

The attached guidance, “Revised Municipal Confirmed Bacteria Positive Response Policy”, was developed for use by Department staff and Municipal drinking water systems when responding to confirmed total coliform (TC) and E. Coli bacteria positive sample results.

Revisions to the federal Total Coliform rule (RTCR) were released February 13, 2013. RTCR has an implementation date of April 1, 2016. RTCR outlines specific responses to what are currently classified as Bacteria Non-Acute and Acute MCL violations. These responses contain Level 1 and Level 2 assessments respectively. Systems must complete these assessments, return the results to the Department in 30 days, and carry out any corrective actions that may have become apparent during assessment process.

Because the federal rule eliminates the current maximum contaminant limit (MCL) for Total Coliform, the Bureau of Drinking Water and Groundwater deemed it important to consider changing its policy on boil water\emergency chlorination ahead of the actual RTCR implementation date. This revised policy will be implemented on an interim basis and will be readdressed at the time of full implementation of RTCR

Implementing this policy will allow municipal drinking water systems that currently maintain a disinfectant residual throughout their distribution system, but would be unable to meet the required criteria of a department reviewed emergency chlorination plan (0.5 mg/L of free chlorine throughout the distribution system within 4 hours), to avoid issuing boil water notices, provided they complete a Level 1 assessment, report their findings to the department, and correct any sanitary defects found during the assessment process.

Municipal drinking water systems that currently do not continually disinfect will experience little change in the department’s policy in response to confirmed bacteria positive samples. They will continue to be required to implement a department reviewed emergency chlorination plan or issue a boil water notice. They will have the option of completing a Level 1 assessment, reporting their findings, and correcting any sanitary defects found, in addition to the emergency chlorination or boil water.

The Department is now soliciting public comment from all external stakeholders. Once the 21 day notice period is complete, all comments will be considered, revisions will be made to the guidance as needed, and final guidance will be made available to the appropriate internal and external stakeholders.

Comments related to this draft guidance document should be sent to Kyle Burton, Kyle.Burton@wisconsin.gov; (920)-662-5169.

Revised Boil Water / Emergency Chlorination Policy – Municipal Systems

This policy revision inserts the Level 1 assessment as an alternative to “emergency chlorination” or “boil water” activities in the event of a non-acute MCL situation (assessment trigger) at municipal systems. The Level 1 assessment and triggers are defined as follows:

***Level 1 Assessment** is an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. It is conducted by the system operator or owner. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system.*

Triggers:

- For a system collecting 40 bacteria samples or more per month, more than 5.0% of samples collected are Total Coliform (TC) positive.
- For a system collecting fewer than 40 bacteria samples per month, more than once sample is TC positive.

Revised Policy

Municipal drinking water systems that currently maintain continuous detectable chlorine residuals throughout their distribution systems would have the option of maintaining their normal chlorine residual and completing a Level 1 assessment, and correcting any sanitary defects found rather than initiating emergency chlorination or boil water activities. Systems continue to have the option of initiating their department reviewed emergency chlorination plan or boil water activities if they choose not to complete the Level 1 assessment and fix any sanitary defects found.

Systems that do not maintain continuous detectable chlorine residuals throughout their distribution must initiate their department reviewed emergency chlorination plan or boil water activities and may choose to additionally complete a Level 1 assessment, fixing any sanitary defects found.

Any confirmed E. Coli positive samples would result in a boil water situation for all municipal systems.

Public Notice Requirements

A tier 2 public notice will be required for each system completing a level 1 assessment in response to a TC trigger. Systems choosing not to complete a level 1 assessment in favor

of successfully implementing a department reviewed emergency chlorination plan will also be required to complete a tier 2 public notice in response to a TC trigger. Systems not able to meet the requirements of their department reviewed emergency chlorination plan or those issuing “boil water notice” must issue a tier 1 public notice.

Completing the Level 1 Assessment

The assessment should be completed as soon as possible after the trigger occurs. It must be returned to the Department within 30 days. It may be completed entirely by the system and its operators but may also be completed in consultation with department staff potentially as a phone interview. Any defects found must be completed in a time frame agreed upon by the department and drinking water system. The results and any follow up corrective actions of the level 1 assessment are subject to tier 3 public notice requirements. Systems may use their Consumer Confidence Reports (CCR) to public notice assessment results. Systems choosing to complete a level 1 assessment and failing to complete that assessment in the required 30 day period will be required to public notice that failure with a tier 2 public notice.

RESPONSES TO TOTAL COLIFORM OR ECOLI AT MUNICIPAL WATER SYSTEMS

CONFIRMED TC+

SYSTEMS WITH CONTINUOUS DISINFECTION AND PROVIDING A RESIDUAL IN THE DISTRIBUTION SYSTEM (May choose either option 1 or Option 2)

Option 1 (Current practice)

Operator boosts chlorine level following a Department reviewed emergency chlorination plan **AND** issues a Tier 2 Public Notice within 30 days. It is recommended that a critical customer list is maintained and notified immediately.

Option 2 (Revised Total Coliform Rule (RTCR) Approach)

Operator conducts a RTCR Level 1 Assessment, issues a Tier 2 Public Notice within 30 days, corrects any identified sanitary defects, and submits a Level 1 Assessment Report to the Department.

SYSTEMS WITHOUT CONTINUOUS DISINFECTION OR WITHOUT PROVIDING A RESIDUAL IN THE DISTRIBUTION SYSTEM

Must initiate Department reviewed emergency chlorination plan **AND** issues a Tier 2 Public Notice. It is recommended that a critical customer list is maintained and notified immediately. May also choose to conduct a Level 1 assessment and correct any sanitary defects, in addition to emergency chlorination.

E. COLI+

ALL MUNICIPAL SYSTEMS

MUST BOIL WATER

NOTE: s. NR 810.26 (8) EMERGENCY CHLORINATION PLANS.

--0.5 mg/L throughout the entire distribution system in 4 hours.

--If unable to meet this requirement, system must issue a boil water order and tier 1 public notice in place of emergency chlorination and tier 2 public notice.

Level 1 Self-Assessment Form – Municipal Water Systems

| | |
|-----------------------------------|---------|
| System Name: | PWSID # |
| Operator in Charge (OIC): | Phone: |
| City, | State: |
| County: | |
| Person that collected TC samples: | Phone: |
| Date Assessment Completed: | |

NOTE: Form to be completed based on data and documents available to the PWS operator in charge, maintained on file, and returned to the DNR within 30 days.

| Questions | Issue(s) found? (Y/N) | Issue Description | Corrective Action Taken (Including Date) |
|---|-----------------------|-------------------|--|
| <p>1. Source:</p> <ul style="list-style-type: none"> a) Have there been any reported vandalism and / or unauthorized access to the source facilities prior to the reported unsafe? b) Are there any visible indicators of unsanitary conditions related to the source? c) Are there any changes in potential sources of contamination in proximity to the source? d) Have there been any new sources introduced? e) Any reported or visible cross connection issues? f) Are there any deficiencies visible in the source sanitary seal, vent screening, or air gapping? g) Was there any heavy precipitation, flooding, or rapid snowmelt prior to the reported unsafe? | | | |
| <p>2. Pump facilities/controls, discharge piping:</p> <ul style="list-style-type: none"> a) Have there been any reported vandalism and / or unauthorized access to the pump or pumping facilities prior to the reported unsafe? b) Are there any visible indicators of unsanitary conditions related to the pump or pumping facilities? c) Has there been any recent maintenance, repair, or replacement work done? d) Are there any deficiencies in the pump to waste line or use? | | | |

Level 1 Self-Assessment Form – Municipal Water Systems

| Questions | Issue(s) found? (Y/N) | Issue Description | Corrective Action Taken (Including Date) |
|--|--------------------------|-------------------|---|
| <p>3. Treatment</p> <p>a) Have there been any reported vandalism and / or unauthorized access to the treatment equipment or facilities prior to the reported unsafe?</p> <p>b) Are there any visible indicators of unsanitary conditions related to the treatment equipment or facilities?</p> <p>c) Have there been any recent interruptions in treatment processes prior to the reported unsafe.</p> <p>d) Has there been any recent maintenance, repair, or replacement work done?</p> <p>e) Have there been any changes to the operation or maintenance of the treatment processes?</p> | | | |
| <p>4. Storage:</p> <p>a) Have there been any reported vandalism and / or unauthorized access to the storage tanks or facilities prior to the reported unsafe?</p> <p>b) Are there any visible indicators of unsanitary conditions related to the storage tanks or facilities?</p> <p>c) Are there any deficiencies with the following or any other storage apparatus?</p> <p style="margin-left: 20px;">i. Screens</p> <p style="margin-left: 20px;">ii. Access openings</p> <p style="margin-left: 20px;">iii. Vents / Overflows</p> | | | |
| <p>5. Sample Site and Protocol</p> <p>a) Were the condition and the location of the tap sanitary?</p> <p>b) Has the sample site been in regular use?</p> <p>c) Was the sample tap adequately flushed, any aerators removed, and flamed?</p> <p>d) Were the sample bottles fresh and in sanitary condition?</p> <p>e) Was the sample shipped on ice?</p> | | | |

Level 1 Self-Assessment Form – Municipal Water Systems

| Questions | Issue(s) found? (Y/N) | Issue Description | Corrective Action Taken (Including Date) |
|--|--------------------------|-------------------|---|
| <p>6. Distribution System:</p> <ul style="list-style-type: none"> a) Were there any distribution system low pressure events before the reported unsafe? b) Are there any known cross connection issues within the distribution system? c) Have there been any recent booster pump issues, repairs, or replacements? d) Have there been any recent main breaks, repairs or replacement work done? e) Have there been any recent reports of issues with any air relief valves? | | | |
| <p>7. Operation and Maintenance:</p> <ul style="list-style-type: none"> a) Have there been any operation and maintenance activities that could have introduced total coliform into the system? b) Were there any other water quality parameters measured when or after the sample reported unsafe? c) Has there been any recent firefighting events, hydrant replacement, flushing, or blow offs? d) Have there been any customer complaints regarding pressure or water quality? | | | |

Additional Comments:

Person Completing Form:

Date:

Signature: _____

Level 1 Self-Assessment Form – Municipal Water Systems

State Use Only:

1. **Assessment was successfully completed.**
2. **Date received:**
3. **System has corrected any identified sanitary defects.**
4. **System was granted or requested a reset.**
 - a) **Rational for reset.**
5. **Assessment reviewed by:**

DRAFT