



Center for Drinking Water Quality

Boil Water Order Policy Checklist

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This document outlines Rhode Island Department of Health's (RIDOH) policy and expectations prior to, during, and after a Boil Water Order is issued to a public water system. The requirements below include public water system (PWS) emergency planning and response, public notification, action plan, monitoring, and standard operating procedure (SOP) activities. The goal of this comprehensive checklist is to ensure that a PWS and, when applicable, its consecutive water systems can swiftly and safely return to normal operations while also protecting the public's health and being in compliance with state and federal regulations. State regulations regarding Boil Water Orders are found in Section 1.9.4, Section 1.10(C)(1), Section 1.11, Section 1.16.4(A)(7)(e), and Section 1.16.6 of Public Drinking Water [216-RICR-50-05-01] (<https://rules.sos.ri.gov/regulations/part/216-50-05-1>).

A Boil Water Order is issued to a PWS when:

- Repeat sample result is *E. coli* present;
- Repeat sample result is total coliform present following an *E. coli* present routine sample;
- A complete set of repeat samples was not taken following an *E. coli* present routine sample;
- No *E. coli* analysis was performed on a repeat sample;
- Sample result from a well without 4-log treatment is *E. coli* present; and/or
- Any PWS receiving water from another PWS that experiences any of these four situations.

CLARIFICATION OF TERMS: RIDOH issues a Boil Water Order to a PWS; a PWS issues a Boil Water Notice to consumers.

Communications

Communicate the Boil Water Notice to your consumers and be available to respond to their questions and concerns. If your PWS serves a large, non-English speaking population, provide information in the appropriate language(s).

- Notify your wholesale and consecutive water systems, as applicable.
- Designate a *single* Point of Contact, for each PWS that is impacted, who is readily accessible during normal business hours *and* after hours.
- Share contact information of designated Point of Contact with RIDOH and all PWSs involved.
NOTE: The Director of RIDOH, or their appointee, will be RIDOH's single point of contact for municipal officials.
- Provide street-level GIS maps and address lists of affected areas to RIDOH and make them available to your customers.
- Provide a phone number, that will be staffed 24 hours per day, that the public may call with questions.
- Prepare personnel to staff customer hotline for the first 24 hours after initial notification of the Boil Water Notice. After the first 24 hours, a pre-recorded message is allowed with a referral to a person who is available 24 hours.

NOTE: Expect a dramatic increase in call volume. Consider requesting assistance from local emergency personnel or other resource(s) to handle call volume.

- Obtain *Boil Water Notice Questions and Answers* guidance document from RIDOH.
- Ensure that a copy of *Tier 1 Public Notice* template is in your PWS's Emergency Response Plan.
- Prepare and issue required *Tier 1 Public Notice* and forward a copy of notice to RIDOH.

NOTE: Pre-approval by RIDOH is not required before issuing a *Tier 1 Public Notice*; however, it can be provided upon request. If *Tier 1 Public Notice* is determined to be necessary during non-business hours, do not delay issuing the *Public Notice* by waiting for RIDOH review/approval.

- Identify a way to provide the *Public Notice* to renters, hotel guests, and visitors, etc. Make a good faith effort to do so.
- Prepare and distribute the *Public Notice* via a mass notification system (for example, CodeRED). Check with the vendor for specific instructions on message format and character limits. In general, the six elements that should be included in a mass notification are:
 1. This is an emergency message from (Name of organization)
 2. Time and date of the call
 3. Scope of the emergency
 4. Area(s) affected by emergency
 5. Action that needs to be taken
 6. Directions to get more information
- Ensure coordination and consistent wording on all press releases, announcements, and social media messaging among all PWSs involved with the *Public Notice* and with RIDOH. Consider issuing joint press releases (in which all PWSs are named and the needs of all consumers are met) to minimize outgoing messages.
- Coordinate public messaging with municipal officials.

NOTE: RIDOH suggests that municipal officials coordinate public messaging with first responders, schools, healthcare facilities, food establishments, and large business representatives. Municipal officials can reach the Center for Health Facilities Regulations and the Center for Food Protection by calling the RIDOH information line at 401-222-5960.

- Be prepared to monitor and respond to social media inquiries and comments.
- Be prepared to provide daily updates to your consumers.

Identify and correct the source of contamination

- Consecutive PWS(s) with total coliform present results perform(s) Level 1 Assessment within 24-48 hours of receiving notification of those results. RIDOH may be available to assist, if needed.

- PWS(s) with *E. coli* present results *must* have a certified level 2 assessor perform the Level 2 Assessment within 24-48 hours of notification of the condition that led to issuing of the Boil Water Order. RIDOH staff will be present for the Level 2 Assessment and may conduct the Assessment under certain circumstances or as per the Director. PWS staff are required to be on site to provide the assessor and RIDOH staff with access to sampling locations, tanks, treatment facilities, wells, records, and any other necessary equipment/documents.
- Expect a *Level 2 Assessment Response* from RIDOH, including items that need to be corrected/fixed/submitted prior to taking the samples that are required to lift the Boil Water Order.

NOTE: Some items listed in RIDOH's *Assessment Response* may include the PWS creating a Corrective Action Plan or submitting a Letter of Understanding to fix more complicated items that RIDOH deems to be less direct, potential pathways for contamination. Such items will not inhibit the system from moving forward with collecting the samples required to lift the Boil Water Order.

- Correct any sanitary defects listed and submit *Level 2 Assessment Response* items to RIDOH.
- Compose a *Due Diligence Report*. The *Level 2 Assessment Response* is not all-encompassing and may not reveal a direct pathway causing contamination, so the *Due Diligence Report* will be a key resource for identifying potential issues in the system that triggered the Level 2 Assessment. The *Due Diligence Report* should include, at a minimum, the results of the surveys, inspections, and reviews listed below, which may help to reveal the source of contamination.
 - Perform a cross-connection survey(s) in area(s) where samples were coliform present and correct any problems with cross-connections found.
 - Review PWS's *Cross-Connection Control Plan*.
 - Review backflow preventer/cross-connection records.
 - Inspect backflow preventers at sampling locations.
 - Review customer complaint log.
 - Inspect all tanks and record inspection results, including investigatory sampling of tanks.
 - Review leak detection records.
 - Review maintenance records.
 - Review fire department events (fire flows, training, etc.) that may have impacted the water system.
 - Review chlorine residual data/other applicable water quality data.
- Submit *Due Diligence Report* to RIDOH.
- If alternate water is to be provided, contact RIDOH for requirements before doing so.

Disinfect and flush

- Coordinate/prepare response efforts regarding adding/increasing chlorine with other PWSs involved. (Each PWS involved should review their *Emergency Response Plan*.)
 - If your PWS *does not* provide continuous disinfection you must identify or devise connection points to inject NaOCl at rates to maintain 0.20 mg/l free chlorine at the extents of the distribution system.
 - If your PWS *does* provide continuous disinfection, you must be able to achieve 0.2 mg/L higher than the normal chlorine residual levels throughout the distribution system.
 - Submit chlorine logs to RIDOH showing 0.2 mg/L or 0.2 mg/L higher than normal residual levels throughout the distribution system, including but not limited to, the ends of the distribution system.
 - Perform distribution system flushing operations to ensure adequate residual chlorine throughout the distribution system.
 - Develop or implement existing sampling plan to measure free chlorine residual levels throughout the PWS affected by the Boil Water Order to demonstrate that the required increase in free chlorine has been achieved and then flushed where necessary.
- NOTE:** Documentation of chlorine residuals may require using and indicating sampling sites in areas not already represented in the PWS's coliform sampling plan.
- If your PWS does not provide continuous disinfection (does not chlorinate), you must flush the system after eight hours to get the chlorine residual to 0.0 mg/L.

Final sampling and Public Notice to lift the Boil Water Order

- Once an acceptable *Due Diligence Report* has been submitted to RIDOH and chlorine levels meet RIDOH's requirements, PWSs can begin three consecutive days of sampling for coliform bacteria at all routine sampling locations.
- NOTE:** If a total coliform/*E. coli* present result is received, the three consecutive days must start again, and additional corrective actions may be required.
- NOTE:** If the wholesale system has absent results for three consecutive days but the consecutive system does not, only the consecutive system must begin the three days of testing again.
- Results must be submitted on the official Microbiological Result State Reporting Form (<https://bit.ly/2meRYlt>) with *Certificates of Analysis* or via electronic upload from the State-certified laboratory that tested the sample.
 - Once results are reviewed and approved by RIDOH, RIDOH will notify the PWS(s) that the Boil Water Order can be lifted.
 - Obtain *Post-Boil Cleaning and Sanitizing* (<https://bit.ly/2kGTmTL>) guidance document from RIDOH.
 - Issue Public Notice that the Boil Water Order/Notice has been lifted.