

Before we begin ...

2014-2016 SOC Waivers


In order to receive a correct/complete waiver from monitoring for SOC's at ALL POEs a completed well vulnerability questionnaire must be on file with the Bureau of Safe Drinking Water for each well in use.

Information including a link to the NJ Well Vulnerability Questionnaire is available on the website at:

<http://nj.gov/dep/watersupply/dws-sampreg.html>

2014-2016 SOC Waivers


- Refer to the December 24, 2013 SOC letter your system received for a list of wells with questionnaires on file
- If any wells are in use that are not listed in the letter (included any new wells) you need to complete the NJ Well Vulnerability Questionnaire
- Wells missing from the final waiver letters will trigger monitoring requirements so it is important to double check.




Revised Total Coliform Rule (RTCR)

a history of the rule

Kristin Tedesco
Winter 2015/2016




Early Regulations



- ❖ Chlorine first used as a primary disinfectant in Jersey City (1908)
- ❖ Safe Drinking Water Act - adopted standards for public water systems in all 50 States (1974)
- ❖ Interim standards for turbidity and total coliform bacteria (1975)
 - ❖ Filtration requirements for nearly all water systems that draw water from surface sources

1908 1974 1975 1986



Background

CURRENT (1989) TCR

RTCR

1989 Total Coliform Rule

- Promulgated the same day as the Surface Water Treatment Rule
- Understanding that common filtration and disinfection practice has to reliably remove or inactivate giardia, viruses and other pathogens
- Prompted, in part, by outbreaks in public water systems (most commonly giardia)

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Current TCR Requirements

- Rule Objectives
 - Determine the integrity of the distribution system
 - Evaluate the effectiveness of treatment
 - Signal the possible presence of fecal contamination
- Regular monitoring is used to determine PWS success in meeting water quality goals and objectives
- PN is required for violations of the MCL and monitoring/reporting requirements
- No requirement for assessment or corrective action

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Existing Rule Concerns

- Total coliforms are not appropriate as an indicator of water quality in the distribution system.
- Monitoring frequency may be inadequate to detect some problems.
- TCR may disproportionately affect small systems.

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History

REVISED TOTAL COLIFORM RULE (RTCR)

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Why?

- EPA is required to review and revise, as appropriate, each National Primary Drinking Water Regulation no less often than every 6 years
- In July 2003 EPA determined that it was appropriate to revise the TCR
- Six-year review findings included concerns about:
 - Frequency and location of monitoring
 - Follow-up monitoring after TC positives
 - The basis of the MCL

RTCR

History of the Proposed RTCR

- Advisory Committee comprised of 15 representatives
- Met 13 times from July 2007 – September 2008
- Analyzed:
 - TC and E. coli occurrence data
 - System inventories
 - Violation data
 - State and System responses to violations
 - Cost information



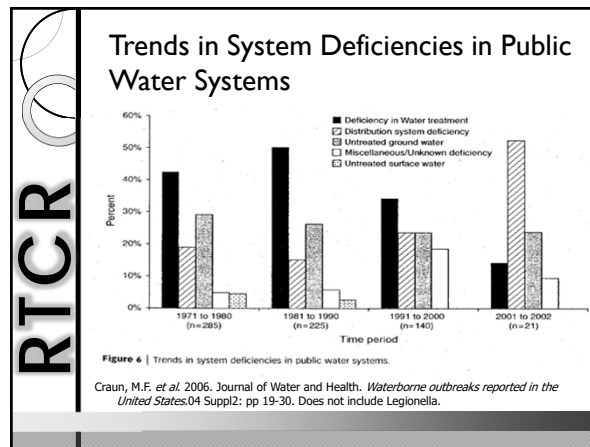
TCRDSAC Membership	
Organization	Representative
National Rural Water Association	David Baird, City of Milford, DE
Native American Water Association	Thomas Crawford, Native American Water Association
US Environmental Protection Agency	Cynthia Dougherty, USEPA, OGWDW
Environmental Council of the States	Patti Fauver, Utah Department of Environmental Quality
National Association of State Utility Consumer Advocates	Christine Maloni Hoover, PA Office of Consumer Advocate
American Water Works Association	Carrie Lewis, Milwaukee Department of Public Works
National Association of Water Companies	Mark LeChevallier, American Water
Council of State and Territorial Epidemiologists	John Neuberger, University of Kansas Medical Center
Rural Community Assistance Partnership	Harvey Minnigh, RCAP Solutions Inc.
Association of State Drinking Water Administrators	Jerry Smith, Minnesota Department of Health
Clean Water Action	Lynn Thorp, Clean Water Action
National League of Cities	Bruce Tobey, City of Gloucester, MA
National Environmental Health Association	Bob Vincent, Florida Department of Health
Association of Metropolitan Water Agencies	David Visintainer, City of St. Louis Dept. of Public Utilities
Natural Resources Defense Council	Mae Wu, Natural Resources Defense Council

The Advisory Committee recognized that:

- “...finished water storage and distribution systems may have an impact on water quality and may pose risks to public health.”
- “...cross connections and backflow in distribution systems represent a significant public health risk.”
- “...water quality problems can be related to infrastructure problems and that aging of distribution systems may increase risk of infrastructure problems.”
- “...distribution systems are highly complex and that there is a significant need for additional information and analysis on the nature and magnitude of risk associated with them.”

Key Observations of Trends

- Number of outbreaks due to all causes has dropped
- Number and percent of outbreaks due to treatment deficiencies has dropped
- Percent of outbreaks due to untreated GWs has remained about the same
 - Drop in numbers of outbreaks
- Percent of outbreaks due to DS contamination has increased
 - Not much change in number of outbreaks



Agreement in Principle (AIP) signed in September 2008

- Based on Key point of Deliberations:
 - Improving public health using assessments and corrective action
 - Lack of consumer confidence (PN process)
 - Optimize TC as an indicator of system operation
 - Ensuring small systems are demonstrating accountability
 - Seasonal Systems

RTCR Timeline

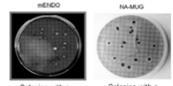
■ Final Rule – On Feb. 13, 2013, after considering 134 public comment letters, EPA promulgated the final RTCR.

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RTCR
KEY PROVISIONS

- RTCR
- ### RTCR Purpose
- Improve public health protection by reducing the pathways through which fecal contamination and pathogens can enter the distribution system
 - TCR & RTCR Objectives:
 - Evaluate effectiveness of treatment
 - Determine integrity of distribution system
 - Signal possible presence of microbial contamination
 - Cost-effective way to enhance multi-barrier approach to public health protection

- RTCR
- ### Key Provisions of RTCR
1. Assessment and Corrective Action
 - Investigate and correct any sanitary defects found when monitoring results show the system may be vulnerable to contamination
 - Conduct a basic self assessment (Level 1) or a more detailed assessment by a qualified party (Level 2) depending on the severity and frequency of contamination

- RTCR
- ### Key Provisions of RTCR
2. Establishes a Treatment Technique in place of MCL / MCLG for TC, with PN only for Treatment Technique violations (failure to conduct a required assessment or fix an identified sanitary defect)
 3. Keeps E. coli as a health indicator with an MCLG of zero and MCL similar to current TCR
- 

Colonies with a green metallic sheen are counted as total coliforms

Colonies with a fluorescent halo are counted as E. coli

- RTCR
- ### Discussion Questions
- Why did EPA only kept the E. coli MCL violation and changed the coliform MCL to a TT violation?
 - Why EPA is no longer using fecal coliform as an indicator?

- RTCR
- ### Why Total Coliform & E. coli?
- RTCR uses TC & E. coli as indicators of potential risk
 - TC are a group of closely related bacteria that, with a few exceptions, are not harmful to humans
 - E. coli bacteria are a more accurate indicator of fecal contamination than TC, though not a measure of waterborne pathogen occurrence
 - The presence of TC is a good indicator of a potential pathway of microbial contamination into the distribution system
 - These contaminants could include:
 - Bacteria
 - Viruses
 - Parasitic protozoa

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MCL vs. TT

- Maximum Contaminant Level (MCL) = highest allowable concentration of a contaminant
 - Compliance based on sampling results
- Treatment Technique (TT) = required process intended to reduce the level of a contaminant in drinking water
 - Compliance based on performing activities

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Key Provisions of RTCR

4. Provides criteria that well-operated ground water small systems must meet to qualify and stay on reduced monitoring
5. Requires increased monitoring for high-risk small ground water systems with unacceptable compliance history

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Key Provisions of RTCR

6. Seasonal System:
 - Start up procedures
 - Monthly monitoring requirements
 - Must have approved sample site plan
 - Primacy requirements on how State will address reduced monitoring and start up

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TCR & RTCR

APPLICABILITY

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Who does the TCR apply to?

- **All Public Water Systems** – TCR is the only microbial drinking water regulation that applies to all public water systems (PWSs)
 - Groundwater & Surface Water Systems
 - Regardless of Population
- One of the few rules that apply to transient PWSs
- Note – systems that do not disinfect are also subject to sampling requirements under the total coliform rule

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238 **480**

New Jersey By The Numbers


3723 **2014** **4.4%**

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Number of Public Water Systems

3723 Public Water Systems

- 590 Community Systems
- 750 Non-Transient Non-Community
- 2383 Transient Systems




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Number of "Seasonal" Water Systems

480

These are all non-community systems that will require more frequent monitoring under RTCR



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Number of TCR MCL violations in 2014

238

- 32 acute TCR MCL violations in 2014 (2 @ CWS)
- 206 Non-acute TCR MCL violations in 2014 (28 @ CWS)

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Percentage of water systems with TCR MCL Violations

4.4%

(This compares to 7.6% in 2013)

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- **STAKEHOLDER PROCESS**

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Recap

- June 18, 2014 Stakeholder Meeting
 - General Rule Issues
 - Sampling Plans
 - Extension of 24-Hour RP collection time
 - NJ will not implement reduced monitoring provisions
- July 16, 2014 Stakeholder Meeting
 - Assessments & Corrective Action

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Recap

- September 23 & 25, 2014 Stakeholder Meetings
 - Seasonal Systems & Start-Up Procedures
 - Included an initial training session for CEHAs
 - North/South locations near concentrations of seasonal systems

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IMPLEMENTATION ASSISTANCE

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Subpart Y - RTCR

- 141.851** General.
- 141.852** Analytical methods and laboratory certification.
- 141.853** General monitoring requirements for all public water systems.
- 141.854** Routine monitoring requirements for non-community water systems serving 1,000 or fewer people using only ground water.
- 141.855** Routine monitoring requirements for community water systems serving 1,000 or fewer people using only ground water

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Subpart Y - RTCR (cont'd)

- 141.856** Routine monitoring requirements for subpart H public water systems of this part serving 1,000 or fewer people.
- 141.857** Routine monitoring requirements for public water systems serving more than 1,000 people.
- 141.858** Repeat monitoring and E. coli requirements.
- 141.859** Coliform treatment technique triggers and assessment requirements for protection against potential fecal contamination.
- 141.860** Violations.
- 141.861** Reporting and recordkeeping.

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Upcoming CEHA RTCR Training

Topics to include:
 Rule Refresher
 Updated Penalty Guidance
 New Violation Types

Classroom Training
 (CEs offered)
 January 13, 2016 – Somerset County
 January 14, 2016 – Camden County

March/April Field Training?

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Upcoming RTCR Training (Water Systems & Laboratories)

December 9, 2015
 East Hanover Volunteer Fire Department

December 15, 2015
 Monroe Twp Utility Department

December 16, 2015
 Brooklawn Senior Community Center

- Pre-registration at www.njwater.org

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**Upcoming RTCR Training
(Water Systems & Laboratories)**
 January 6, 2016
 Wharton American Legion

 January 21, 2016
 Hightstown Fire Department

 • Pre-registration at www.njwater.org

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RTCR Factsheets

(RTCR)

Requirements for Small Systems on Monthly Monitoring

Who Does THIS FACTSHEET APPLY TO?
All PUBLIC WATER SYSTEMS (PWSs), REGARDLESS OF SOURCE, THAT SERVE 1,000 PEOPLE OR FEWER and collect at least one routine total coliform (TC) being sample.

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What to Do?

STEP 1: DEVELOP/UPDATE YOUR SAMPLE SITING PLAN*
 CONTACT YOUR STATE FOR ASSISTANCE.

- DEVELOP A SAMPLE SITING PLAN AND HAVE IT READY FOR USE BY APRIL 1, 2016. If you already have a sample siting plan for the Total Coliform Rule (TCR), update this plan to meet the requirements of the RTCR.
- LIST THE LOCATIONS WHERE YOU WILL TAKE YOUR SAMPLES (DROPPING AND SPRING). Any tested sampling location that is also used for other triggered source water monitoring must be included.
- INCLUDE YOUR ROUTINE COLLECTION SCHEDULES. For example, "PWS_01 will collect one routine total coliform sample every first Monday of the calendar month."
- UPDATE TO REFLECT CHANGES. If your PWS's sample siting plan is a living document and should be updated to reflect changes at your PWS such as: major changes in population, a new or additional water source.

ADDITIONAL RTCR FACTSHEETS:

- Requirements for Small Systems on Quarterly Annual Monitoring

• Suggestions?

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