

Revised Total Coliform Rule A Year in Review

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Silver Falls Conference
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RTCR Background

► Total Coliform Rule (TCR)

- Proposed in 1987 and went into effect in 1990
- Targeted the distribution system and effectiveness of treatment
- Required Public Notice when total coliform and *E. coli* were confirmed

► Revised Total Coliform Rule (RTCR)

- Advisory committee proposed changes to TCR in 2008
- EPA proposed RTCR in 2010
- EPA finalized RTCR in 2013/2014
- RTCR effective on April 1, 2016

Implementation of RTCR

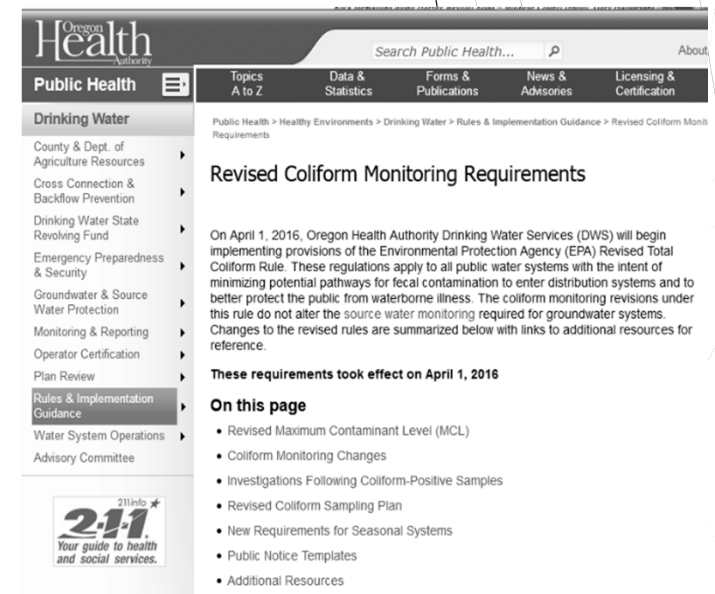
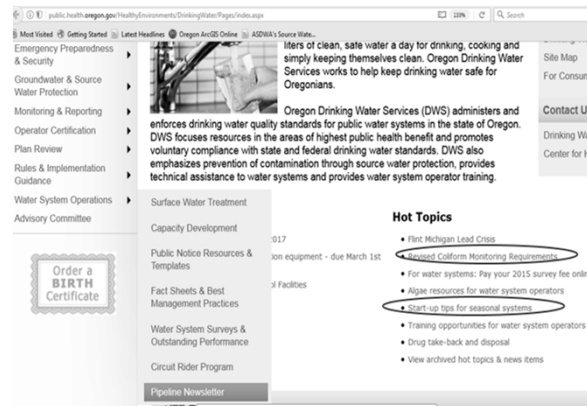
- RTCR Team
 - Gregg Baird
 - Michell Byrd
 - Brad Daniels
 - Bill Goss
 - Betsy Parry
 - Chuck Michael
 - Kari Salis



Revised Total Coliform Rule Implementation Checklist				
	Assignment	Deadline		
3	Coliform Investigations		Special Monitoring Evaluations	
4	Great draft list or concepts for defects	6/15/2014	Finalize procedure for special monitoring evaluations	9/1/2015
5	Form concept for the DWAC	6/15/2014	Deadline for Collecting Repeat Samples	
6	Proposal for who can conduct level 2 investigations	6/15/2014	Develop final criteria for extending the 24-hour period for collecting repeat samples - no standardized criteria will be developed	12/31/2014
7	Determine parties authorized to conduct level 2 investigations	10/1/2014	Outreach	
8	Create draft investigation forms	12/31/2014	Complete pipeline article about basic RTCR requirements	3/1/2015
9	Produce final investigations forms	1/31/2015	Create 1 hour training materials for operators and regulators	3/1/2015
10	Develop draft procedure for investigation process / flow	9/1/2015	Complete detailed pipeline articles:	9/1/2015
11	Develop FINAL procedure for investigation process / flow	3/1/2016	* Coliform investigations	9/1/2015
12	Seasonal Start-Up Procedures		* Coliform sampling plans	9/1/2015
13	Develop draft seasonal start-up procedure	6/15/2014	* Monitoring revisions	9/1/2015
14	Develop procedure to track seasonal pressurized vs depressurized	9/1/2015	* Seasonal Start-up procedures (intro 9/1/15 and detailed 2/1/16)	9/1/2015
15	Run final query to identify seasonal water systems	2/1/2016	Put on 2-hour webinar	3/1/2016
16	Develop "Guidance" to accompany start-up checklist	1/1/2016	Present Trainings: Waterworks Schools, Silver Falls, Fall training	3/1/2016
17	Update seasonal operations webpage to include revised "Guidance"	3/15/2016	Create PH webpage for coliform investigation information	3/1/2016
18	Develop final seasonal start-up forms	1/1/2016	Redesign PH webpage for seasonal start-up	2/1/2016
19	Coliform Sampling Plans		Upload new documents and templates to DWS partners website	3/1/2016
20	Final coliform sampling plan templates	9/1/2015	Primacy	
21	Communicate need for coliform sampling plans to be final by 3/31/2016	1/1/2016	Complete primacy letter including the necessary information from the crosswalk to include with the primacy application.	10/1/2015
22	Develop coliform sampling plan (sample siting plan) guidance	1/1/2016	Complete and submit final EPA primacy application	1/31/2016
23	Rulemaking and Rule Writing		Data Management	
24	Workgroup review of proposed rule language	10/1/2014	Create data online webpage for coliform investigations	3/1/2016
25	Present proposed materials to the DWAC	10/15/2014	Begin issuing violations for not completing coliform investigations	4/1/2016
26	Complete draft EPA primacy materials	2/15/2015	Begin issuing violations for not completing corrective action	4/1/2016
27	Present final materials to the DWAC	10/21/2015	General	
28	Hold rulemaking public hearing	10/29/2015	Revise survey forms and manual as needed	3/1/2016
29	Complete Oregon rulemaking activities	12/31/2015	Finalize procedure for increased monitoring and return to routine	3/1/2016
30	Reduced Sampling		Develop DWS procedure to include CFR provisions not going into rule	1/1/2016
31	Complete reduced sampling proposal (no)	6/15/2014		
32	Sample Invalidation			
33	Finalize procedure for invalidating coliform samples	12/31/2014		

RTCR Rollout Preparation

- Web Page
- Pipeline Articles
 - Overview of RTCR
 - Sampling Plan
 - Seasonal Systems
 - Implementation Day Summary
 - Level 1 and 2 Coliform Investigations
 - Monitoring Changes
- Presentations
 - Silver Falls and Fall Training



RTCR Implementation and Overview

- ▶ RTCR effective April 1, 2016, no joke!
- ▶ 390 Seasonal Systems, 169 required to complete startup procedure and collect a sample



▶ Issues with RTCR

- ▶ Campgrounds and parks - Actual opening different than
 - ▶ Operating period on SDWIS different than actual opening

▶ Schools

- ▶ Not really seasonal since they are pressurized and open year round
- ▶ Requested change to year round so they could avoid monthly monitoring
- ▶ Confusion due to the rule change, not aware of the new rule
 - ▶ Did not submit startup procedure or collect startup sample
 - ▶ Did not realize their schedule changed to monthly

OR41 90643	GERBER WATER SYSTEM
Contact:	GRANT WEIDENBACH 2795 ANDERSON AVE BLDG #25 KLAMATH FALLS, OR 97603
Population:	100
Operating Period:	May 15 to September 30
Certified Operator(s)	
Required:	N

Originally, set to open April 1st

RTCR Implementation and Overview

- ▶ Other rule change issues for systems
 - ▶ Collected too many repeat samples
 - ▶ Non-submittal of Level 2 triggered a change to monthly sampling (see later slide for returning to quarterly)
 - ▶ Improper completion of Level 1 or 2
 - ▶ Ensure information is accurate
 - ▶ Stress the importance of determining the source of contamination
 - ▶ Three strikes and the system will have to perform residual maintenance

Autogenerated Letters & Email Reminders

► Systems required to complete a Level 1

- 170 for multiple positives
- 42 for no repeat samples
- 13 for repeat samples turned in late (investigation not needed)

► Required to complete a Level 2

- 25 for *E. coli* MCL
- 55 for multiple positives (subsequent Level 1)
- 16 for no repeat samples
- 3 for repeats turned in late (investigation not needed)

► Letters sent to systems and emails sent to regulating agency

► Change from quarterly to monthly monitoring letters for non-community systems

► 5 (started in January 2017) - cause not recorded.

- 35 NC/NTNC systems had Level 2 investigations in 2016 and if GW regulating agency was instructed to tell them to go to monthly

Level 1 & 2 Investigations

► Systems that returned the Level 1 & 2 investigations on time and late

► Level 1:

- 152 for not submitting investigation on time
- 37 for submitting the investigation late
- 16 for not submitting and investigation report
- 6 for submitting investigations that were not due

► Level 2:

- 68 for not submitting investigation on time
- 6 for submitting the investigation late
- 4 for not submitting and investigation report
- 2 for submitting investigations that were not due

Residual Maintenance

- 9 systems required to install residual maintenance since April 1, 2016

PWSName	STATUS_DATE
BLACK MOUNTAIN WATER DISTRICT	17-Feb-17
DOUGLAS CO PKS - SCOTTSBURG	29-Dec-16
INDIAN TRAIL WATER USERS ASSN	21-Feb-17
MT ASHLAND ASSOCIATION	29-Jul-16
ODF/WL SANDY FISH HATCHERY	11-Jul-16
SISTERS GARDEN RV RESORT	03-Jan-17
SMITH BERRY BARN	29-Nov-16
UNITY, CITY OF	23-Sep-16
UPS-HERMISTON	14-Jul-16

- 14 systems confirmed *E. coli* under the groundwater rule (4-log or other corrective action)

RTCR Violations

- ▶ 1167 RTCR violations issued since April 1, 2016
 - ▶ Total Coliform MCL
 - ▶ Acute MCL for *E. Coli*
 - ▶ Coliform Investigation Nonreporting
 - ▶ Prevented Level 2 Investigation
 - ▶ Public Notice late/Nonreporting
 - ▶ Routine Coliform - Did Not Report Any
 - ▶ Routine Coliform - Did not Report Enough
 - ▶ Repeat Coliform - Did Not Report Any
 - ▶ Repeat Coliform - Did not Report Enough
 - ▶ Temporary Routine - Did Not Report Any
 - ▶ Temporary Routine Coliform - Did not Report Enough

Compliance and Enforcement Schedules

► Compliance Schedules being entered for:

► Level 1

- Complete Level 1 Investigation
- No repeats

► Level 2

- Complete Level 2 Investigation
- No repeats
- Correct Defect from Investigation
- Install disinfection (i.e., residual maintenance)
- Denied Access

- Schedule being entered into SDWIS, see data online

Compliance and Enforcement Schedules

Regulating Agency	County	Schedule Status
All Agencies ▼	All Counties ▼	<input checked="" type="checkbox"/> Open
		<input checked="" type="checkbox"/> Closed
Schedule Type		
<input type="radio"/> Compliance Schedules		
<input type="radio"/> Lead Action Level Exceedance		
<input type="radio"/> Confirmed Source E. coli		
<input checked="" type="radio"/> Coliform Investigation		
<input type="radio"/> Microscopic Particulate Analysis (MPA) Required		
<input type="radio"/> Other Compliance Schedule		
<input type="radio"/> Bilateral Compliance Agreement		
<input type="radio"/> Formal Enforcement		
<input type="radio"/> Notice of Non-Compliance		
<input type="radio"/> Administrative Order		
<input type="radio"/> Extension to Administrative Order		
<input type="radio"/> Administrative Order Settlement		
<input type="radio"/> Civil Penalty Order		
<input type="radio"/> Civil Penalty Settlement Agreement		
<input type="radio"/> Court Filing		
<div>Show Schedules</div>		

Information by county:

Inventory :: Surface Water Systems :: Water System Surveys :: Outstanding Alerts :: Violations :: Compliance & Enforcement :: Significant Deficiencies ::

Compliance and Enforcement Schedules

Regulating Agency: All Regulating Agencies County: All Counties Schedule Type: Coliform Investigation Schedule Status: Open and Closed Schedules			Sorted by Regulating Agency Click on a column header to sort by that field, or sort by activity due date (systems with the earliest open due date or no scheduled activities will be at the top)		
326 schedules found for 242 systems.			Hide scheduled activities		
Regulating Agency	County Served	PWS PWS Name	System Type	System Score	
Schedule Type			Date Issued Closed Date		
BAKER COUNTY	Baker	91226 THOMPSONS HELL'S CANYON INH	NC	12	
					COLIFORM INVESTIGATION
					Scheduled Activity LEVEL 2 INVESTIGATION - NO REPEATS CORRECT DEFECTS FROM INVESTIGATION
					Mar 27, 2017 Open Due Date Date Completed Apr 27, 2017 Apr 10, 2017 May 10, 2017
					COLIFORM INVESTIGATION
					Nov 21, 2016 Feb 01, 2017 Due Date Date Completed Dec 24, 2016 Feb 01, 2017 - Late
BENTON COUNTY	Benton	95350 CALVARY CORVALLIS	NC	3	
					COLIFORM INVESTIGATION
					Scheduled Activity COMPLETE LEVEL 1 INVESTIGATION
					Oct 05, 2016 Oct 07, 2016 Due Date Date Completed Nov 07, 2016 Oct 07, 2016
BENTON COUNTY	Benton	93714 KING'S VALLEY CHARTER SCHOOL	NTNC	0	
					COLIFORM INVESTIGATION
					Scheduled Activity COMPLETE LEVEL 1 INVESTIGATION
					Mar 16, 2017 Apr 13, 2017 Due Date Date Completed Apr 22, 2017 Apr 13, 2017
BENTON COUNTY	Benton	05548 RAINTREE ESTATES	C	3	
					COLIFORM INVESTIGATION
					Scheduled Activity COMPLETE LEVEL 1 INVESTIGATION
					Mar 30, 2017 Open Due Date Date Completed May 07, 2017
CLACKAMAS COUNTY	Clackamas	94621 BACKROADS PUB & GRUB	NC	0	
					COLIFORM INVESTIGATION
			Jan 10, 2017 Jan 25, 2017		

Increased Monitoring

► Change from quarterly to monthly

► Reasons

- One Level 2 or two Level 1 investigations are triggered in 12 months;
- The MCL for *E. coli* is exceeded;
- A coliform investigation isn't completed or defects not corrected;
- Samples not collected twice within 12 months; or
- A combination of sampling and investigation violations

► How to return to quarterly monitoring after 12 months are complete

- A sanitary survey, Level 2 coliform investigation or equivalent site visit is completed and the water system is found to be free of sanitary defects and has a protected water source; and
- All required coliform samples were collected and reported during the previous 12 consecutive months
- The MCL for *E. coli* was not exceeded and no coliform investigations were required during the previous 12 consecutive months.

► Note: If a system is triggered into monthly sampling because they failed to submit a Level 1 investigation, they can be changed back to quarterly if they submit the investigation, even if it is late

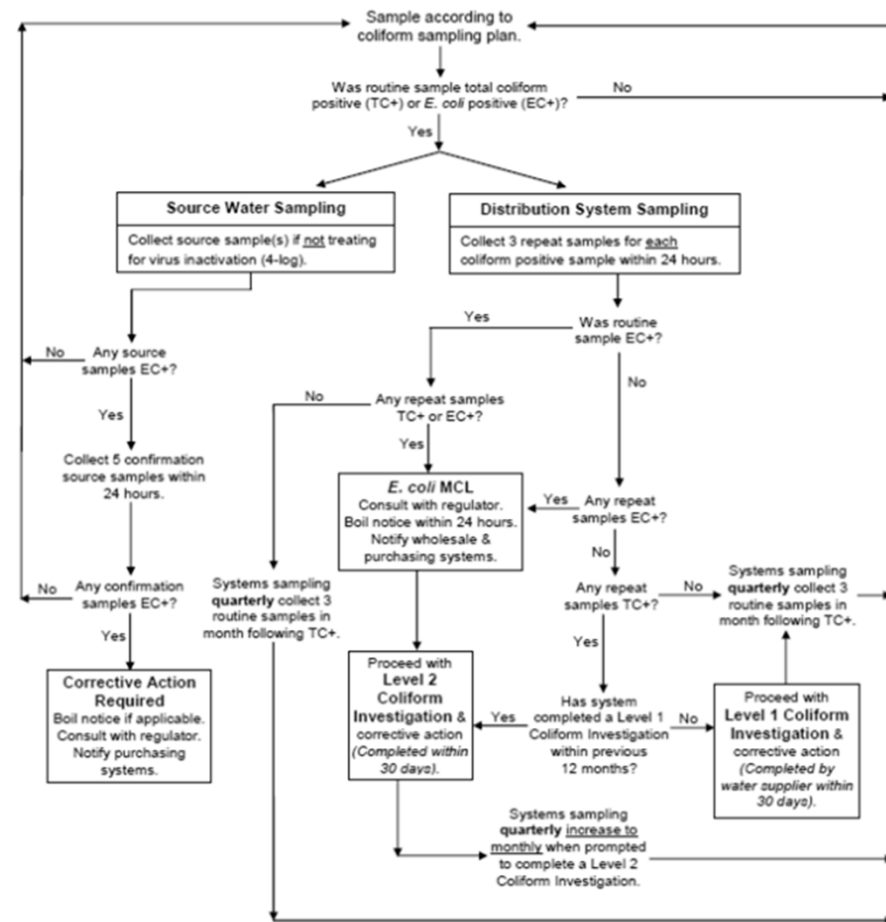
- Must be the only trigger for increased monitoring

RTCR/GWR Overlap

- ▶ Two different paths
- ▶ Old TCR/GWR procedures have caused confusion
 - ▶ 1 EC+ in dist. and repeats neg., but source is EC+, should consider boil water
- ▶ Consider history, current disinfection, and condition of system
- ▶ Consult with Tech staff prior to decision/notice
- ▶ When in doubt, boil water



**Coliform Response Chart for Groundwater Systems
Serving up to 1,000 Persons**



Proposed Rule Changes to RTCR

- ▶ If a system has 3 confirmed TC+ or EC+ in 12 months, or 4 confirmed TC+ or EC+ in 24 months, they will need to install residual maintenance within 6 months
- ▶ Exceptions:
 - ▶ Systems with no distribution system (one building) and confirmed TC+ in source can use UV that is NSF standard 55 certified in lieu of residual maintenance
 - ▶ TC+ or EC+ confirmed after a sanitary defect is identified but prior to correction does not count towards this requirement.

Questions?