



DPH Regulatory Update and Safe Drinking Water Act (SDWA) Compliance Reminders

ATCAVE

February 23, 2016

Christopher D. Roy
Supervising Sanitary Engineer
Rule Implementation Unit
Drinking Water Section
Connecticut Department of Public Health

Drinking Water Section



New Regulation

Generator and emergency contingency and response plan requirements (RCSA 19-13-B102(w)(1))

- 🔹 Announced in Circular Letter #2016-01
- 🔹 Effective 12/17/2015
- 🔹 CWS must install and maintain a generator or Department-approved alternative source of backup power
- 🔹 Minimum construction and fuel storage requirements are outlined in regulations

🔹 Due dates:

CWS Serving	Due Date
$\geq 100,000$	12/17/2016
10,000-99,999	12/17/2017
$< 10,000$	12/17/2018



New Regulation

Generator and emergency contingency and response plan requirements (RCSA 19-13-B102(w)(2))

- 💧 CWS also required to prepare a prepare an emergency contingency and response plan
- 💧 Plan must be completed by 7/17/2016
- 💧 Plan addresses disruption of the supply of water to consumers due to a loss of power, including:
 - 💧 Restoring service to consumers
 - 💧 Maintaining an adequate and safe supply of water to consumers
 - 💧 Notifying the consumers, local emergency management officials, the Department, the chief elected official of any municipality and any local health department or district health department served by the CWS
- 💧 **Generator and plan verification is required in a CWS's annual submission under CGS §25-33 (Annual Update)**



Revised Total Coliform Rule

- 💧 Final RTCR published in Federal Register on February 13, 2013
 - 💧 New requirements beginning April 1, 2016
 - 💧 CT Draft Regulation still under review
- 💧 Key Changes
 - 💧 Eliminates the MCL for total coliforms
 - 💧 Establishes an MCL for *E. coli*
 - 💧 Establishes Treatment Technique requirements
 - 💧 Level 1 and Level 2 Assessments (“Find and Fix”)
 - 💧 Defines a “Sanitary Defect”
 - 💧 Allowances for increased and reduced monitoring
 - 💧 Start-up procedures required for seasonal systems



Revised Total Coliform Rule

Sample Siting Plans

- 💧 Must identify Routine and Repeat sampling locations and a sample collection schedule
- 💧 Three repeat samples required at all times:
 - 💧 Original RT TC+ site
 - 💧 Tap within 5 service connections upstream
 - 💧 Tap within 5 service connections downstream
- 💧 Alternative fixed locations may also be used but need Department review and approval
- 💧 Plans do not need to be submitted, unless requested, but are subject to Department review and revision

Revised Total Coliform Rule

Sample Siting Plans

- 💧 Forms and guidance available on the DWS website
- 💧 *Revised Total Coliform Rule Sample Siting Plan Requirements*
- 💧 Two new reporting forms developed:
 - 💧 *SSP with Alternative Repeat Sampling Locations*
 - 💧 *SSP for Seasonal Public Water Systems Monitoring Quarterly*
- 💧 *Sample Siting Plan Template*
 - 💧 Meets all of the SSP requirements (if filled out properly)
 - 💧 Works in concert with Sampling Point Inventory Form
 - 💧 “Fill-in the blanks” style
 - 💧 Ideal for all water systems



Revised Total Coliform Rule

Start-up Procedures

- 💧 Required for seasonal systems
- 💧 Must be performed prior to serving water to the public
- 💧 Water System Start-Up Guidelines have been developed
- 💧 Start-up procedures require monitoring prior to serving water to the public
 - 💧 Acceptable sample results can be used to satisfy routine monitoring requirements if collected from compliance locations
- 💧 ***A Certification of Seasonal Start-up Procedure*** form must be submitted to the Department prior to serving water
- 💧 Failure to perform start-up procedures prior to serving water is a Treatment Technique Violation requiring a Tier 2 (30 day) public notification



Long Term 2 Surface Water Treatment Rule

- 🔹 **Enhanced treatment for Cryptosporidium**
- 🔹 **Applies to all Subpart H Systems**
- 🔹 **Second round of source water sampling started in 2015**
- 🔹 **Grandfathering of data is not allowed**
- 🔹 **PWS must submit a sampling schedule and receive approval prior to monitoring**
 - 🔹 **Due 3 months prior to sampling start date**
 - 🔹 **Sampling calendar dates**
 - 🔹 **Sampling locations**
 - 🔹 **Forms are available on DWS website**



Long Term 2 Surface Water Treatment Rule

LT2 Source Monitoring Schedule			
Schedule	Population	Sample Sch. Due	Monitoring Start Date
1	>= 100,000	1/1/2015	4/1/2015
2	50,000-99,999	7/1/2015	10/1/2015
3	10,000-49,999	7/1/2016	10/1/2016
4	< 10,000	7/1/2017	10/1/2017

Schedules 1, 2 and 3: *Cryptosporidium*, *E. coli*, and turbidity at least monthly for 24 months

Schedule 4: *E. coli* at least once every two weeks for 12 months

Sample reporting form will be available soon



Stage 2 Disinfectant and Disinfection Byproducts Rule

- 💧 Applies to all CWS and NTNC that deliver water treated with a primary disinfectant (not UV)
- 💧 Maximum Contaminant Levels have not changed
 - 💧 TTHM MCL = 0.080 mg/L
 - 💧 HAA5 MCL = 0.060 mg/L
- 💧 Compliance is based on a Locational Running Annual Average (LRAA) at locations identified in compliance monitoring plans



Stage 2 Disinfectant and Disinfection Byproducts Rule

Compliance Monitoring Plans

- 💧 Required for all systems
- 💧 All plans have been reviewed and approved by the DWS
- 💧 Plans must be followed exactly as approved:
 - 💧 Sampling frequency
 - 💧 Sampling locations
 - 💧 Sampling date range
- 💧 Any changes to the plan must receive approval from the DWS
- 💧 Compliance Monitoring Plan Forms and Instructions are available on the DWS Website



Stage 2 Disinfectant and Disinfection Byproducts Rule

Operational Evaluation Levels (OEL)

- 💧 Pre-compliance calculation at each sampling location conducted quarterly after 3 quarters of monitoring
- 💧 Equal to the sum of the 2 previous quarterly results plus twice the current quarter's result, divided by 4
- 💧 Compare OEL to MCL
- 💧 OEL exceedance requires an **OEL report** to be submitted to the DWS **within 90 days** of being notified of the result



Ground Water Rule

Triggered Monitoring

- 💧 Routine TC+ TCR samples “trigger” source water monitoring
- 💧 Triggered samples must be collected within 24 hours
- 💧 Triggered samples must be collected at each ground water source for each TCR TC+ sample
- 💧 Representative monitoring plan advised if a ground water source does not supply the entire distribution system
- 💧 Tier 1 (24 hr) Public Notification required if E. Coli+
- 💧 **Do NOT disinfect until you are sure that no additional (confirmation) monitoring will be required!**



Ground Water Rule

Assessment Monitoring

- ☛ Source does not meet the separating distances from sources of pollution
- ☛ Source is currently disinfected but not 4-log approved
- ☛ Two or more TCR MCL violations in a 12-month period
- ☛ Source is determined to be susceptible to contamination by microbial pathogens based on an HSA
- ☛ All 5 confirmation samples are Fecal Indicator Negative
- ☛ Discontinuance/removal of 4-log approved treatment
- ☛ Initial source schedule will be at the same frequency of the routine TCR monitoring schedule
- ☛ Tier 1 (24 hr) Public Notification required if E. Coli+

Ground Water Rule

Additional (Confirmation) Monitoring

- 💧 Following E. Coli+ triggered or E. Coli+ assessment sample
 - 💧 **Collect 5 Confirmation (CO) samples within 24 hours** of notification for each E. Coli+ source sample (*unless immediate corrective action is required by DWS*)
 - 💧 **Tier 1 (24 hr) Public Notification required**
- 💧 **If any of the 5 CO samples are E. Coli+**
 - 💧 **Additional Tier 1 (24 hr) Public Notification required**
 - 💧 Corrective Action or Corrective Action Plan required within 120 days
 - 💧 Consultation with the DWS is necessary within 30 days
- 💧 **Failure to collect confirmation samples requires Corrective Action within 120 days**



Ground Water Rule

Corrective Action Requirements

Upon notification of E. Coli+ source samples or a significant deficiency, PWS must either:

- ☛ Complete corrective action within **120 days** (30 day consultation period); OR
- ☛ Be in compliance with a DWS approved Corrective Action Plan
- ☛ Failure to comply = Treatment Technique Violation and Tier 2 (30 day) Public Notification Requirement
- ☛ Public notice must be completed annually if not corrective action is not completed



Ground Water Rule

What is a Corrective Action?

- ☉ Correct all significant deficiencies or violations potentially contributing to the issue,
- ☉ Eliminate the source of contamination,
- ☉ Provide an alternate source of water, or
- ☉ Provide treatment which reliably achieves 99.99 percent (4-log) inactivation or removal of viruses.

- ☉ Department needs to know exactly how the situation was corrected and the **date of the correction**
- ☉ Department must be notified of the corrective action within 10 days of completion



Lead and Copper Rule

- 💧 Two words: Flint. Michigan.
- 💧 DWS is conducting a complete review of all of its implementation procedures
- 💧 Expect changes that will tighten-up procedures and compliance activities across the entire section:
 - 💧 More scrutiny of new sources
 - 💧 Closer review of sampling points
 - 💧 Updated guidelines on sampling procedures
 - 💧 Development of detailed Lead and Copper Rule Guidance for PWS and operators
 - 💧 Quicker enforcement referrals when needed
 - 💧 Improved tracking and cross-referencing of customer complaints



Lead and Copper Rule

General reminders

- 💧 Applicable to all CWS and NTNC PWS
- 💧 Lead Action Level = 0.015 mg/L
- 💧 Copper Action Level = 1.3 mg/L
- 💧 “End of the monitoring period” trigger date defined as:
 - 💧 9/30 for annual or less frequent monitoring
 - 💧 6/30 or 12/31 for 6 month monitoring frequency
- 💧 Following an exceedance, PWS returns to standard routine tap monitoring (every 6 months)
- 💧 Systems on triennial monitoring must sample every three years, **not once every three-year compliance period**
- 💧 DWS will no longer approve monitoring reductions if there are other outstanding compliance requirements



Lead and Copper Rule

Sampling Locations

- 💧 PWS must complete a materials evaluation of the distribution system to identify a pool of sampling sites
- 💧 Pool must be large enough to ensure that the water system can collect the required number of samples
- 💧 Sample sites shall not include faucets with POU or POE treatment
- 💧 The sampling pool must consist of (in order of priority):
 - 💧 Tier 1 sampling sites
 - 💧 Tier 2 sampling sites
 - 💧 Tier 3 sampling sites
 - 💧 Non-Tier (representative) sampling sites.
- 💧 **Samples must be reported to the DWS using the identified sampling site!**



Lead and Copper Rule

Sampling Locations

- 💧 Tier 1: Single family structures that: contain copper pipes with lead solder installed after 1982 or contain lead pipes; or are served by a lead service line
- 💧 Tier 2: Buildings, including multiple-family residences, that: contain copper pipes with lead solder installed after 1982 or contain lead pipes; or are served by a lead service line
- 💧 Tier 3: Single family structures that contain copper pipes with lead solder installed before 1983
- 💧 Non-Tier: Representative site in which the plumbing materials used at that site would be commonly found at other sites



Lead and Copper Rule

Lead and Copper Rule Compliance

- 💧 An exceedance of either action level triggers additional requirements:
 - 💧 Water Quality Parameter Monitoring
 - 💧 Corrosion Control Treatment (CCT) Evaluation and Installation
 - 💧 Source Water Monitoring
 - 💧 Source Water Treatment Evaluation and Installation
 - 💧 Lead Public Education (lead exceedance only)
 - 💧 Lead Service Line Monitoring and/or Replacement (repeated lead exceedance only)
 - 💧 Copper Public Notification (Tier 2) (CT requirement only)
- 💧 **Recommended to sample early in the monitoring period**



Lead and Copper Rule

Water Quality Parameters (WQPS)

- 🔹 Required by all systems serving >50,000 and when smaller systems exceed the action levels
- 🔹 **Collected in the same monitoring period as the exceedance**
- 🔹 Samples are collected in the distribution system based on system size and at each entry point
- 🔹 Includes pH, alkalinity, calcium, conductivity, orthophosphate, silica and temperature
- 🔹 Results used to help predict water corrosivity and help identify appropriate CCT and operating levels
- 🔹 After installing CCT and follow-up monitoring, the State sets operating ranges and/or limits for WQPS



Lead and Copper Rule

Source Water Monitoring

- 🔹 Required by all systems that exceed either action level
- 🔹 Conduct lead and copper monitoring at each entry point within six months after the end of the monitoring period
 - 🔹 6 month monitoring frequency: **Due by 12/30 or 6/30**
 - 🔹 Annual or Triennial frequency: **Due by 3/30**
- 🔹 Based on the results, if source water treatment is needed, the system has 24 months for installation
- 🔹 After treatment installation
 - 🔹 Follow-up lead and copper tap and entry point monitoring
 - 🔹 DWS may set maximum permissible levels for source water lead and copper leaving the treatment system



Lead and Copper Rule

Corrosion Control Treatment

- 🔹 Required by all systems that exceed either action level
- 🔹 System shall recommend optimal CCT within 6 months after the end of the monitoring period of the exceedance
 - 🔹 6 month monitoring frequency: **Due by 12/30 or 6/30**
 - 🔹 Annual or Triennial frequency: **Due by 3/30**
- 🔹 Once the State approves the proposed CCT, system has 24 months for installation
- 🔹 System must conduct follow-up tap lead and copper and WQPS monitoring for two consecutive 6-month monitoring periods following installation
- 🔹 CCT steps may be suspended at any time if the system meets both action levels for two consecutive 6-month monitoring periods



Lead and Copper Rule

Lead Public Education

- 💧 Only required if lead action level is exceeded
- 💧 Informs customers about lead health effects, sources and what can be done to reduce exposure
- 💧 May be provided in billing inserts, pamphlets, brochures, newspaper notices and public service announcements (PSA)
- 💧 Lead education materials must be delivered within 60 days after the end of the monitoring period of the exceedance and annually thereafter (every 6 months for PSAs)
 - 💧 6 month monitoring frequency: **Due by 8/29 or 3/1**
 - 💧 Annual or Triennial frequency: **Due by 11/29**
- 💧 May be discontinued when the PWS meets the lead AL
- 💧 Education materials and certification need to be sent to the DWS within 9 days of



Lead and Copper Rule

Consumer Notice

- 💧 **Required for every lead tap water sample collected**
- 💧 Notice of lead tap water monitoring results to persons served at the sites tested
- 💧 Notice must be delivered as soon as practical but not later than 30 days after learning of the results
- 💧 Notice must include:
 - 💧 Results of lead testing
 - 💧 Explanation of health effects of lead
 - 💧 List of steps to reduce exposure
 - 💧 PWS contact information
- 💧 **The Certification and a sample copy of a Notice must be sent to the DWS no later than 3 months after the end of the monitoring period (12/29 for annual/triennial samples, 9/29 and 3/31 for 6 month samples)**

Drinking Water Section



Water Quality Monitoring Schedules

- 💧 Provided by the DWS as a courtesy to assist owners and operators of PWS in maintaining compliance
- 💧 Updated and posted on the website twice monthly
- 💧 Schedules divided into the following sections
 - 💧 Water Quality Monitoring Requirements
 - 💧 Water System Facility Level Monitoring Requirements
 - 💧 Water System Facility Information
 - 💧 Sampling Point Inventory
 - 💧 Operator Certification
 - 💧 Public Notification Requirements
 - 💧 Contact Information
 - 💧 Other Compliance Schedules



Helpful Information

- 💧 DPH website: www.ct.gov/dph
- 💧 DWS website: www.ct.gov/dph/publicdrinkingwater
- 💧 DWS Phone: (860) 509-7333 (during business hours: M-F 8:30 am – 4:30 pm)
- 💧 DPH Main/Emergency phone: (860) 509-8000 (outside of business hours)
- 💧 US EPA website: <http://www.epa.gov/laws-regulations/summary-safe-drinking-water-act>
- 💧 Connecticut Drinking Water Regulations (19-13-B102): <https://eregulations.ct.gov/eRegsPortal/Browse/RCSA>
- 💧 Federal Drinking Water Regulations (40 CFR 141): <http://www.ecfr.gov>



Thanks for Listening! Questions??

Connecticut Department of Public Health Website:

<http://www.ct.gov/dph/publicdrinkingwater>

Presenter Information:

Christopher D. Roy

Supervising Sanitary Engineer

CT Department of Public Health Drinking Water Section

Safe Drinking Water Rule Implementation Unit

410 Capitol Avenue, MS#51WAT

P.O. Box 340308

Hartford, CT 06134-0308

Phone: 860-509-7333

Fax: 860-509-7359

christopher.roy@ct.gov