedures prior to serving water to the public.

Helpful hints:

- Find and correct sanitary defects as soon as you become of aware of them.
- Make sure to collect all routine and repeat samples as required.
- Timely and correct monitoring can help reduce triggering a Level 1 or 2 Assessment.
- If you are a seasonal system make sure you follow the start-up procedure and turn in the completed form before serving water to the public.
- Consult with Montana DEQ if you have any questions. We are here to help!

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Montana's Quick Reference Guide for the Revised Total Coliform Rule

Overview of the Rule

Title: Revised Total Coliform Rule (RTCR) 78 FR 10269, February 13, 2013, Vol. 78, No. 30

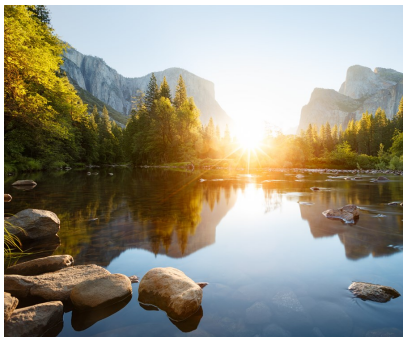
Purpose: Increase public health protection through the reduction of potential pathways of entry for bacterial contamination into distribution systems.

General Description: The RTCR establishes a Maximum Contaminant Level (MCL) for *E. coli* and uses *E. coli* and total coliforms to initiate a "find and fix" approach to address contamination that could enter into the public water supply. It requires public water systems (PWSs) to perform assessments to identify sanitary defects and subsequently take action to correct them.

*******Beginning April 1, 2016: PWSs must comply with the RTCR requirements.*******

Utilities Covered: All Public Water Systems

Deadlines and Requirements
Before April 1, 2016:
PWSs must develop a written sample siting plan that identifies the system's sample collection schedule and all sample sites (routine and repeat).



Emphasis is on "find and fix"

Basic Changes
Acute violation based on having at least one *E. coli* positive sample. Non acute violations based solely on total coliform no longer exist. Emphasis is on conducting system assessments (Level 1 and Level 2).

Routine Monitoring Requirements
Number of monthly samples based on population; same as under the Total Coliform Rule (TCR).

Reduced Monitoring
Only year round Transient Non Community systems will be eligible for quarterly monitoring. Systems on reduced monitoring will have triggers for increased monitoring (same as under the TCR).

Repeat Monitoring
All systems are required to take **3 repeat distribution samples** following a routine total coliform positive (TC+) or *E. coli* positive (EC+) sample.

Dual Purpose Samples
Dual purpose samples to satisfy both the RTCR and the Groundwater Rule will **not** be allowed. **Each system must sample all their active wells in addition to taking 3 repeat samples from their distribution system**.

Additional Routine Monitoring (temporary routine) For PWSs taking 1 TC sample per month (majority of MT PWSs) the **additional 5 routine samples required the following month is eliminated (take usual number of samples the following month).**

Seasonal Systems
Seasonal Systems are required to demonstrate a state -approved start up procedure and certify the start-up procedure has been followed every year starting in 2016.
Failure to complete start-up procedure is a Tier 2 Treatment Technique violation.

Level 1 and Level 2 Assessments

Assessments and Corrective Action
The RTCR requires PWSs that have an indication of coliform contamination (i.e. TC+ samples, *E. coli* MCL violations, or failure to take repeat samples) to assess the problem and take corrective action. There are two levels of assessments (Level 1 and Level 2) based on the severity and/or frequency of the problem.

Purpose of Level 1 and Level 2 Assessments
To identify and fix defects at the PWS that could provide a pathway of entry for microbial contamination, or that indicate failure (existing or potential) of protective barriers against microbial contamination.

Timelines for Completing Corrective Actions
When sanitary defects are identified during a Level 1 or 2 Assessment, they should be corrected as soon as possible. The Assessment Form must be submitted to the state within **30 days** of notification regardless if all corrective actions have been completed. **Failure to return the Assessment Form within 30 days is a violation.** If corrections or repairs are not completed within the first 30 days after notification, then a state-approved timeframe with corrective actions may be granted after the PWS consults with the state.

Level 1 Assessments

Level 1 assessment is a basic examination of the source water, treatment, distribution system, and operations.

Conducting Level 1 Assessments

- Performed by the PWS or a certified professional of the PWS's choice.
- Level 1 Assessment Form is due to the state 30 days after notification.

Level 1 Assessment is triggered if any one of the following occurs:

- A PWS collecting fewer than 40 samples per month has 2 or more TC+ routine/ repeat samples in the same month.
- A PWS collecting 40 samples or more per month, the system has 5.0 percent of the routine/repeat samples in the same month that are TC+.
- A PWS fails to take every required repeat sample after any single TC+ sample.

Don't forget to sample early in the month in case you have to re-sample.

Major Changes Due to the RTCR

The Revised Total Coliform Rule (RTCR) is designed to increase public health above and beyond the Total Coliform Rule of 1989 (1989 TCR), by reducing the number of potential pathways of entry for bacterial contamination into distribution systems. Adopted in 2013, and effective on April 1, 2016, this rule requires all public water systems (PWSs) to implement 8 key changes, summarized in this document.

1. Site Sampling Plans

The 1989 TCR required PWSs to have written sample siting plans representative of the water in the distribution system. The RTCR requires this sample siting plan to be updated, and specifies that it must now identify the system's sample collection schedule and all sample sites (both routines and repeats).

2. Testing for E.coli

Under the 1989 TCR rule, total coliform samples are tested for either fecal coliforms or *E. coli*. However, studies conducted since adoption of this rule have shown that fecal coliform tests can turn positive due to bacteria that are not necessarily fecal in origin. Therefore, at time, positive samples may not contain waterborne pathogens that are hazardous to human health, and boil orders are implemented when they are not necessary to protect public health. As a result, the RTCR will require total-coliform samples to be tested specifically for *E.coli* – choosing to test for fecal coliforms is no longer an option. *E. coli*, unlike fecal coliforms, almost always originate in the guts of humans and other mammals so are therefore better indicators of potential fecal contamination and the possibility of pathogenic organisms in the water supply. This rule change is beneficial in two ways. It will decrease the likelihood of boil orders when public health is not at stake, and it will substantiate the need of boil orders when public health is truly in jeopardy.

3. Seasonal Systems

The RTCR will require seasonal systems to perform a state-approved start-up procedure, and certify to the state that the procedure has been completed, before opening for the operating season and serving water to the public. The start-up procedure will include flushing stagnant water from pipes, inspecting equipment to see if repairs are needed, checking to see that disinfectants are fresh, and testing a sample of water for coliforms. This procedure, not required under the 1989 TCR, is designed to protect public health by ensuring that the water system is fully operational and ready for the season. The final step, testing a sample of water for coliforms, will determine whether there are potentially harmful microbes in the water before it is served to the public.

4. Coliform Monitoring Frequency

The RTCR federal language specifies routine and reduced monitoring guidelines, at the state's discretion to adopt all or just portions. Except for specifically mentioning seasonal systems, the RTCR is the same as the TCR:

RTCR Monitoring Frequency (reduced at state discretion)

System Type	Routine	Reduced	How is this different from TCR?
All PWS > 1,000	same as TCR	N/A	same [40 CFR 141.21(a)]
Any PWS using Surface Water, GWUDI of Surface Water, or Blended Surface Water/GWUDI ≤ 1,000	1/month	N/A	same [40 CFR 141.21(a)(3)(iv)
GW CWS ≤ 1,000	1/month	1/quarter	same [40 CFR 141.21(a)(1)-(a)(2)]
GW NCWS ≤ 1,000	1/quarter	1/year	same [40 CFR 141.21(a)(3)(i)]
Seasonal NCWS ≤ 1,000	1/month	1/quarter or 1/year during vulnerable period	not mentioned in the TCR

Montana has rules that are different than the federal rules. Here is a chart, summarizing what Montana rule currently states, and what we are proposing once the RTCR is implemented:

Current Montana Monitoring Frequency, pre- and post- Implementation of RTCR

System Type	Through March 2016	Beginning April 2016
All Systems	Monitor monthly.	Monitor monthly.
Seasonal TNC Systems, Using only GW and Serving 1,000 or Fewer People	Can qualify for quarterly monitoring by meeting specific requirements.	No longer qualify for quarterly monitoring. Systems currently monitoring quarterly will be required to begin monthly monitoring on April 1, 2016.
Non-Seasonal TNC Systems, Using only GW and Serving 1,000 or Fewer People	Can qualify for quarterly monitoring by meeting specific requirements.	Can qualify for quarterly monitoring by meeting specific requirements.

In 1998, the department proposed that all TNC systems move from monthly to quarterly sampling to be consistent with the 1989 TCR. Sanitarians, city-county health departments, and others commented during the rule writing process that quarterly

sampling was not frequent enough, and the Board agreed. MAR notice 17-089, published in 1999, documents the reasoning and support for keeping the "more stringent" rules requiring these systems to monitor monthly, and the guidelines for qualifying for and staying on reduced quarterly monitoring. The ways to qualify for quarterly monitoring were agreed upon between the above mentioned groups and the department, and written into rule in ARM 17.38.215(1)(c).

In order to fully protect public health, the department is proposing to keep all of the current coliform monitoring frequencies in place, including the "more stringent" rules requiring TNC systems to monitor monthly unless the system qualifies and applies for quarterly monitoring, except for two major changes. First, the requirements for triggering TNC systems to return to monthly coliform monitoring have been strengthened by incorporating RTCR triggers that mandate increased monitoring. This change will help ensure that only well-maintained systems that are complying with Safe Drinking Water regulations qualify for and remain on reduced monitoring, reducing the risk of serving contaminated water to the public. Second, only non-seasonal transient systems will be able to qualify for reduced monitoring under proposed ARM 17.38.215(3). Seasonal transients will be required to sample monthly starting in April 2016. This change will emphasize the importance of the start-up procedure and upkeep for systems that are depressurized or without maintenance for part of the year.

Key Points for Coliform Monitoring Frequency

- ✓ Montana is proposing to not adopt baseline quarterly monitoring for non-community systems using only GW and serving fewer than 1,000 people. Instead, we are proposing to continue requiring monitoring 1/month. In this regard, Montana is more stringent (see MAR notice 17-089, published in 1999).
- ✓ Montana is proposing to allow only non-seasonal transient systems, using ground water and serving ≤ 1000 people, the opportunity to qualify for reduced monitoring. In this regard, Montana is using state discretion.

5. Clean Compliance History

The federal requirements define the term "clean compliance history" as "for the purposes of subpart Y, a record of no MCL violations under §141.63; no monitoring violations under §141.21 or subpart Y; and no coliform treatment technique trigger exceedances or treatment technique violations under subpart Y". However, Montana does not use this term in Montana rule. In addition, to qualify for quarterly monitoring, the department uses a policy that states a system must have satisfactory total coliform test results for 24 months and no MCL exceedances, monitoring violations, or TT violations of any kind for 12 months. In this regard, in order to better protect public health, Montana is more stringent.

6. Use of Dual Sampling

Dual purpose samples are samples that can be used to satisfy a requirement of both the Ground Water Rule and the RTCR. Montana currently allows the use of these samples. However, when the RTCR is implemented, Montana is no longer allowing the use of these samples. In this regard, Montana is using state discretion.

7. Temporary Routines

For public water systems taking 1 total coliform sample per month, the requirement to collect an additional 5 routine samples the following month is eliminated. Instead, the system collects the usual number of samples, and may be triggered to conduct a level 1 or 2 assessment (see #8 below).

8. Level 1 and 2 Assessments

First, the RTCR, like the 1989 TCR, will require systems to test for coliforms. Currently, the 1989 TCR requires monitoring and reporting of coliform test results. Systems are not required to determine the cause of any positive results. The RTCR, however, will require a system to apply a "find and fix" strategy that identifies the actual and/or potential causes of the positive coliform test results. The system is then required to take corrective action and fix the problem(s). Since total coliforms are indicators of microbial contamination entering the distribution system, this "find and fix" strategy will add an additional layer of protection for public health. Systems with positive coliform test results will be required to look closely at all aspects of their system, including the source water, treatment process, distribution system, and operating procedures. Then, any identified problems that could result in pathogens entering the system and making people sick need to be fixed.

Conference or Meetings for RTCR Training	Date	Population attending
Section Meeting for DEQ	July 2013	65
Billings Water School	March 2014	150
Kalispell Water School	April 2014	80
Section Meeting for DEQ	July 2014	65
Bozeman Water School	October 2014	200
Helena Water School	November 2014	35
Focus Group formed and meeting held in August 26, 2014. Focus Group Webpage created in November of 2014:	November 2014	20
Focus Group Meeting	January 2015	20
MDEQ Field Staff Meeting	January 2015	45
Billings Water School	March 2015	150
Kalispell Water School	Apriil 2015	35
Lab systems RTCR compliance Webinar outreach	April 2015	75
Helena Water School	May 2015	35
Billings MSAWWA/MWEA Conference	May 2015	450
DEQ Field Staff – Summer outreach and on site training to 250 PWS. - 2015	July - August 2015	250
Missoula Night RTCR Training –	Sept 2015	35
Bozeman Water School METC –	Sept 2015	200
MAPS RTCR training Helena –	Sept 2015	15
PWSB Bureau Meeting –	Sept 2015	65
Lab systems site visit for RTCR training –	Sept 2015	10
West Yellowstone Rural water training –	Oct 2015	110
Focus Group Meeting	Oct 2015	20
Great Falls Night School Training –	Nov 2015	45
Rural Water Training on RTCR in Billings-	Nov 2015	750
METC Helena Group	Nov 2015	15
Mass Mailing of RTCR upcoming changes and requirements	DEC2015	2200 PWSS
Webpage created for the PWSS RCTR – Forms, Guidance Documents, reference guides-	Dec 2015	
Focus Group Meeting –	Jan 2016	20
MAPS – Provided operator training in Billings about RTCR –	Jan 2016	20
MAPS – Provided operator training in Havre about RTCR –	Jan 2016	39
Lab RTCR email of Treatment technique triggers and Seasonal Startup information	Jan 2016	150
Great Falls Colony Training	Jan 2016	50
Missoula Night Transient Training METC Sponsored –	Jan 2016	48
Kalispell METC Night Training –	Feb 2016	89
MAPS – Provided operator training in Miles City about RTCR –	Feb 2016	35
MAPS – Provided operator training in Culbertson about RTCR –	Feb 2016	15
Great Falls Rural Water –	Feb 2016	900
Billings Water School-	March 2016	150
Rural Water provided RTCR training Polson –	March 2016	40
Rural Water provided RTCR training Eureka –	March 2016	35
Kalispell Water School –	March 2016	100
Lab systems notified by email of Dual Sample changes per the RTCR –	March 2016	150
3 Rule Manager phone outreach and education		400 hrs