

Community and NTNC Public Water System Emergency Response Plan





**LOGOCOLR**

**Rural Community Assistance Corporation**

***www.rcac.org***









*Produced for the Rural Community Assistance Partnership (RCAP) National Network*

*by Rural Community Assistance Corporation, Western RCAP*

*RCAP Safety and Security Education Program*

*and modified by the Rhode Island Department of Health*

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Planning Template

NA02020_

Introduction

Preparing an emergency response plan (ERP) is an essential part of managing a drinking water system. Rural Community Assistance Partnership, Inc. and the Rhode Island Department of Health (RIDOH) Center for Drinking Water Quality has developed this template for public water systems (PWSs) to help them develop such plans and comply with RIDOH Drinking Water Regulation 216-RICR-50-05-1, primarily with § 1.9.9 PWS Emergency Response Plans. Compliance shall also be achieved with other emergency-related sections of the Regulation, for example, § 1.9.6, Minimum Pressure Requirements; § 1.9.7, Auxiliary Power; and § 1.9.8, Notifications Involving Emergency Events.

NA02020_  
How to use the template

Developing an emergency response plan (ERP) can take a lot of time and effort. The purpose of this document is to make the job easier and help create a plan that works for your public water system (PWS). The document is intended for use by any public water system and may be modified to fit the specific needs of each system. Use this document as a starting point based on what is relevant for the type, size, and complexity of the system.

The template is just a guide; you may modify it in any way that works for your PWS—add sections, take them out, or rearrange them. You may also use a completely different format for your plan if you find one that works better for your PWS and results in compliance.

Since this completed document and the rest of the ERP likely contain sensitive information, **do not** submit them to RIDOH. Make sure to keep the ERP stored in a safe and secure location. RIDOH compliance is accomplished by completing the ERP and submitting certification to RIDOH. It is recommended you have one copy of the Plan stored on-site and one off-site to ensure the document is available in the event you are unable to access your offices or facilities. The document template is available electronically on the web at:

<https://health.ri.gov/water/for/publicwatersystemsduringemergency/>

https://health.ri.gov/licenses/detail.php?id=274

NA02020_The requirement for an  
Emergency Response Plan

RIDOH Drinking Water Regulation (216-RICR-50-05-1 § 1.9.9) requires that all public water systems must develop and maintain an Emergency Response Plan. This guidance document can be used to help meet the requirement for developing an Emergency Response Plan for a PWS of any size. Other methods or formats can also be used to meet the Emergency Response Plan requirement.

NA02020_Section 1.  
System Information

Keep this basic information easily accessible to authorized staff for using with emergency responders, repair people, and the news media.

**System information**

|  |  |  |  |
| --- | --- | --- | --- |
| **System identification number (PWS ID)** |  | | |
| **System name and address** |  | | |
| **Directions to the system** |  | | |
| **Basic description and location of system facilities** |  | | |
| **Location/Town** |  | | |
| **Population served and service connections from division of drinking water records** | Number of people: | Number of connections: | |
| **System owner** | Name: | | Phone number:  Email address: |
| **Name, title, phone number and email address of person responsible for maintaining and implementing the emergency plan** |  | | Phone number:  Email address: |

NA02020_Section 2.  
Chain of Command—Lines of Authority

**The first response step** in any emergency is to inform the person at the top of this list. This person is responsible for managing the emergency and making key decisions.

**Chain of command**—**lines of authority**

| **Name and title** | **Responsibilities during an emergency** | **Contact numbers** |
| --- | --- | --- |
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NA02020_Section 3.  
Events that Cause Emergencies

The events listed below may cause water system emergencies. They are arranged from highest to lowest probable risk.

**Events that cause emergencies**

|  |  |  |
| --- | --- | --- |
| **Type of event** | **Probability or risk**  **(High-Med-Low)** | **Comments** |
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NA02020_Section 4.  
Emergency Notification

**Report PWS status to RIDOH after a significant weather event:** In the 24 hours following a significant weather event, the Center for Drinking Water Quality requires status reports from public water system personnel when requested. Report status using the *PWS Reporting After a Significant Weather Event* form found on the following webpage: <https://health.ri.gov/water/for/publicwatersystemsduringemergency/>

**Notification call-up lists:** Use these lists to notify first responders of an emergency.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Emergency Notification List | | | | |
| **Organization or department** | **Name & position** | **Telephone** | **Night or cell phone** | **Email** |
| **Local law enforcement** |  |  |  |  |
| **Fire department** |  |  |  |  |
| **Emergency medical services** |  |  |  |  |
| **Water operator**  **(if contractor)** |  |  |  |  |
| **Primacy agency contact** |  |  |  |  |
| **Hazmat hotline** |  |  |  |  |
| **Interconnected water system** |  |  |  |  |
| **Neighboring water system (not connected)** |  |  |  |  |
| **RCAP contact** |  |  |  |  |
| **Rural water contact** |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Priority Customers | | | | |
| **Organization or department** | **Name & position** | **Telephone** | **Night or cell phone** | **Email** |
| **Hospitals or clinic(s)** |  |  |  |  |
| **Public or private schools** |  |  |  |  |
| **Wastewater treatment plant** |  |  |  |  |
| **Adult care facility** |  |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| State, Federal, or Tribal Notification List | | | | |
| **Organization or department** | **Name & position** | **Telephone** | **Night or cell phone** | **Email** |
| **State or tribal police** |  |  |  |  |
| **Regulatory agency State/Federal/Tribal** |  |  |  |  |
| **Authorized testing laboratory** |  |  |  |  |

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| --- | --- | --- | --- | --- |
| Service / Repair Notifications | | | | |
| **Organization or department** | **Name & position** | **Telephone** | **Night or Cell phone** | **Email** |
| **Electric utility co.** |  |  |  |  |
| **Electrician** |  |  |  |  |
| **Fuel supplier (gas/propane/oil)** |  |  |  |  |
| **Water testing lab.** |  |  |  |  |
| **Sewer utility co.** |  |  |  |  |
| **Telephone co.** |  |  |  |  |
| **Plumber** |  |  |  |  |
| **Pump supplier** |  |  |  |  |
| **“Dig Safe”**  **(**[**www.digsafe.com**](file:///C:\Users\Alicyn.Murphy\AppData\Local\Microsoft\Windows\INetCache\Content.Outlook\1IOSMWI5\www.digsafe.com)**)** |  |  |  |  |
| **Rental equipment supplier** |  |  |  |  |
| **Chlorine supplier** |  |  |  |  |
| **Well drilling co.** |  |  |  |  |
| **Pipe supplier** |  |  |  |  |
| **Alternate water source/Bottled water vendor** |  |  |  |  |

In the event of a natural disaster that causes significant damage to the water system, use Appendix B. *Natural Disaster Incident Response Form* to provide RIDOH with a detailed report on the status of the PWS.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Media Notification List | | | | |
| **Organization or department** | **Name & position** | **Telephone** | **Night or cell phone** | **Email** |
| **Newspaper**—**Local** |  |  |  |  |
| **Newspaper**— **Regional/State/Tribal** |  |  |  |  |
| **Radio station 1** |  |  |  |  |
| **Radio station 2** |  |  |  |  |
| **TV Station 1** |  |  |  |  |
| **TV Station 2** |  |  |  |  |

**Notification procedures**

**Notify water system customers of potential water shortage.**

|  |  |
| --- | --- |
| **Responsible party:** |  |
| **Procedures:** |  |

**Alert local law enforcement, state, federal, or tribal drinking water officials, and local health agencies.**

|  |  |
| --- | --- |
| **Responsible party:** |  |
| **Procedures:** |  |

**Contact service and repair contractors.**

|  |  |
| --- | --- |
| **Responsible party:** |  |
| **Procedures:** |  |

**Contact neighboring water systems and implement RIWARN Mutual Aid Agreement, if necessary.**

|  |  |
| --- | --- |
| **Responsible party:** |  |
| **Procedures:** |  |

**Procedures for issuing a health notice.**

|  |  |
| --- | --- |
| **Responsible party:** |  |
| **Procedures:** |  |

**Other procedures as necessary.**

|  |  |
| --- | --- |
| **Responsible party:** |  |
| **Procedures:** |  |

NA02020_Section 5.  
Emergency Public Notification Procedures

Communication with customers, the news media, and the general public is a critical part of emergency response. The Emergency Response Plan must include emergency public notification templates as well as precautionary and boil water notice templates and guidance. See Appendix D through Appendix M.

Appendix G: *Boil Water Order Policy Checklist* contains more information about preparing for an emergency event, including the required aspects of emergency public notification procedures.

**Designated public spokesperson and alternate(s)**

Designate a spokesperson and alternate(s). Contact your local primacy agency for delivering messages to the news media and the public.

|  |  |
| --- | --- |
| **Spokesperson** | **Alternate(s)** |
|  |  |

**Health notices**

During events when water quality and human health may be compromised, it may be necessary to issue a health notice commonly called a boil water notice. This notice gives advice or recommendations to water system customers on how to protect their health when drinking water is considered unsafe. Boil water advisories are issued when the water system, state, tribal, or local health authorities determine that there are sufficient health risks to the consumers. Communication during these times is critical. Health advisories should always be well thought out and provide very clear messages.

The US Environmental Protection Agency has put together a number of tools, including fact sheets, brochures, forms, and templates to help prepare for a health notice. These are available online at: <https://www.epa.gov/dwreginfo/public-notification-rule>.

RIDOH’s Emergency Information for Public Water Systems webpage is another helpful resource: <https://health.ri.gov/PWSprepare>

Section 6.  
Response Actions for Specific Events

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**All Emergency Events**

For all types of emergency events, follow the general steps below:

1. Analyze the type and severity of the emergency;
2. Take immediate action to save lives;
3. Take action to reduce injuries and system damage;
4. Notify RIDOH of system damage;
5. Notify customers of hazards and water use restrictions;
6. Make repairs based on priority demand;
7. Return the system to normal operation;
8. Notify RIDOH and submit lab reports for review; and
9. After RIDOH approval, notify customers of system restoration.

**Specific Events**

For specific events, the following table identifies the assessment, sets forth immediate response actions, defines what notifications need to be made, and describes important follow-up actions.

| Event | Assessment | **Immediate actions** | **Notifications** | **Follow-up actions** |
| --- | --- | --- | --- | --- |
| **Power outage** |  |  |  |  |
| **Distribution line break** |  |  |  |  |
| **Chlorine treatment equipment failure** |  |  |  |  |
| **Treatment equipment failure** |  |  |  |  |
| **Source pump failure** |  |  |  |  |
| **Microbial (coliform, *E. coli*) contamination** |  |  |  |  |
| **Chemical contamination** |  |  |  |  |
| **Vandalism or terrorist attack** |  |  |  |  |
| **Reduction or loss of water in the well** |  |  |  |  |
| **Drought** |  |  |  |  |
| **Flood** |  |  |  |  |
| **Earthquake** |  |  |  |  |
| **Hazardous materials spill in vicinity of sources or system lines** |  |  |  |  |
| **Electronic equipment failure** |  |  |  |  |
| **Cyber attack** |  |  |  |  |
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**NA02020_Section 7.  
Alternative Water Sources**

**Interconnection with adjacent water supply system**

|  |  |
| --- | --- |
| Water systems within one-quarter mile of our system | Feasibility of connecting |
|  |  |
|  |  |

**Alternate source(s) of water**

| **Alternate sources** | **Names** | **Phone** | **Availability** | **Is the water safe for drinking?** |
| --- | --- | --- | --- | --- |
| **Bottled water suppliers for potable water use** |  |  |  |  |
| **Tanker trucks in the area available to deliver bulk water for non-potable use** |  |  |  |  |
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Section 8.  
Returning to Normal Operation

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**Returning to normal operations**

This section should include procedures for measures that must be taken to return to normal operations. At a minimum, it must include disinfection procedures for wells, the distribution system, and tanks. When disinfection is needed, PWSs can use Appendix O. *Well Disinfection Procedure* and should apply the following AWWA standards, as amended:

a. Wells – AWWA C654-13

b. Distributions – AWWA C651-14

c. Storage tanks – AWWA C652-11

d. Field Dechlorination – AWWA C655-18

|  |  |
| --- | --- |
| **Corrective measure** | **Description and means of confirmation** |
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Section 9.  
Plan Approval

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**Plan approval**

This plan is officially in effect when reviewed, approved, and signed by the following PWS officials:

|  |  |  |
| --- | --- | --- |
| Name/Title | Signature | Date |
|  |  |  |
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Section 10.  
NA02020_Certification

Complete *Appendix A:* *Certification of Public Water System Emergency Response Plan* and return by mail to Rhode Island Department of Health, Center for Drinking Water Quality, Three Capitol Hill, Room 209, Providence, RI 02908 or by email to [DOH.RIDWQ@health.ri.gov](mailto:DOH.RIDWQ@health.ri.gov) with *Certification of PWS ERP* in the subject line.

Appendices:  
NA02020_Required documents

The series of documents listed below and found on the following pages are required elements of your Emergency Response Plan. Guidance and checklist/procedure documents are protected from editing. Public Notice templates are indicated by the “\*” following their titles. Some of the appendices may not be applicable to your public water system and may be removed. For example, if the PWS is not a food establishment you may delete the *Food Establishments Boil Water Notice FAQ* and the *Post-Boil Water Notice Guidance for Food Establishments*.

**Appendices**

1. Certification of Public Water System Emergency Response Plan
2. Natural Disaster Response Form
3. Winter Weather Preparation Checklist
4. Precautionary Boil Water Notice\*
5. Boil Water Notice, Distribution\*
6. Boil Water Notice, Well\*
7. Boil Water Order Policy Checklist
8. Household Boil Water Notice FAQ
9. Food Establishments Boil Water Notice FAQ
10. Boil Lifted Notice\*
11. Post-Boil Water Notice Guidance for Households
12. Post-Boil Water Notice Guidance for Food Establishments
13. Post-Boil Water Notice Guidance for Schools, Healthcare Facilities, & Other Businesses
14. Bulk Water Policy
15. Well Disinfection Procedure

**Certification of** **Public Water System Emergency Response Plan**

**Non-Transient Non-Community and Community Public Water Systems**

**Part (A): Public Water System Identification**

Public water system name:

Public water system complete mailing address:

Public water system identification number:

Population served:

**Part (B): Certification Date**

Date of the certification:

**Part (C): Certification Statement**

I, *[Name of certifying official]* hereby certify that an emergency response plan (hereafter, Plan) has been developed for the public water system named under Part A and that it is in compliance with the requirements of § 1.9.9 of the Rhode Island Department of Health Drinking Water Regulations (216-RICR-50-05-1). This Plan will be maintained, will be updated as necessary to incorporate changes and at a minimum interval of every five years, and will be implemented to mitigate the effects of applicable hazards. By checking off and signing below, I attest that the Plan includes:

* A statement of the objectives that the Plan is designed to achieve, including identification of the criteria that will initiate activation of the Plan;
* Known and potential natural and human-caused risk(s) to the PWS;
* Major PWS component information, including identification of those components that may be incapacitated during emergency situations;
* Organizational structure including names of emergency response team members in accordance with 216-RICR-50-05-1.9.9(C)(2); and telephone numbers and email addresses that will be responded to twenty-four (24) hours a day, seven (7) days a week;
* Contact information for external contacts including the Department of Health, Department of Environmental Management, police, fire, and local emergency management director(s) designated by the State Emergency Response Commission;
* Response checklist providing procedures for responding to a power outage, loss of pressure, flooding, and contamination;
* Procedures for obtaining and distributing potable water if the primary source(s) become(s) unavailable;
* Emergency disinfection procedures for distribution system(s) and storage tank(s);
* Emergency public notification procedures and templates;
* Vulnerability assessment;
* Any other information the Director deems necessary to respond to unforeseen water emergencies and long-term, relatively predictable water emergencies;
* Updates from recent, significant changes to the systems and operations and maintenance procedures;
* Current emergency response team personnel or their telephone numbers or email addresses;
* Acknowledgement that the PWS will report to RIDOH within seventy-two (72) hours of contact info change; and
* Designation of Plan storage location that will remain readily accessible in the event of an extended emergency.

I attest to the accuracy of the above and certify that it is in compliance with 216-RICR-50-05-1.9.9,

*[Certifying official – Signature and DATE]*

*[Certifying official – Printed name]*

*[Certifying official – Phone]*

*[Certifying official – Email]*

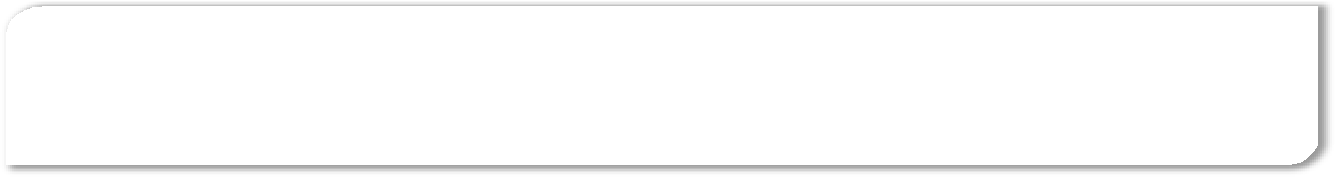
Rhode Island Department of Health

Center for Drinking Water Quality

Natural Disaster Incident response form

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| **Water System Information Date:**   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | PWS-ID#: |  | Water System Name: | | | Most Recent  Site Visit: |  |  | | Contact Person: | | | Phone Number: | Email: | | | | |   Address:   |  |  |  | | --- | --- | --- | | Public Water System Type (circle one):  Community / Non-Community / Transient | Public Water System Source (circle one):  Groundwater / Surface Water / Both / Purchased / Unsure | Population: | | **Met With (Office Use Only)** | | | | Name: | Phone Number: | Date/Time: | |  | Email: | Contact Made: on-site / phone / email |   **Damage assessment information**   |  |  | | --- | --- | | Is the water system operational? | YES  NO  PARTIAL  UNKNOWN | | Did the water system lose pressure? | YES  NO  PARTIAL  UNKNOWN | | Did the water system lose power? | YES  NO  PARTIAL  UNKNOWN | | Was there any physical damage to the system? If yes, explain below: | YES  NO  UNKNOWN | | Explain: | | | Other: | | | Is the water system operating under a Mandatory or Precautionary Boil Water Order? | YES  NO  UNKNOWN | | If there is physical damage to the water system, identify the parts of the system and the extent of damage: | | | |  |  |  | | --- | --- | --- | | **SOURCE** | CRITICAL | NON-CRITICAL | | **STORAGE TANK:** | CRITICAL | NON-CRITICAL | | **VALVES:** | CRITICAL | NON-CRITICAL | | **PUMPS:** | CRITICAL | NON-CRITICAL | | **PIPES:** | CRITICAL | NON-CRITICAL | | **ELECTRICAL EQUIPMENT:** | CRITICAL | NON-CRITICAL | | **VEHICLES:** | CRITICAL | NON-CRITICAL | | **SCADA (IF APPLICABLE):** | CRITICAL | NON-CRITICAL | | **DAMS (IF APPLICABLE):** | CRITICAL | NON-CRITICAL | | **OTHER:** | CRITICAL | NON-CRITICAL | | Critical Customers (Hospitals, Industries, Emergency Response Facility, etc.): | | | | |  |  | | --- | --- | | 1. | YES  NO | | 2. | YES  NO | | 3. | YES  NO | | 4. | YES  NO | | 5. | YES  NO | | | | | |   **OPERATOR INFORMATION**  (if applicable)   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  |  | | --- | --- | --- | | CATEGORY | NORMAL STAFFING LEVELS | CURRENT  STAFFING  LEVELS | | Certified Operator |  |  | | Non-Certified Operator |  |  | | Administrative |  |  | | Information Technology |  |  | | | **GENERATOR** | | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | Does the system have an emergency generator? | YES  NO  UNKNOWN | | Does the generator power the entire system? If not, please explain below: | YES  NO  PARTIAL  UNKNOWN | | Is the generator pad mounted or portable? | PAD MOUNTED  PORTABLE | | Automatic switch or manual start | AUTOMATIC  MANUAL | | | Fuel type/storage capacity/number of days of supply: | | How long do you run each generator? | | | |  |  |  |  |  | | --- | --- | --- | --- | --- | | **SOURCE** | | | | | | |  |  |  | | --- | --- | --- | | NAME | TYPE | CONDITION | |  | GW  SW  PURCHASED |  | |  | GW  SW  PURCHASED |  | |  | GW  SW  PURCHASED |  | |  | | | | | | | | | **TREATMENT** | | | | | | DISINFECTANT TYPE | PRE-TREATMENT | PRIMARY | BOOSTER | OPERATIONAL | | Chlorination: Gaseous |  |  |  | YES  NO | | Chlorination: Sodium Hypochlorite |  |  |  | YES  NO | | Chlorination: Calcium Hypochlorite |  |  |  | YES  NO | | Chlorine Dioxide |  |  |  | YES  NO | | Miox |  |  |  | YES  NO | | Ozonation |  |  |  | YES  NO | | Ultra Violet (UV) |  |  |  | YES  NO | | Chloramination |  |  |  | YES  NO | | | How many days’ supply of disinfectant does the water system have? | | |  |  |  | | --- | --- | --- | | CHEMICAL USED FOR TREATMENT | DAYS OF SUPPLY AVAILABLE | NEXT DELIVERY DATE | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | | | | | | |  |  |  | | **SAMPLING INFORMATION** | | | | | | | Which of the following water quality parameters do you have the capability to test? Check all that apply.  pH  Free Chlorine  Total Chlorine  Alkalinity  Turbidity  Total Coliform  Other  Additional description of State’s/Water system’s response and results of water quality testing: | | | | | | | **FIELD TESTS** | | | | | | | Chlorine Residual Range: | Chlorine Res. Avg: | Field Test Result: | | Field Test Loc.: | | | Pressure Range: | Average Pressure: | Field Test (psi): | | Field Test Loc.: | | | Number of Total Coliform Samples: | | | | | | | **OTHER SYSTEM RESPONSE MATERIAL** | | | | | | | Emergency Booster Disinfection in Distribution System: | | | | YES  NO  UNKNOWN | | | Re-routing water to customers: | | | | YES  NO  UNKNOWN | | | Discontinuation of service to customers: | | | | YES  NO  UNKNOWN | | | Reported customer complaints: | | | | YES  NO  UNKNOWN | | | Emergency Interconnections: | | | | YES  NO  UNKNOWN | | | Is additional assistance from EPA being requested? If yes, describe below: | | | | YES  NO  UNKNOWN | | | **ADDITIONAL DETAILS/NOTES** | | | | | | |  | | | | | | | Designated time and date for update/follow-up information: | | | | | | | Signature of water system representative: | | | Name of water system representative: | | | | Signature of assessor: | | | Name of assessor: | | | |  | | |  | | | |  |  |  |  |  |  |
|  |

**Step One: Before the Storm**



Winter weather events may cause problems for your public water system. The Rhode Island Department of Health, Center for Drinking Water Quality reminds you to prepare for the upcoming winter season.

Please use this document as guidance.



Rhode Island Department of Health Center for Drinking Water Quality

Winter Weather Preparation

* Review your system’s emergency management plan to verify snow and ice readiness.
* Tightly fasten all bolts of the well cap.
* Check well casing, cap, screens, and electrical conduit for holes or cracks.
* Secure screens and hatches on storage tanks.
* Mark well locations with highly visible flags.
* Test emergency generators yearly to confirm good working order.
* Confirm that indoor heaters are working properly and placed appropriately. Remove flammable and hazardous materials.

**Step Two: During the Storm**

* Remove snow and ice from areas around wellhead.
* Do not plow snow over the well casing.

**Step Three: After the Storm**

* Do not use ice melt around the well casing.
* If there is a loss of pressure, issue a boil water notice and notify RIDOH within 24 hours or by the end of the next business day using the contact information below for additional directions.



**If you are no longer the administrative contact, please notify us within 24 hours.**

PUBLIC NOTICE TO ALL CONSUMERS OF

[PWS#ID]

[Water System Name]

[Water System Address]

DRINKING WATER WARNING

*E. coli* is present in *[Water System Name]*’s water

BOIL YOUR WATER BEFORE USING

***[Briefly describe the situation, such as: “E. coli bacteria were found in the water supply on [give date]”.]*** These bacteria can make you sick and are especially a concern for people with weakened immune systems.

Bacterial contamination can occur when increased run-off enters the drinking water source (for example, following heavy rains). It can also happen due to a break in the distribution system (pipes) or a failure in the water treatment process.

What should I do? What does this mean?

* **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation until further notice. Boiling kills bacteria and other organisms in the water.
* *\*E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.\**
* The symptoms above are not only caused by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice from their healthcare providers about drinking this water.

What is being done?

***[Describe corrective action].*** We will inform you when tests show no bacteria are present and you no longer need to boil your water. We anticipate resolving the problem within ***[estimated timeframe]***.

For more information, please contact ***[CONTACT NAME AND PHONE]***. General guidelines on ways to lessen the risk of infection by bacteria and other disease-causing organisms are available from the EPA Safe Drinking Water Hotline at 1-800-426-4791.

*\*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.\**

This notice is being sent to you by ***[PWS NAME, ID#: RIXXXXX].***

Date distributed: \_\_\_\_\_\_\_\_\_.

PUBLIC NOTICE TO ALL CONSUMERS OF

## [PWS#ID]

[Water System Name]

[Water System Address]

**DRINKING WATER WARNING**

*E. coli* is present in *[Water System Name]*’s water

**BOIL YOUR WATER BEFORE USING**

Our water system recently detected a *E. coli* (see definition below) in one of our wells. As our customers, you have a right to know what happened and what we are doing to correct this situation. On ***[DATE]***, we collected a sample from ***[LOCATION]***. The sample tested positive for *E. coli*.

What should I do? What does this mean?

* **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation until further notice. Boiling kills bacteria and other organisms in the water.
* *\*E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.\**
* The symptoms above are not only caused by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice from their health care providers about drinking this water.

What is being done?

*[Describe corrective action.]* We will inform you when tests show no *E. coli* and you no longer need to boil your water. We anticipate resolving the problem within *[estimated timeframe].*

For more information, please contact ***[CONTACT NAME AND PHONE]***. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1-800-426-4791.

*\*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.\**

This notice is being sent to you by ***[PWS NAME, ID#: RIXXXXX].***

Date distributed: \_\_\_\_\_\_\_\_\_\_\_

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 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/2meRYIt>) 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.

**Center for Drinking Water Quality**

**Questions and Answers About *E. coli* and Fecal Coliform Bacteria in the Water Supply and Boil Water Notices**

**When *E. coli* is found in my drinking water, what does that mean?**

The Rhode Island Department of Health (RIDOH) monitors drinking water throughout the state through regular testing. Sometimes water testing finds *E. coli*/ fecal coliform bacteria in the drinking water supply. *E. coli* and fecal coliform bacteria indicate that the water may be contaminated with human or animal wastes. Drinking water with these wastes can cause short-term illness, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems. If this happens, your water system will issue a boil water notice. A boil water notice lets people know that they should boil their water for at least one minute, or used bottled water, for drinking, cooking, food preparation, making ice, brushing teeth, bathing children, and washing dishes. In addition, infants and young children should not be bathed in this water because they may accidentally swallow it.

**If my water systems tell me my water is contaminated, should I get it tested?** There is no need to get your water tested. A water test at your house will only tell you what is in your water at that specific point in time. It won't tell you what else is in the larger water distribution system. Therefore, the water testing needs to be conducted on the entire system, as it has been.

**What will happen to me if I drink this water?**

Almost everyone who drinks this water will be fine and will have no symptoms at all. Those people who do develop symptoms may suffer nausea, diarrhea, cramps, and possibly a mild fever. These symptoms are very much what you would expect from a case of food poisoning. If you get these symptoms, you should wash your hands frequently and avoid dehydration. Call a doctor if an infant or elderly person develops these symptoms or if you have a weakened immune system. You should also call a doctor if you have diarrhea and any of the following symptoms:

* Fever over 101.5° F, measured orally.
* Blood in the stool.
* Prolonged vomiting that prevents keeping liquids down (which can lead to dehydration).
* Signs of dehydration, including a decrease in urination, a dry mouth and throat, and feeling dizzy when standing up.
* Diarrheal illness that lasts more than 3 days.

**Could I get Hepatitis from the water?**

It is possible to get Hepatitis A from drinking contaminated water. The symptoms include jaundice (yellowing of the skin). Hepatitis A is not fatal and no specific medical treatment is required. If you are concerned, contact your doctor.

**How long will this problem with the water last?**

During a boil water notice, the water system needs to investigate the cause of the contamination and fix the problem. Then they need to do a series of tests to ensure there are no more bacteria in the water. As soon as RIDOH is assured that the water is safe, we will lift the boil water order and the water system will issue a public notice.

**Can I wash my clothes while there is a boil water notice?**

Yes.

**Can I wash my dishes?**

Dishwasher – using a dishwasher with a sanitizing cycle is recommended; if a dishwasher does not have a sanitizing cycle, wash your dishes by hand following the information below.

Hand washing of dishes – wash in warm, soapy tap water; rinse in pre-boiled or bottled water.

**What if I drank the water already?**

If you develop any symptoms, follow the above recommendations. Make sure you use only pre-boiled or bottled water for drinking, cooking, food preparation, making ice, brushing teeth, bathing children, and washing dishes until you are told the water is safe.

**Can I shower or take a bath in the water?**

Yes, as long as you don't swallow the water. Infants and young children should not be bathed in this water because they might swallow some accidentally. To prevent this, bathe your children with pre-boiled or bottled water or give them sponge baths using only a small amount of water.

There is no problem with bathing nursing home or elderly patients unless there is any possibility of them swallowing the water. Patients with open sores should not be bathed even under normal conditions.

Don't use swimming pools as a substitute for bathing. Tap water is safer.

**Can I water my grass or garden?**

Yes, but wash fruits and vegetables in pre-boiled or bottled water before eating them.

**Can my pets drink the water?**

Pets are not affected by contaminated water in the same way as humans; however, if you are concerned, out of an abundance of caution you can give your pet boiled or bottled water.

**How do I know what water system I get my water from?**

RIDOH does not have customer lists by water system. Your water bill (or your landlord’s water bill) will tell you the water system that serves your household.

**COOKING AND FOOD PREPARATION TIPS**

Use pre-boiled water for all preparation of food. If food is to be cooked in water, boil the water first for more than one minute.

**FILTERS** do not remove *E. coli* fecal coliform bacteria.

**ICE MACHINES, VENDING MACHINES, or SODA DISPENSERS** that are directly

connected to the water supply cannot be used.

**COFFEE MACHINES** directly connected to the water supply cannot be used unless they are able to heat water to boiling and hold it for at least one minute before making the coffee. Bottled or previously boiled water may also be used.

|  |  |  |
| --- | --- | --- |
| **Tap water can be used for:** | **Use boiled water for:** | **Caution** |
| Washing clothes | Washing food | Filters do not remove the bacteria |
| Dishwasher with sanitizer | Cooking food | Water from ice, coffee and vending machines directly feeding from water supply |
| Showers (adults & older children) | Bathing infants/toddlers |
| Toilets | Drinking | Alcohol does not kill bacteria |
| Watering outside | Rinsing dishes done by hand |  |
| Pets | Making ice cubes |  |
| Cleaning surfaces | Brushing teeth |  |
|  | Infant formulas |  |

**Call the Center for Drinking Water Quality main line at 401-222-6867, Monday – Friday, 8:30 a.m. – 4 p.m. if you have any questions. After hours and on weekends, call RIDOH’s emergency line at 401-276-8046.**

*Revised November 2023*



**Center for Food Protection**

**BOIL WATER NOTICE FOR FOOD ESTABLISHMENTS**

**In order to continue operating your food establishment when water testing has revealed that your drinking water may be contaminated, all of the following must be implemented.**

**ICE MACHINES:** Ice machines that are directly connected to the water system must not be used. Shut the machine down, clean and sanitize the unit, and leave the unit off until the water is OK again.

**SODA MACHINES:** Soda machines that are directly connected to the water system must not be used. The machines must be shut down, cleaned and sanitized, and left shut down until the problem is over. **Only bottled/canned soda may be sold.**

**COFFEE MACHINES:** Coffee machines that are directly connected to the water system can be used only if the water reaches a boiling temperature for one (1) minute. If you are not sure how hot the water gets, then bottled or previously boiled water must be used.

**SANITIZING IN A 3-BAY SINK / IN PLACE SANITATION:** Normal washing, rinsing, and sanitizing can be done in a three (3)-bay sink, provided that the concentration of sanitizer (chlorine, iodine, quaternary ammonia) is at the proper level. The levels are 50 to 100 parts per million (ppm) chlorine, 200-ppm quaternary ammonia, and 12.5-ppm iodine.

**AUTOMATIC DISHWASHING:** Automatic dishwashers, sanitizing with chlorine, can continue to be used, as can dishwashers using hot water to sanitize. The combination of soap and hot water, or sanitizer, will effectively kill any bacteria. The utensils must be left to air dry.

**COOKING:** As long as the product being cooked is going to be boiled for at least one (1) minute, then the tap water can be used. If the product is not going to be boiled, e.g. baked goods, then bottled water must be used.

**HAND WASHING:** Normal hand washing, using warm water and soap, can be done using tap water. Soaps with bactericidal properties are recommended at this time.

**VEGETABLE AND FISH / SHELLFISH SPRAYS:** In-place spray units and units which periodically spray water on products to maintain freshness must be shut down, cleaned, and sanitized, and these units may not be used until the boil water notice is no longer in effect.

**\*NOTE: WATER FOR DRINKING OR COOKING MUST BE BOILED FOR ONE (1) MINUTE OR THE ESTABLISHMENT MUST USE BOTTLED WATER FROM AN APPROVED COMPANY. ICE MUST ALSO BE FROM AN APPROVED SOURCE. YOU MAY NOT USE ANY CHEMICALS TO DISINFECT WATER THAT WILL BE USED FOR COOKING OR DRINKING. FILTERS CANNOT BE USED SINCE THEY WILL NOT DISINFECT WATER.**

PUBLIC NOTICE

# TO ALL CONSUMERS OF

## <<PWS#ID>>

<< Water System Name>>

<<Water System Address>>

**DRINKING WATER WARNING LIFTED**

**Bacteria absent in the <<Water System Name’s>> water**

The << Water System Name>> public water system has notified RI Department of Health Center for Drinking Water Quality that the most recent testing of our water has shown that no bacteria are currently present.

YOU NO LONGER NEED TO BOIL YOUR WATER BEFORE USING.

**What has been done?**

[Describe corrective action(s) performed.]

If you have any questions or concerns, please contact **<< Administrative Contact >>** at **<<Telephone # >>** during the hours of \_\_\_\_\_\_\_\_ am to \_\_\_\_\_\_\_\_ pm.

*\*Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example: people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or by mail.\**

This notice is being sent to you by **[water system name]**. State Water System ID#: \_\_\_\_\_\_\_\_.

Date distributed: \_\_\_\_\_\_.

**Center for Drinking Water Quality**

**Household cleaning and sanitizing procedures for after a Boil Water Notice has been lifted**

**When the Rhode Island Department of Health (RIDOH) lifts a boil water notice, residents should follow these recommendations to help ensure drinking water is safe.**

**Refrigerators with water dispensers or ice makers**

Before use, water dispensers and ice machines must be cleaned and sanitized with a solution of one teaspoon of bleach to one gallon of water. Follow the manufacturer’s suggested sanitizing procedures in the operator’s manual. At a minimum, residents should:

* Run the water dispenser for 3 to 5 minutes to get any contaminated water out of the lines.
* Run the ice maker for at least 30 minutes.
* Throw away the first batch of ice that the refrigerator makes.
* Wash and sanitize the area in and around the ice collection bin.

All external filtering devices associated with ice machines should be sanitized. Filter cartridges should also be changed.

**Water treatment units**

Replace any water treatment filter cartridges.

**Faucets/Taps**

Any faucets or taps should be run for 10 minutes to ensure that any contamination that may be present is removed.

**Reminder:** Use cold water for cooking and drinking instead of water that has been sitting in the hot water tank.

**Call the Center for Drinking Water Quality main line at 401-222-6867, Monday – Friday, 8:30 a.m. – 4 p.m. if you have any questions. After hours or on weekends, call RIDOH’s emergency line at 401-276-8046.**

*Revised November 2023*

**Center for Drinking Water Quality**

**Cleaning and sanitizing procedures**

**for after a Boil Water Notice has been lifted for food establishments**

**When the Rhode Island Department of Health (RIDOH) lifts a boil water notice, food establishments must follow these steps.**

**Ice machines**

Ice machines must be cleaned and sanitized with a solution of one teaspoon of bleach to one gallon of water before use. Follow the manufacturer’s suggested sanitizing procedures in the operator’s manual. At minimum, a food establishment must:

* Run the ice machine for 24 hours and throw away the ice that is made during the 24 hours.
* Wash and sanitize the area around and in the ice collection bin.

All external filtering devices associated with ice machines must be sanitized. Filter cartridges must also be changed.

**Water treatment units**

Replace any water treatment filter cartridges.

**Soda dispensers**

Follow the manufacturer’s suggested sanitizing procedures in the operator’s manual or contact the company that installed the dispenser(s) to have them properly cleaned and sanitized.

**Vending machines**

Contact the company that installed the vending machine to have the machine properly cleaned and sanitized. This only applies to vending machines that are connected to the water system and are used to make items like cold beverages.

**Vegetable and fish sprays**

In-place spray units and units which periodically spray water on products to maintain freshness must be cleaned and sanitized prior to use. A 50 to 100 parts per million (ppm) chlorine solution or other approved sanitizer should be flushed through the lines for at least 60 seconds.

**Drinking fountains**

All water cooling tanks must be completely flushed out prior to use. Run the drinking fountain for at least 10 minutes to completely flush the lines.

**Faucets/Taps**

Any faucets or taps must be run for 10 minutes to ensure that any contamination that may be present is removed.

**Call the Center for Drinking Water Quality main line at 401-222-6867, Monday – Friday, 8:30 a.m. – 4 p.m. if you have any questions. After hours and on weekends, call RIDOH’s emergency line at 401-276-8046.**

*Revised January 2020*

**Center for Drinking Water Quality**

**Cleaning and sanitizing procedures**

**for after a Boil Water Notice has been lifted for healthcare facilities, schools, and businesses**

**When the Rhode Island Department of Health (RIDOH) lifts a boil water notice, healthcare facilities, schools, and non-food-related businesses should follow these recommendations to help ensure drinking water is safe.**

**Refrigerators with water dispensers or ice makers**

Before use, water dispensers and ice machines must be cleaned and sanitized with a solution of one teaspoon of bleach to one gallon of water. Follow the manufacturer’s suggested sanitizing procedures in the operator’s manual. At minimum, a facility, school, or business should:

* Run the water dispenser for 3 to 5 minutes to get any contaminated water out of the lines.
* Run the ice maker for at least 30 minutes.
* Throw away the first batch of ice that the refrigerator makes.
* Wash and sanitize the area around and in the ice collection bin.

All external filtering devices associated with ice machines should be sanitized. Filter cartridges should also be changed.

**Water treatment units**

Replace any water treatment filter cartridges.

**Faucets/Taps**

Any faucets or taps should be run for 10 minutes to ensure that any contamination that may be present is removed.

**Reminder:** Employees should use cold water for cooking and drinking instead of water that has been sitting in a hot water tank.

**Eye-Wash stations/Showers**

Any emergency eye-wash stations that have not been used while the boil water notice was in place should be run for 10 minutes to ensure that any contamination that may be present is removed.

**Call the Center for Drinking Water Quality main line at 401-222-6867, Monday – Friday, 8:30 a.m. – 4 p.m. if you have any questions. After hours and on weekends, call RIDOH’s emergency line at 401-276-8046.**

*Revised November 2023*



**Policy on Bulk Water Deliveries and Use**

(revised 4/12/2018)

All Bulk Water transportation, transfer, and storage shall be conducted in accordance with Section 4.9.4 “Bulk Water” of the RI Department of Health (RIDOH) Regulations for Food Protection [216-RICR-50-10-4] (Regulations).

1. Bulk water shall mean water intended for potable uses which is transported by a tank truck, water buffalo, storage tank, or transfer line.
2. Bulk water use by public water systems is only allowed on a temporary or emergency basis and should it be required and approved by the Rhode Island Department of Health Center for Drinking Water Quality (RIDOH) on a long-term basis, additional testing may be required.
3. Public water systems must notify the RIDOH prior to accepting deliveries of bulk water and must submit an engineer's report within ten (10) days of notifying RIDOH, specifying actions to be taken to resolve the emergency situation which necessitated the use of bulk water.
4. Bulk water sources must be approved by RIDOH.
5. All truck tanks, transfer lines, and on-site storage tanks must be dedicated to potable water use only and sanitized prior to use.
6. All on-site storage tanks must be secured against unauthorized entry or tampering at hatches, valves, or piping connections.
7. Sampling of water from a Bulk Water System will be conducted and analyzed as directed by RIDOH. All bulk water deliveries must be sampled for coliform bacteria and residual chlorine, either from the Bulk Water System or from a sample tap between the fill line and the water system storage tank. After initial sampling shows the delivered water to be coliform free, subsequent sampling of each delivery may be waived by RIDOH provided that the Bulk Water System is used exclusively for delivery to that public water system, a minimum concentration of 0.5 ppm chlorine is maintained in the bulk water system at all times, and all other aspects of this policy are in compliance. At a minimum, sampling of water from a bulk water system delivering water to a public water system will be conducted monthly.
8. Coliform samples must be collected in sterile sample bottles containing sodium thiosulfate.
9. The water system will not use the water in the system for drinking or food preparation until sample results are reported to RIDOH, which show the water to be coliform-free with a residual chlorine reading of 0.5 to 4.0 mg/L.
10. RIDOH will determine the frequency and methodology of chlorine residual monitoring, if necessary.
11. Records of each delivery will be maintained by the hauler and on-site user. Specifically, a log or data sheet shall be maintained for each delivery, indicating the date, time and location of delivery, the number of gallons, the amount of chlorine (sodium hypochlorite) added and the original strength of the sanitizing solution, the measured residual, the name of the Bulk Hauling Company, the source of the water and the truck used.
12. Records will also be maintained by the on-site user for each bulk storage tank, noting whether it is a dedicated potable water tank, the sanitizing procedure utilized, any available sampling results showing it to be coliform-free at the time it was put into service or at the point of first filling on site, and/or any measurements of chlorine residual to confirm that an 0.5 ppm chlorine residual is being maintained, if deemed necessary.
13. These records must be available for inspection by RIDOH personnel.
14. The on-site user must also obtain approval from the local building inspector or plumbing authority prior to use. Elimination of any cross-connection with the public water supply may be required.

If bulk water is used without compliance with all the requirements of this policy, the public water system will implement a boil water advisory to remain in effect until rescinded by RIDOH.

For more information, call the Center for Drinking Water Quality at 401-222-6867 or the Center for Food Protection at 401-222-2750.



RHODE ISLAND DEPARTMENT OF HEALTH

CENTER FOR DRINKING WATER QUALITY

WELL DISINFECTION PROCEDURE

Follow the procedures below and save this completed checklist for reference during compliance inspections. Please read all of the steps before you begin.

Date:

Reason for well disinfection: \_

1. Shut off all power to well to avoid potential electrical shock. Ensure that power switches will not be inadvertently turned on. (Please refer to OSHA 29 CFR 1910.147 “lock out, tag out” procedure). Power should not be turned back on until Step 5, after the chlorine solution has been placed in the well.

**Power shut off and secured**

1. Refer to the attached Well Disinfection Calculators (5.25% or 8.25% available chlorine) to determine the appropriate amount of unscented liquid household bleach to introduce to the well. **DO NOT USE BLEACH SOLIDS,TABLETS, OR PELLETS**. Note: For large storage tanks, additional disinfection requirements may be necessary to achieve the desired effect. Refer to AWWA Standard C652 for guidance when disinfecting large storage tanks.



**Type and amount of bleach used:**

1. Fill a clean 5-gallon bucket approximately halfway with clean water. Slowly pour the appropriate amount of bleach for your system into half-full bucket and then carefully fill remainder with clean water. Wear appropriate personal protective equipment, including but not limited to gloves and eyewear.
2. If the well cap has the discharge pipe coming out the top of the well, well disinfection should be performed by a well professional. If the well cap is a “pitless adapter” type (the discharge pipe is underground), remove well cover/cap by removing the bolts or loosening the set screws, but be careful not to drop parts into the well. Remove any visible insects or debris found within the wellhead.



**Well cover/cap and opening inspected for insects and debris.**

**Notes:**

1. Pour bleach and water solution into well making sure to cover all surfaces within the wellhead and interior of the casing. Turn on the power to the pump. Spray or hose down the interior of the well with chlorinated water by attaching a hose to the nearest tap downstream, prior to any unpressurized storage reservoirs (if this is not possible, contact DWQ or a water system maintenance professional for further technical consultation). Recirculate water from the tap back into the well for approximately 15 minutes. Use caution to avoid electrical wires when applying solution to prevent corrosion of wire sheathing.



**Solution introduced as noted above.**

**Notes:**

1. Turn off the power to the pump. Remove the hose and ensure the well cover/cap is properly secured. Turn power back on to pump. To disinfect the distribution system in addition to the well, operate the well pump until the entire distribution/piping system is full of chlorinated water from within the well. **To ensure that all potential sources of contamination are disinfected, supply chlorinated water to each plumbing fixture/faucet (cold and hot faucets, showers, outdoor spigots, etc.) until you detect an odor of chlorine in each fixture.**



**Well cover/cap secured Procedures completed as above**

**Notes:**

1. Allow the chlorinated water to remain in the well and piping system (if disinfecting the distribution system as well) overnight (minimum of 8 hours).

 **Completed Notes:**

1. Pump the well water to waste (discharge water from outdoor faucet using hose to the ground surface AWAY from well(s), any surface water system, storm water system, garden, lawns, etc.) until no chlorine is left in the water. Next, discharge the small amount of chlorinated water left in the distribution system (water lines, faucets, other fixtures, etc.) down the appropriate drain(s) until no chlorine is left in the water. Water within plumbing fixtures must NOT be used for consumptive purposes until no chlorine is left in the water.

**Use EPA-approved chlorine test strips or test kit to confirm chlorine is no longer in the discharge water from the well or distribution system.**

**Note:** Highly chlorinated water can disrupt microbial activity within septic systems and affect waste decomposition processes. A large volume of water can be found in deep wells. Therefore, the highly chlorinated discharge water from the well should not be discharged into septic systems. If you have questions regarding disposal of chlorinated water into a septic system, contact RIDEM’s OWTS Program for more information. Chlorinated water should not be discharged to surface water or a storm water system. If either are nearby, contact RIDEM’s RIPDES Program to obtain discharge requirements.

 **Completed Notes:**

1. After allowing time for conditions to stabilize, and ensuring a zero-chlorine residual, collect the number of coliform samples required by RIDOH or arrange for sample collection with RIDOH or a commercial laboratory licensed by the State of Rhode Island for water testing to ensure the disinfection procedure was successful.



**Completed Notes:**

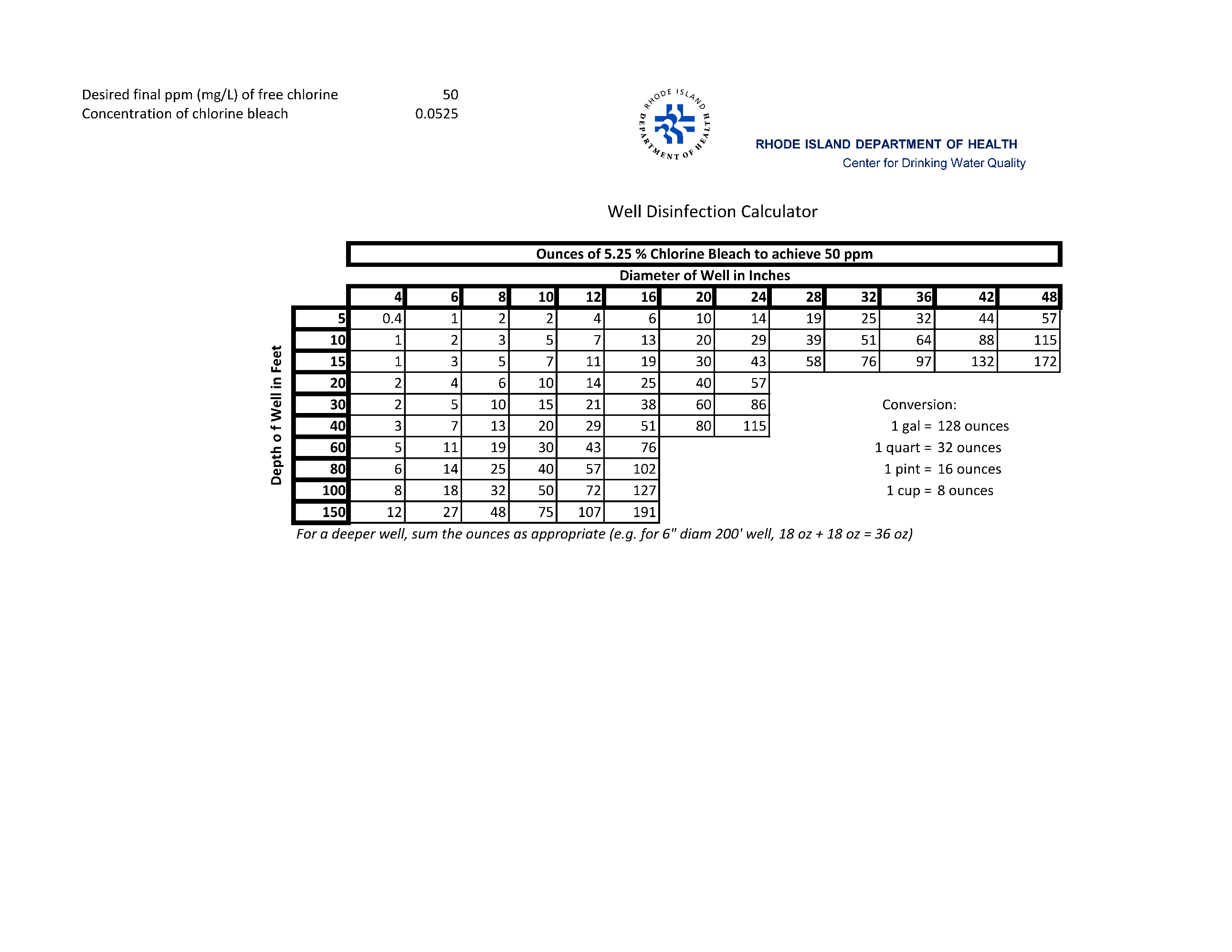
**Warning**: Bleach used in this disinfection process must be flushed thoroughly from all service lines. This procedure is for shock disinfection only and should not to be used on a regular basis. Bleach contains chlorine and is harmful to organisms living in water and soil. Human exposure to strong bleach solutions (over 4 ppm chlorine) may cause severe irritation to eyes and skin. Bleach solutions over 4 ppm chlorine can be harmful if swallowed. Please use appropriate protection and precautions when handling bleach and notify customers who may be receiving highly chlorinated water before the system is flushed. For additional assistance, contact the Center for Drinking Water Quality at 401-222-6867.

For more detailed guidance, refer to Minnesota Department of Health’s Well Disinfection webpage [https://www.health.state.mn.us/communities/environment/water/wells/waterquality/disinfection.html.](http://www.health.state.mn.us/divs/eh/wells/waterquality/disinfection.pdf)

Well Disinfection Calculator

Desired final ppm (mg/L) of free chlorine 50

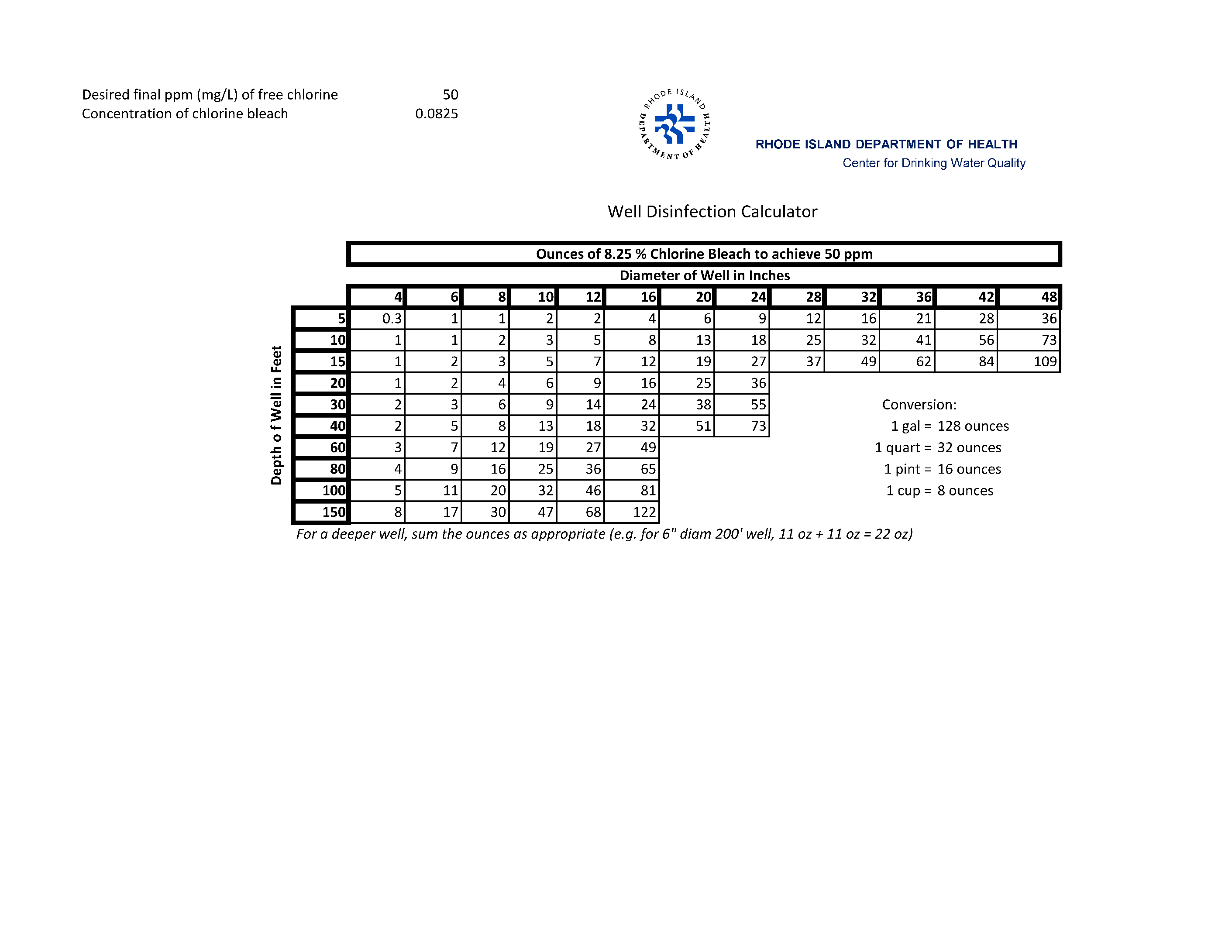
Concentration of chlorine bleach 0.0525



Well Disinfection Calculator

Desired final ppm (mg/L) of free chlorine 50

Concentration of chlorine bleach 0.0825



**Technical Assistance:**

If you need technical assistance to complete your Emergency Response Plan, please contact RIDOH at 401-222-6867.

*Revised January 2020.*

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For additional copies of this publication, call 401-222-6867or email doh.ridwq@health.ri.gov.

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**Disclaimer**

This document contains information on how to plan for protection of the assets of your water system. The work necessarily addresses problems in a general nature. You should review local, state, tribal (if applicable), and federal laws and regulations to see how they apply to your specific situation.

Knowledgeable professionals prepared this document using current information. The authors make no representation, expressed or implied, that this information is suitable for any specific situation. The authors have no obligation to update this work or for notification of any changes in statutes, regulations, information, or programs described in this document. Publication of this document does not replace the duty of water systems to warn and properly train their employees and others concerning health and safety risks and necessary precautions at their water systems.

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