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## **Introduction: Protecting Public Health**

Preparing an Emergency Response Plan is an essential part of managing a drinking water system. The Rhode Island Department of Health has made this document available to public water systems in the state to help them develop such plans.

### How to use the template

Complete the templates in the **Plan** section to develop an Emergency Response Plan for the water system. Each section of the Plan refers to a corresponding section(s) in the **Guide**. The Guide discusses key components of emergency planning and provides examples of how to develop your Emergency Response Plan by completing the templates provided here.

This document is also available on-line in Microsoft Word and Adobe pdf formats. A digital copy of your Plan will make it easier to update and revise. A digital copy also allows you to modify sections of the Plan to fit the specific needs of the water system.

If you do complete your Plan digitally, make sure you save and print it. Put the Plan in the binder.

Emergency Response Plans contain sensitive information. Keep your Plan in a secure location that is accessible in case of an emergency.

Emergency Response Plan | Introduction

## **Section A: Emergency Response Objectives**

See Section 1 of the Guide Use your mission statement and objectives to help focus emergency planning and response. For sample text, see Section 1, page 1-1.

#### **Emergency Response Mission and Objectives**

Mission Statement **Objective 1 Objective 2 Objective 3 Objective 4** 

**Questions?** Call Rhode Island Department of Health (401) 222-6867 Project website: web.uri.edu/nemo/drinking-water/emergency-response Emergency Response Plan | Section A: Emergency Response Objectives

## Section B: What to Do in Case of an Emergency

#### See Section 2 of the Guide

This flowchart is repeated here from Section 2 of the Guide as a reminder of the general stages of emergency response. There is nothing here for you to fill out.

- Assess the emergency and its impact on the water supply.
- Notify the water system owner, operator(s), and board members.
- ▶ Notify RI HEALTH, 911, and other agencies, depending on the nature of the emergency.
- Respond to the emergency.
- Take water samples to be analyzed by a state-certified laboratory.
- Find an alternate water source if needed.
- Log all response actions.
- Notify customers by issuing a water use notice.
- Issue a press release as needed based on the nature of the situation.
- Recover by returning the water system to normal operations.
- Lift the water use notice.
- Evaluate the response actions.
- Revise the emergency response plan as needed.

Emergency Response Plan | Section B: What to Do in Case of an Emergency

## Section C: Emergency Operations Checklists and Threat Confirmation Checklist

# See Section 3 of the Guide

Use the following checklist to determine whether your system has a complete Emergency Response Plan. Complete the checklist as you develop the Plan. When you have completed the Plan, review the checklist to determine if there is anything missing.

### **Emergency Operations Checklists**

Eme	Emergency Response Plan Content Checklist			
Yes	No	Does the Plan Include	Comments	
		Contact information for internal personnel?		
		Contact information for external personnel, such as critical users, state agencies, repair and service providers, media outlets, analytical laboratories, utility companies, etc.?		
		A pre-determined line of authority structure for the owner, board members, the lead operator, and any other operators?		
		A designated staff member to serve as the Media Spokesperson during and after an emergency?		
		A pre-determined list of roles and responsibilities for internal personnel?		
		An inventory of on-site equipment and alternate power supplies?		

Eme	Emergency Response Plan Content Checklist			
Yes	No	Does the Plan Include	Comments	
		A list of potential spare parts, equipment, and tools included within the Plan?		
		An inventory and/or location of other important system manuals and information?		
		Property, distribution line, and other pertinent maps? Details on where these maps are located on the property, if they aren't included here in this binder.		
		A reviewed and/or modified Responding to a Power Outage Checklist to meet the needs of your water system?		
		A reviewed and/or modified Responding to a Loss of Pressure Checklist to meet the needs of your water system?		
		A reviewed and/or modified Responding to Flooding Checklist to meet the needs of your water system?		
		A reviewed and/or modified Responding to a Contamination Checklist to meet the needs of your water system?		
		Information on the system's daily water demand in gallons per day?		
		Information on the system's production capacity and storage capacity?		

Eme	Emergency Response Plan Content Checklist			
Yes	No	Does the Plan Include	Comments	
		An estimated number of days that the water system can provide water to its customers?		
		Copies of public notification resources, such as press release and Boil Water notices?		

Supp	Supplemental Preparation Questions			
Yes	No	Question	Comments	
		Was a vulnerability assessment conducted to determine weaknesses in property security or the need to upgrade and/or replace vital components of the infrastructure?		
		Does your water system have a plan for alternative communication equipment when the power goes out (e.g. radios)?		
		Does your water system have the information for sizing a backup generator to meet the electrical needs during an emergency?		
		Has your water system developed relationships with neighboring water systems, in case you need an alternate water supply?		
		Are system personnel aware of the Emergency Response Plan's content and where it is located so they can access when needed?		
		Are personnel aware of their roles and responsibilities in the event of an emergency?		

Emergency Response Plan | Section C: Emergency Operations Checklists and Threat Confirmation Checklist

Additional System-Specific Questions				
Yes	No	Question	Comments	

### **Threat Confirmation Checklist**

The Threat Confirmation Checklist helps you keep track of the actions taken in response to a vandalism or terrorist threat. The Checklist also serves as a reminder of what still needs to be done in the event of a threat to the water system.

#### **Possible Threat**

Has the water system:

- □ Notified local law enforcement as appropriate?
- Considered internal water system information from those who know the system?
- Considered information from their Vulnerability Assessment?
- Considered real-time water quality data?

Has the water system:

- Performed a site assessment?
- Implemented an immediate operational response?

Has the water system notified:

- Rhode Island Department of Health?
- Rhode Island State Health Laboratories?

#### **Credible Threat**

Has the water system:

- Notified key water system personnel and external partner agencies?
- Collected/analyzed samples?
- Performed a site assessment?
- Taken public health response actions (operational and public notification)?

#### **Confirmed Threat**

Has the water system consulted with Rhode Island Department of Health to review:

- ☐ The results from laboratory analysis?
- ☐ The results and observations of continued site assessment?
- □ Targeted information from external sources (public health and law enforcement)?

If confirmed, has the water system requested:

Assistance reassessing the public health response measures?

Assistance in planning for remediation and recovery activities?

Assistance in locating alternate drinking water source?

Assistance with sampling and analysis to monitor treatment and remediation?

Assistance interacting with the public and media?

## **Section D: System Information**

#### See Section 4 of the Guide

Place system as-built plans, other plans and maps, and a copy of the system's sanitary survey in the binder's Resources section or the front or back pocket. Refer to these resources when completing the tables below.

Facility #1	
Name:	
Approximate Dimensions:	
Location:	
Description of Facility:	
Facility #2	
Name:	
Approximate Dimensions:	
Location:	
Description of Facility:	
Treatment Facility (if applicable)	Chemical Storage (if applicable)
Name:	Name:
Location:	Location:
Approximate Dimensions:	Approximate Dimensions:
Description of Facility:	Description of Facility:

## System Information

Location of Important Manuals and Procedures			
Item	Location		
Technical Manuals			
Start-Up/Shut-Down Procedures (SOPs)			
Operations & Maintenance (O&M) Plan or Manual			
Water Sampling Procedures			
Sanitary Survey			
Water System Management Guide			
Water System Shock Chlorination Procedures			
Other (specify)			

Pipe Information					
Туре	Use/Location	<b>Size</b> (e.g., diameter)	Length	Material Makeup	

Well Source Information				
Source Name	Location	Well Depth	Well Yield	Storage Tank Capacity

Surface Source Information				
Source Name	Location	Intake Location	Capacity	Storage Tank Capacity

Water Storage Information		
Location	Capacity	Type/Description

Pump Information				
Source	Location	Pump Type	Manufacturer	Pump Model

Disinfection and Treatment	
Chemicals Used	Location of Chemical Storage

**System Demand**: The table below records how much capacity your system has compared to what your demand is and helps you to determine how many days of water you will have during an emergency. This information may change during different times of the year.

System Demand	
Maximum Daily Demand (gallons/day)	
Average Daily Demand (gallons/day)	
What is the total storage capacity of the system? (gallons)	
What is the total production capacity of this system? (gallons/day)	
Estimated Available Water (days) Divide total storage capacity by average daily demand	

Alternative Power Supply				
Make/Model	Voltage/ Amps	Fuel Type	Tank Capacity	Location Stored
Powers Facility:	Powers Facility:			
Powers Facility:				

## **Section E: Lines of Authority**

#### See Section 5 of the Guide

Use the tables in this section to list contact information for Internal and External Contacts. Identify responsibilities for Owner(s), Board of Director(s), and Operator(s).

### **Internal Contacts**

Water System Owner(s) Contact Information			
Name and Title	Responsibilities	Phone (Day) Phone (Night)	Email

Board of Directors Contact Information			
Name and Title	Responsibilities	Phone (Day) Phone (Night)	Email

System Operator and Other Operator(s) Contact Information			
Name and Title	Responsibilities	Phone (Day) Phone (Night)	Email
Designated Operator			
Other Operator			

## **External Contacts**

Emergency Responders and State Agency Contact List			
Organization	Department or Contact Name	Phone (Day) Phone (Night)	Email (if applicable)
Local Fire Department			
Local Police Department			
Emergency Medical Service			
RI Department of Health	Office of Drinking Water Quality	Monday – Friday 8:00 AM – 4:00 PM (401) 222-6867 After hours emergency (401) 272-5952	
RI Department of Environmental Management	Office of Compliance and Inspection	Monday – Friday 8:00 AM – 4:00 PM (401) 222-1360	
*Also for HAZMAT needs.	Environmental Police (Division of Law Enforcement)	Anytime, any emergency (401) 222-3070	
RI WARN	Dave Aucoin, RIWARN Chair	(401) 461-8848 x418	daucoin@narrabay.org

Continued on next page  $\blacktriangleright$ 

Emergency Responders and State Agency Contact List			
Organization	Department or Contact Name	Phone (Day) Phone (Night)	Email (if applicable)
RI Emergency Management Agency (RIEMA)		(401) 946-9996	
RI State Police		(401) 444-1000	
Local Emergency Management Director			
Other (secify)			
Other (specify)			

## Section F: Responding to Emergency Events

See Sections 6 and 9 of the Guide

Use the checklists for the emergencies included here to help you keep track of your response actions. Use the table that follows each checklist to list specific response actions.

#### Checklist: Responding to a Power Outage

If your water system has lost power, contamination might have entered your water system, putting your customer's health at risk. You must take prompt action, that might include using back-up power, system disinfection and flushing, customer notification and possibly a Boil Water Order.

What to Do If the Water System Experiences a Power Outage? Each situation is unique. Circumstances vary and the order of actions below may change.
Inform the system owner(s), designated operator, and board members of the situation. Each is responsible for tasks identified in the water system's Emergency Response Plan in Section E.
☐ Notify the power company. First Responder should notify the power company. Let the power company know that the water system has lost power and if you will be using a back-up generator.
Assess whether the outage will last more than 6 hours. If no, monitor conditions and storage tank levels. If outage will last more than 6 hours, consider using a back-up generator.
$\Box$ Notify the RI Dept. of Health, Office of Drinking Water Quality, at (401) 222-6867.
Notify your customers. If the water system cannot be adequately flushed and disinfected, customers must be notified with a press release to media outlets and posted Boil Water Order notices as soon as possible. Copies of these notices are in Section G and on the HEALTH website at www.health.ri.gov/drinkingwaterquality/about/yourwater. In addition, customers must
be notified if they will be receiving highly chlorinated water.
Disinfect the system. Section I of the Plan has the Rhode Island Department of Health's well disinfection procedures.
A power outage might result in contamination of the supply or loss of pressure. If this happens, follow the steps in the <i>Responding to a Loss of Pressure</i> checklist.

#### When Do I Issue a Boil Water Order?

- If you cannot adequately flush and disinfect your water system.
- If any water samples are positive for *E. coli*.
- If there is a broken sewer line adjacent to a broken water line.

For specific guidance on issuing and lifting drinking water orders, see Rules and Regulation Pertaining to Public Drinking Water [R46-13-DWQ].

### Table: Responding to a Power Outage

Use the table below to summarize the vulnerability assessment, identify immediate response actions, define what notifications need to be sent out, and describe important follow-up actions when responding to a power outage.

Refer to Section 9 of the Guide on page 9-3 for an example of a completed table. In addition, see the flowchart in Section 6 of the Guide on page 6-3 for help indentifying actions to take during a power outage.

Assessment	
Immediate Actions	
Notifications	
Follow-up Actions	

### Checklist: Responding to a Loss in Pressure

**Pressure loss** can be defined as very low or no pressure within the water system, often resulting in no water in parts or all of the system. **If your water system loses pressure, <u>contamination</u> <b>might have occurred, putting your customers at risk.** You must take prompt action, that might include disinfection, flushing, customer notification, and possibly a Boil Water Order.

What to Do If the Water System Experiences a Loss in Pressure?Each situation is unique. Circumstances vary and the order of actions below may change.
Inform the system owner, system operator, and board members of the situation. Each is responsible for tasks identified in the water system's Emergency Response Plan in Section E.
$\Box$ Notify the RI Dept. of Health, Office of Drinking Water Quality, at (401) 222-6867.
Notify your customers. If the water system cannot be adequately flushed and disinfected after water pressure is restored, customers must be notified with a press release to media outlets and posted Boil Water Order notices as soon as possible. Copies of these notices are in Section G and on the HEALTH website at www.health.ri.gov/drinkingwaterquality/about/yourwater. In addition, customers must be notified if they will be receiving highly chlorinated water.
Disinfect the system. Section I of the Plan has the Rhode Island Department of Health's well disinfection procedures.
☐ <b>Flush the system.</b> After water service is restored, flush the system to remove contamination such as sediment or highly chlorinated water. Depending upon the event, flushing could occur before and after the disinfection step.
Test the water. After disinfecting and flushing, contact a state-certified laboratory to have the water tested for bacteria. If the sample is positive for total Coliform, repeat the disinfection and flushing procedure. If the sample is positive for E. coli, immediately issue a Boil Water Order and notify the RI Department of Health, Office of Drinking Water Quality at (401) 222-6867.
Contact the RI Department of Health when the contamination is resolved and the supply is safe for consumption. Remove the Boil Water notice.

#### When Do I Issue a Boil Water Order?

- If you cannot adequately flush and disinfect your water system.
- If any water samples are positive for *E. coli*.
- If there is a broken sewer line adjacent to a broken water line.

For specific guidance on issuing and lifting drinking water orders, see Rules and Regulation Pertaining to Public Drinking Water [R46-13-DWQ].

#### Table: Responding to a Loss in Pressure

Use the table below to summarize the vulnerability assessment, identify immediate response actions, define what notifications need to be sent out, and describe important follow-up actions when responding to a loss in pressure.

Refer to Section 9 of the Guide on page 9-3 for an example of a completed table. In addition, see the flowchart in Section 6 of the Guide on page 6-4 for help indentifying actions to take due to loss of pressure.

Assessment	
Immediate Actions	
Notifications	
Follow-up Actions	

### Checklist: Responding to Flooding

Flooding can be a result of severe weather or rising water level from a nearby waterbody. One preventative measure is to consult the town or city to determine if the entire water system or parts of it are located in a floodplain area. This can help you determine which areas of the water system are more vulnerable to flooding.

What to Do If the Water System is Flooded?
Each situation is unique. The order of actions below may change and the steps taken will be based on the severity and impact of the flooding.
☐ Inform the system owner, system operator, and board members of the situation. Each is responsible for tasks identified in the water system's Emergency Response Plan in Section E.
$\square$ Assess the damage from the flooding.
$\Box$ Notify the RI Dept. of Health, Office of Drinking Water Quality, at (401) 222-6867.
☐ Notify your customers. If the water system cannot be adequately flushed and disinfected, customers must be notified with a press release to media outlets and posted Boil Water Order notices as soon as possible. Copies of these notices are in Section G and on the HEALTH website at www.health.ri.gov/drinkingwaterquality/about/yourwater. In addition, customers must be notified if they will be receiving highly chlorinated water.
Disinfect the system. Depending upon the event, flushing could occur before and after the disinfection step. Section I of the Plan has the Rhode Island Department of Health's well disinfection procedures.
☐ <b>Test the water.</b> After disinfecting and flushing, contact a state-certified laboratory to have the water tested for bacteria. If the sample is positive for <b>total Coliform</b> , repeat the disinfection and flushing procedure. If the sample is positive for <b>E. coli</b> , immediately issue a Boil Water Order and notify the RI Department of Health, Office of Drinking Water Quality at (401) 222-6867.
Contact the RI Department of Health when the contamination is resolved and the supply is safe for consumption. Remove the Boil Water notice.

#### When Do I Issue a Boil Water Order?

- If you cannot adequately flush and disinfect your water system.
- If any water samples are positive for *E. coli*.
- If there is a broken sewer line adjacent to a broken water line.

For specific guidance on issuing and lifting drinking water orders, see Rules and Regulation Pertaining to Public Drinking Water [R46-13-DWQ].

### Table: Responding to Flooding

Use the table below to summarize the vulnerability assessment, identify immediate response actions, define what notifications need to be sent out, and describe important follow-up actions when responding to flooding.

Refer to Section 9 of the Guide on page 9-3 for an example of a completed table. In addition, see the flowchart in Section 6 of the Guide on page 6-5 for help indentifying actions to take during a flood. Table follows with plenty of room to write in.

Assessment	
Immediate Actions	
Notifications	
Follow-up Actions	

### Checklist: Responding to Contamination

A contamination event can occur from various sources, such as heavy rains, severe weather, a car accident, leaking tanks from a nearby commercial zone, or even intentional contamination.

What to Do If the Water Supply is Contaminated?
Each situation is unique. The order of actions below may change and the steps taken will be based on the severity of the contamination.
Inform the system owner, system operator, and board members of the situation. Each is responsible for tasks identified in the water system's Emergency Response Plan in Section E.
Assess the severity of the contamination. Look for intentional contamination or any difference in color, clarity or smell to the supply. Determine if all water supplies are contaminated.
$\Box$ Notify the RI Dept. of Health, Office of Drinking Water Quality, at (401) 222-6867.
Notify your customers. If the water system cannot be adequately flushed and disinfected, customers must be notified with a press release to media outlets and posted Boil Water Order notices as soon as possible. Copies of these notices are in Section G and on the HEALTH website at www.health.ri.gov/drinkingwaterquality/about/yourwater. In addition, customers must be notified if they will be receiving highly chlorinated water.
Disinfect and flush the system. Flushing should occur to remove contamination such as sediment and other material or to remove highly chlorinated water. Depending upon the event, flushing could occur before and after the disinfection step. Section I of the Plan has the Rhode Island Department of Health's well disinfection procedures.
☐ <b>Test the water.</b> After disinfecting and flushing, contact a state-certified laboratory to have the water tested for bacteria. If the sample is positive for <b>total Coliform</b> , repeat the disinfection and flushing procedure. If the sample is positive for <b>E. coli</b> , immediately issue a Boil Water Order and notify the RI Department of Health, Office of Drinking Water Quality at (401) 222-6867.
If contamination is still present, contact HEALTH at 401-222-6867 for additional assistance.
Contact the RI Department of Health when the contamination is resolved and the supply is safe for consumption. Remove the Boil Water notice.

#### When Do I Issue a Boil Water Order?

- If you cannot adequately flush and disinfect your water system.
- If any water samples are positive for *E. coli*.
- If there is a broken sewer line adjacent to a broken water line.

For specific guidance on issuing and lifting drinking water orders, see Rules and Regulation Pertaining to Public Drinking Water [R46-13-DWQ].

### Table: Responding to Contamination

Use the table below to summarize the vulnerability assessment, identify immediate response actions, define what notifications need to be sent out, and describe important follow-up actions when responding to contamination.

Refer to Section 9 of the Guide on page 9-3 for an example of a completed table. In addition, see the flowchart in Section 6 of the Guide on page 6-6 for help indentifying actions to take due to contamination.

Assessment	
Immediate Actions	
Notifications	
Follow-up Actions	

## **Section G: Emergency Public Notification**

#### See Section 7 of the Guide

Use the tables in this section to identify emergency public contacts. This section also contains public notices for drinking water orders and an example press release.

### **Critical Customers and Contacts**

Hospital Contacts				
Hospital Name	Contact Name	Phone (Day) Phone (Night)	Email (if applicable)	

Neighboring Water System Contacts (for emergency connection)				
Water System	Contact Name	Phone (Day) Phone (Night)	Email (if applicable)	

**Questions?** Call Rhode Island Department of Health (401) 222-6867 Project website: web.uri.edu/nemo/drinking-water/emergency-response

<b>Critical Customers</b>	List (e.g.,	shelters,	hospitals,	assisted	living	facilities
and schools)						

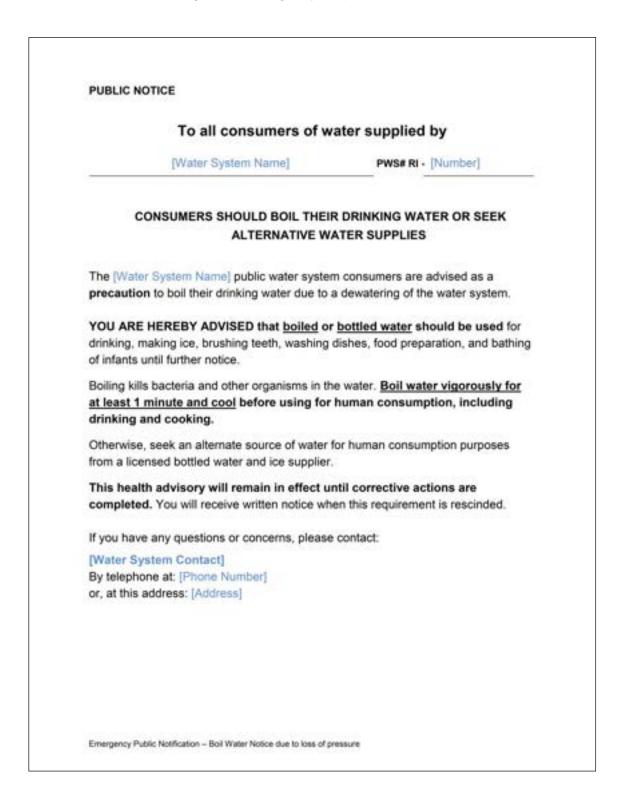
Critical Customer #1				
Туре:	Additional Information:			
Location:				
Contact Name:				
Contact Number:				
Critical Customer #2				
Туре:	Additional Information:			
Location:				
Contact Name:				
Contact Number:				

Media Outlets			
Organization	Contact Name	Phone (Day) Phone (Night)	Email
Radio Station #1:			
Radio Station #2:			
TV Station #1:			
TV Station #2:			
Providence Journal		(401) 277-8100	Weekdays: breakingnews@providencejournal.com Weekends: news@providencejournal.com
Local Paper (specify):			
Local Patch* (specify):			

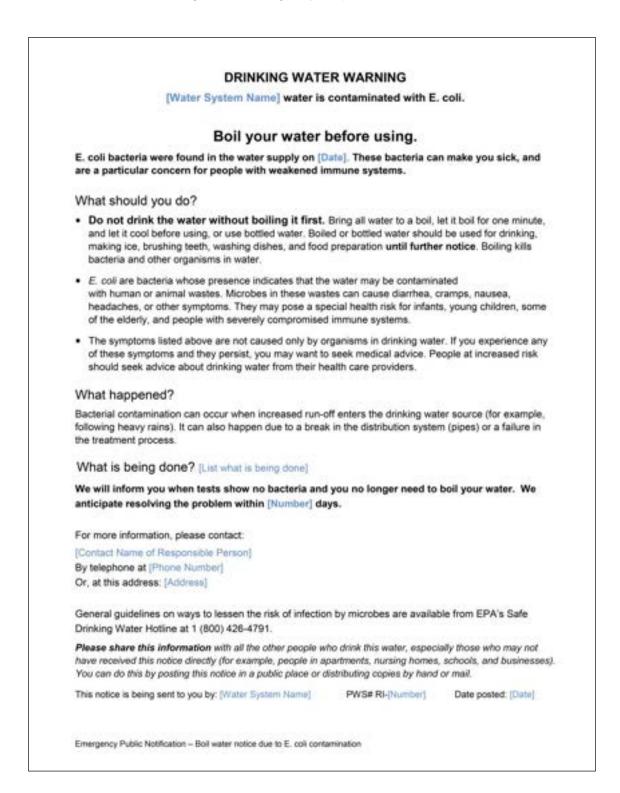
\* Patch.com is a website that provides communities with area-specific news, information, and events. Local news is published on the local Patch sites. Communities and towns in Rhode Island have individualized websites. To upload press releases, navigate to the Contact Us page within your community's local Patch.com site.

### **Public Notice for Drinking Water Order:** Boil Water for Loss of Pressure

This public notice is available in Microsoft Word format on the project website: web.uri.edu/nemo/drinking-water/emergency-response



# Public Notice for Drinking Water Order: Boil Water for Presence of E. coli



# Public Notice for Drinking Water Order: Boil Water for Presence of Total Coliform bacteria

Tests show Coliform bacte	eria in water supplied by	:
[Water System Name]		
[Water System Street Address], [Water System Town,	State, Zip]	
PWS# RI -		
The [Water System Name] water system recently exce Level standard.	eded the Microbiological	Maximum Contaminant
Although this is not an emergency, as our customers, y should do, and what we are doing to correct this situati		what happened, what you
We routinely monitor for the presence of drinking water bacteria was collected on [Collection Date] and [Numb [Collection Date]. A total of [Number of Samples] samp standard is that no more than one (1) sample per mont	er of Samples] additional bles showed the presence	samples were collected of
What should you do?		
<ul> <li>You must use <u>bottled water</u> or <u>boil the water</u> (for drinking or cooking.</li> </ul>	r a minimum of one min	ute at a rapid boil) for a
<ul> <li>If you have specific health concerns, consult your de systems, infants, and some elderly may be at increa- risk of infection by microbes are available from EPA</li> </ul>	ased risk. General guidelin	es on ways to lessen the
What does this mean?		
<ul> <li>Total Coliform bacteria are generally not harmful the naturally present in the environment and are used a bacteria may be present. Coliforms were found in m potential problems.</li> </ul>	is an indicator that other,	potentially harmful,
<ul> <li>Usually, Coliforms are a sign that there could be a p Whenever we detect Coliform bacteria in any sampling greater concern, such as fecal Coliform or <i>E. coli</i>, and in our subsequent testing. Further testing will be o of Coliform bacteria.</li> </ul>	le, we do follow-up testing re present. We did not fin	to see if other bacteria on any of these bacteria
What happened? [List what happened]		
What is being done? [List what is being done]		
We are still detecting Coliform bacteria. We will inform present. We anticipate resolving the problem within [N		hows that no bacteria are
For more information, please contact: [Contact Name of	of Responsible Person] at	[Contact Information]
Please share this information with all the other people in have received this notice directly (for example, people in You can do this by posting this notice in a public place or	apartments, nursing home:	s, schools, and businesse
Los and as the of based and lots in a basis bines of		

# Public Notice for Drinking Water Order: Do Not Drink

This public notice is available in Microsoft Word format on the project website: web.uri.edu/nemo/drinking-water/emergency-response

4.85 ( A.8 ( 11.5)				
	UN	SAFE WATE	R ALERT	
[Wa	ter System Name] water	is possibly con	taminated with [Contai	minant Name]
Do not d	rink your water. F	ailure to follow	this advisory could res	ult in illness.
to a recent (ir The Rhode Is water system	ubstance has been added trusion; break-in] at [one o land Department of Health are advising residents of [ ND COOKING UNTIL FUR	f the wells; our tr Office of Drinkin City, Town, Syste	satment plant; storage ta g Water Quality, and [W	ink; specific facility]. ater System Name]
What shou	ld you do?			
drinking (i	ink your tap water. Use cluding baby formula and a until further notice.			
	y and treat the water yo ts, or letting water stand w			chlorine or other
	otable water is available a ng a clean water container			
What happ	ened? [List what happen	ned]		
What is be	ing done? (List what is I	being done)		
	m you when tests show r e resolving the problem v			boil your water.
For more info	mation, please contact:			
(Contact Nan	e of Responsible Person]			
By telephone	at [Phone Number]			
Or, at this ad	ress: (Address)			
have received	this information with all th this notice directly (for exan 'ou can do this by posting th	nple, people in ap	artments, nursing homes,	schools, and
This notice is t	eing sent to you by: [Water B	iystem Name]	PWS# RI-[Number]	Date posted: [Date]

**Questions?** Call Rhode Island Department of Health (401) 222-6867 Project website: web.uri.edu/nemo/drinking-water/emergency-response

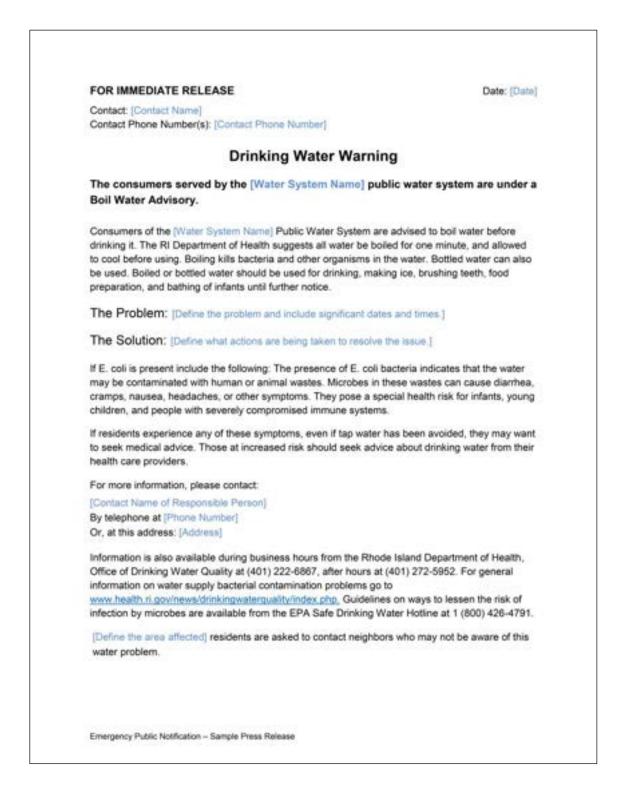
# Public Notice for Drinking Water Order: Do Not Use

	UNICASE WATER ALERT
	UNSAFE WATER ALERT
[Wa	iter System Name] water is possibly contaminated with [Contaminant Name]
Do not u	se your water. Failure to follow this advisory could result in illness.
to a recent ( The Rhode I water system	substance has been added to the drinking water supplied by the [Water System Name] due trusion; break-in] at [one of the wells; our treatment plant; storage tank; specific facility]. sland Department of Health Office of Drinking Water Quality, and [Water System Name] are advising residents of [City, Town, System] to NOT USE THE TAP WATER FOR COOKING, FOOD PREPARATION, HANDWASHING, OR BATHING UNTIL FURTHER
What sho	Ild you do?
drinking (i	rink your tap water. Use only bottled water. Bottled water should be used for all ncluding baby formula and juice), brushing teeth, washing dishes, making ice and food in, hand washing, and bathing until further notice.
	y and treat the water yourself. Boiling, freezing, filtering, adding chlorine or other nts, or letting water stand will not make the water safe.
	Potable water is available at the following locations: [List locations] ing a clean water container (5 gallons maximum capacity).
What hap	pened? [List what happened]
What is be	ting done? [List what is being done]
	m you when tests show no bacteria and you no longer need to boil your water. We solving the problem within [estimated time frame] days.
For more info	mation, please contact:
	ne of Responsible Person]
	at [Phone Number] dress: [Address]
have received	this information with all the other people who drink this water, especially those who may not if this notice directly (for example, people in apartments, nursing homes, schools, and 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: [Water System Name] PWS# RI-[Number] Date posted: [Date]

# Public Notice for Drinking Water Order: Do Not Give Water to Infants

Water System Name) water has high levels of nitrate.         Do not give the water to infants under six months old or use it for make infant formula.         Water sample results received [Date] showed nitrate levels of (Ancurr) miligrams per liter (mgl).         The is above the nitrate standard, or maximum contaminant level (MCL), of 10 mgl). Nitrate in drinking water is a serious health concern for infants less than six months old.         What should you do?         • Do not give the water to infants, Infants below the age of six months who drink water containing mitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. Blue baby syndrome is indicated by blueness of the sk. Symptoms in infants can develop rapidy, with health deteriorating over a period of days. If symptom or excess medical attention immediately.         Water, Juice, and formula for children under six months of age should not be prepared with ta water. Cottled water or other water low in nitrates should be used for infants unell further note.         • Do not boil the water, Boling, freezing, fitering, or letting water (infrate is a concern for infants behave water low in nitrates should be used for infants unell further note.         • Adults and children older than six months can drink the tap water (infrate is a concern for infants behave water (letting system and run-off). Levels of nitrate in drinking water can vary throughout the year. Wet is you know when the amount of nitrate is again below the limit.         Water suber do infrate is being done!       For more information, please contact:         Contact bane of Response Person       Adverter	DRINKING WATE	R WARNING	
<ul> <li>to make infant formula.</li> <li>Water sample results received [Date] showed nitrate levels of [Amount] miligrams per liter (mgil).</li> <li>This is above the nitrate standard, or maximum contaminant level (MCL), of 10 mg/l. Nitrate in drinking water is a serious health concern for infants less than six months old.</li> <li>What should you do?</li> <li><u>Do not give the water to infants</u>, infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome. Blue baby syndrome is indicated by blueness of the ski Symptoms in infants can develop rapidly, with health deteriorating over a period of days. If symptom occur, seek medical attention immediately.</li> <li>Water, juice, and formula for children under six months of age should not be prepared with tap water. Bottled water or other water low in nitrates should be used for infants until further notice.</li> <li><u>Do not bold the water</u>, Boiling, freezing, filtering, or letting water stand does not reduce the nitrate level. Excessive boiling can make the nitrates more concentrated, because nitrates remain behind when the water evaporates.</li> <li>Adults and children older than six months can drink the tap water (nitrate is a concern for infants because they can't process nitrates in the same way adults can). However, if you are pregnant or have specific health concerns, you may wish to consult your doctor.</li> <li>What is being done? (List what is being done)</li> <li>For more information, please contact: [Contact Name of Responsible Person]</li> <li>By telephone at [Phone Number]</li> <li>Or, at this address: [Address]</li> </ul>	[Water System Name] water H	has high levels of nitrate.	
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This notice is being sent to you by: [Water System Name] PWS# RI-[Number] Date posted: [Date]	have received this notice directly (for example, people in ap	artments, nursing homes	schools, and
	This notice is being sent to you by: [Water System Name]	PWS# RI-[Number]	Date posted: [Date]
	Emergency Public Notification - Do not give water to infants		

## **Sample Press Release**



# **Section H: Assessing Vulnerabilities**

## See Section 8 of the Guide

Use the tables in this section to take inventory of tool, equipment and parts that should be available on-site in the case of an emergency. There are tables to identify service providers, contractors and statecertified analytical laboratories. Also, you will find a worksheet for sizing a back-up generator.

## Equipment and Spare Parts Inventory

Response Tools and Equipment					
Item	Quantity	Loc	ation	Additional Information	
Tool kit		□ On-site	Need to acquire		
Flashlights/Lamps		□ On-site	Need to acquire		
Additional batteries		□ On-site	Need to acquire		
Water sampling equipment		□ On-site	Need to acquire		
		□ On-site	Need to acquire		
		□ On-site	Need to acquire		

Emergency Response Plan		Section H: Assessing	Vulnerabilities
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Replacement Parts					
Item	<b>Description</b> (Dimensions, Capacity)	Quantity	Loc	ation	Additional Information
Electricity Meters			□ On-site	Need to acquire	
Well Pipes			□ On-site	Need to acquire	
Replacement Pump			□ On-site	Need to acquire	
Backflow Preventer			□ On-site	Need to acquire	
Hydrants			□ On-site	Need to acquire	

Spare Parts for Piping Network					
Item	Quantity	Loc	ation	Additional Information	
Pipes		□ On-site	Need to acquire		
Couplings		□ On-site	Need to acquire		
Fittings		□ On-site	Need to acquire		
Valves		□ On-site	Need to acquire		
		□ On-site	Need to acquire		
		□ On-site	Need to acquire		
		□ On-site	Need to acquire		
		□ On-site	Need to acquire		

Emergency Response Tools and Equipment					
Item	Quantity	Loc	ation	Additional Information	
Tool kit including cordless drill		□ On-site	□ Need to acquire		
Flashlights Head lamps		□ On-site	Need to acquire		
Extra batteries D batteries for flashlights A batteries for head lamps Spare battery for electric drill Truck battery		□ On-site	Need to acquire		
Water sampling equipment		□ On-site	□ Need to acquire		
Treatment Screens		□ On-site	□ Need to acquire		
Chlorine for Treatment		□ On-site	□ Need to acquire		
Chlorination Equipment		□ On-site	Need to acquire		
		□ On-site	Need to acquire		

Communication Equipment					
Item	Quantity	Loc	ation	Additional Information	
Radios		□ On-site	Need to acquire		
		□ On-site	Need to acquire		
		□ On-site	Need to acquire		
		□ On-site	Need to acquire		

Back-Up Generator						
Make and Model	Voltage/ Amps	Fuel Type	Tank Capacity	Location Stored		
		□ On-site	Need to acquire			
		□ On-site	Need to acquire			
		□ On-site	Need to acquire			

Vehicles		_	
Make and Model	Location of Keys	Fuel Type	Tank Size

Personal Safety Equipment			
Item	Location on Property	Contact Information For Trained Staff Member	
Evacuation Plan			
Personal Protective Equipment			
First Aid Kit			

Other Equipment, Tools, and Resources				
Item	Quantity	Loc	ation	Additional Information
		□ On-site	Need to acquire	
		□ On-site	Need to acquire	
		□ On-site	Need to acquire	
		□ On-site	Need to acquire	

# Service Contractors and Supply Contacts

Service Contractors and Suppliers			
Service	Contact Name	Phone (Day) Phone (Night)	Email
Electrician			
Plumber			
Pump Specialist			
Pump Supplier			
Pipe Supplier			
Soil Excavator/ Backhoe Operator			
Well Driller			
Dig Safe		811	
Equipment Repair			

For Dig Safe's How It Works Information, to go: www.digsafe.com/how\_it\_works.php

Service Contractors and Suppliers			
Service	Contact Name	Phone (Day) Phone (Night)	Email
Tool Rental Service			
Control System Repair Specialist			
Power Generator Rental			
Bulk Water Hauler*			
Bulk Water Hauler*			
Bottled Water Company			
Bottled Water Company			
Other <i>(specify)</i>			

\* Refer to the Rhode Island Department of Health's bulk water hauling policy in Section I on page I-4.

Utilities and Fuel Suppliers Specify the compnay your water system uses.			
Company	Contact Name	Phone (Day) Phone (Night)	Email (if applicable)
Electric Company: National Grid Account Number:		800-465-1212	
Gas Company: Account Number:			
Telephone Company: Account Number:			
Fuel Supplier: Account Number:			

State-Certified Analytical Laboratories					
Laboratory	Contact N	ame	Phone (Day) Phone (Night)		Email (if applicable)
Physical Address	5:				
Analysis for:	Pathogens	Chemical	□ Radiological		Other:
Physical Address					
Analysis for:	Pathogens	Chemical	□ Radiological		Other:
Physical Address		Chamical			Other
Analysis for:	-ainogens		□ Radiological		Other:

Chemical Supplier Information			
Company	Contact Name	Phone (Day) Phone (Night)	Email (if applicable)
Physical Address			
Company supplie			
Physical Address: Company supplies:			
Physical Address:			
Company supplie			

# **Emergency Power - Sizing a Generator**

### **Emergency Generator Information Form**

This worksheet should be filled out by the water system operator with the sole intent of determining the needs for a generator or for describing an existing generator. Information on this form will be completed and used by a licensed electrician. A copy of the completed form should be included in the Emergency Response Plan.

#### **System Information**

System Name:			
EPA#:	Town:		
Max. daily demand in (MGD):	Avg. daily demand in (MGD):		
MGD is million gallons per day	· · · · · · · · · · · · · · · · · · ·		
Generator Needs			
Location (Name):			
Existing transfer switch:  Yes  No			
Existing "add-a-phase" or "roto-phase" unit:	Yes 🗆 No		
These units convert a single phase line to a thr	ee phase line.		
Size of electrical main breaker:	Amps		
System Voltage: 240 volt single phase	240 volt three phase		
208 volt three phase	480 volt three phase		
Major motors used at facility for operation:			
Example: <u>75</u> HP <u>2</u> Quantity	<u>460</u> Volts <u>3</u> Phase		
HP Quantity	Volts Phase		
HP Quantity	Volts Phase		
HP Quantity	Volts Phase		
HP Quantity	Volts Phase		

Existing concrete pad to locate generator: $\Box$ Yes $\Box$ No			
Distance of concrete pad to connection point			
Size and number of motors needed for critical processes:			
System meter kilowatt reading:			
Is this system a member of WARN? : $\Box$ Yes $\Box$ No			
Additional Comments:			
Existing Generator Capacity			
Existing generator on-site:   Yes  No			
On-site generator location(s):			
Is your on-site generator portable for use elsewhere: $\Box$ Yes $\Box$ No			
If your facility has an off-site generator ready for use in an emergency, what is the source or location:			
Existing transfer switch:  Yes No			
If yes, is the transfer switch manual or automatic:			
If automatic, what brand is the ATS and how many wires are required to start:			
Size of generator: kilo Volt Amps (kVA) kilowatts (kW)			
Configuration (Wye or Delta):			
A Wye configuration is in the shape of a "Y", while a Delta configuration is in the shape of the Greek letter delta " $\Delta$ "			
Load cable length: feet			
Load cable size: Thousand Circular Mils (MCM)			

\_\_\_\_\_ American Wire Gauge (AWG)

Ground cable length: feet				
Ground cable size: (MCM or AWG)				
Generator connection point:				
Fuel tank size:				
Fuel type:  Diesel  Gasoline  Natural gas  Propa	ne gas 🛛 Other			
Fuel available on site: $\Box$ Yes $\Box$ No				
If yes, how much: How is fuel sto	red:			
Is there a maintenance plan in place: $\Box$ Yes $\Box$ No				
Who provides generator maintenance and testing service:				
How often is the generator tested: Last test	t completed on:			
Does the water system have access to an electrician: $\Box$ Yes	□ No			
Who is the electrician?				
Number of power company transformers:				
Transformer size(s) painted on front of the units:kVAkVAkVAkVA				
Additional comments:				
Person completing form:				
Signature	Title			
Person completing form:				
Signature	Title			

Emergency Response Plan | Section H: Assessing Vulnerabilities

# **Section I: Response Actions and Procedures**

## See Section 10 of the Guide

This section contains the Rhode Island Department of Health's Well Disinfection Procedure and Policy on Bulk Water Hauling.

# Well Disinfection Procedure

1/30/2014

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

Date and reason for well disinfection:

 Shut off all power to well to avoid potential electrical shock while adding disinfectant to wellhead. 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.

#### $\Box$ Power shut off and secured

2. Following instruction below, for shallow wells (<100ft.), introduce into the well one (1) pint of unscented liquid household bleach (5.25% available chlorine) or a proportionately smaller amount of a stronger solution. Do NOT use bleach solids/tablets. Note: For deeper wells and/or systems with large storage tanks, additional disinfectant may be necessary to achieve the desired effect. Refer to the attached Table or contact the Office of Drinking Water Quality for assistance determining well volume, the amount of chlorine needed, and guidance when disinfecting storage tanks.</p>

#### □ Type and amount of bleach used: \_\_\_\_\_

**3.** 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. Appropriate personal protective equipment, including but not limited to, gloves and eyewear, should be used when working with chemicals.

4. 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. Ensure that no visible insects or debris exists within the wellhead.

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

Findings: \_\_\_\_\_

5. 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: \_\_\_\_\_

6. 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. Chlorinated water must be supplied to each plumbing fixture/faucet until an odor of chlorine is detected to insure that all potential sources of contamination are disinfected.

□ Well cover/cap secured

□ Procedures completed as above

Notes: \_\_\_\_\_

**7.** Allow the chlorinated water to remain in the well and piping system (if disinfecting the distribution system as well) overnight.

□ Completed

Notes: \_\_\_\_\_

8. Pump the water to waste and/or use the water for non-consumption purposes until no odor of chlorine is detected. Note: 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.

Notes: \_\_\_\_\_

**9.** After allowing time for conditions to stabilize, and ensuring a zero chlorine residual, collect the number of Coliform samples required by HEALTH and arrange for sample collection with the HEALTH 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 provide notification to any customers who may be receiving highly chlorinated water before the system is flushed.] For additional assistance contact the Office of Drinking Water Quality at (401) 222-6867.

For more detailed guidance, a good source of information is the Minnesota Department of Health's Well and Water System Disinfection document at <u>www.health.state.mn.us/divs/eh/wells/waterquality/disinfection.pdf</u>.

# Bulk Water Delivery Policy

RI Department of Health, Office of Drinking Water Quality

All Bulk Water transportation, transfer and storage shall be conducted in accordance with <u>Section 11.0 Bulk Water</u> of the *Rules and Regulations for Bottled Water (R21-23-BB)*.

- 1. Sources must be approved by the HEALTH and must meet the requirements in Section 2 of the Regulations.
- **2.** All truck tanks, transfer lines and on-site storage tanks must be dedicated to potable water use only and sanitized prior to use in accordance with Section 11.1.3.
- **3.** All on site storage tanks must be secured against unauthorized entry or tampering at hatches, valves or piping connections.
- 4. Sampling of water from Bulk Water System (i.e. tank truck, water buffalo, storage tank, transfer line, etc.) shall be conducted and analyzed as directed by HEALTH. After initial sampling shows the delivered water to be Coliform free, subsequent sampling may be waived provided that a minimum concentration of 0.5 ppm chlorine is maintained in the system at all times and all other aspects of this policy are complied with.
- **5.** HEALTH will determine the frequency and methodology of chlorine residual monitoring, if necessary.
- 6. Records of each delivery shall be maintained by the hauler and on-site user in accordance with Section 11.1.5. 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.
- 7. Records shall 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.
- 8. These records must be available for inspection by HEALTH personnel.
- **9.** 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.

For more information call the RI Department of Health, Office of Drinking Water Quality at (401) 222-6867 or Office of Food Protection at 222-2750. Contact the RI Department of Health for updates to this policy.

# **Section J: Water Conservation During an Emergency**

## See Section 11 of the Guide

Use the table below to record water conservation measures that either the system needs to implement or that you want customers to do. Identify actions that need to be taken to implement the practice and who is responsible for doing it.

## Water Conservation During an Emergency

Water Conservation Measures	Actions and Responsible Person
Restrict outdoor lawn watering until further notice.	Send notice to customers that lawn watering is restricted until further notice.

Emergency Response Plan | Section J: Water Conservation During an Emergency

# **Section K: Returning to Standard Operations**

See Section 12 of the Guide Use the table below to list what must be done to return the system to standard operations and who is responsible for making sure it is done.

# Action Description and Responsible Person Image: Contract of the system to Standard Operations Image: Contract of the system of the

Emergency Response Plan | Section K: Returning to Standard Operations