Emergency Response Planning Guide

For Public Drinking Water Systems Serving up to 3,300 people

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Table of Contents: The Guide

Introduction: Protecting Public Health	i
How to use this document	ii
Section 1: Emergency Response Objectives	1-1
Section 2: What to Do in Case of an Emergency	2-1
Section 3: Emergency Operations Checklist and Threat Confirmation Checklist	3-1
Emergency Operations Checklist	3-1
Threat Confirmation Checklist	3-2
Section 4: System Information	4-1
Section 5: Lines of Authority	5-1
Internal Contacts	5-1
External Contacts	5-2
Section 6: Responding to Emergency Events	6-1
Responding to a Power Outage	6-3
Responding to a Loss in Pressure	6-4
Responding to Flooding	6-5
Responding to Contamination	6-6
Section 7: Emergency Public Notification	7-1
Critical Customers and Contacts	7-1
Public Notices for Drinking Water Orders	7-1
Example Press Release	7-1

Section 8: Assessing Vulnerabilities	8-1
Equipment and Spare Parts Inventory	8-1
Service Contractors and Supply Contacts	8-2
Emergency Power - Sizing a Generator	8-3
Section 9: Response Actions and Procedures	9-1
Responding to Specific Events	9-1
Checklist: Responding to a Power Outage	9-2
Table: Responding to a Power Outage	9-3
Section 10: Response Actions and Procedures	10-1
Well Disinfection Procedure	10-1
Bulk Water Delivery Policy	10-1
Section 11: Water Conservation During an Emergency	11-1
Section 12: Returning to Standard Operations	12-1

Introduction: Protecting Public Health

Safe and reliable drinking water is vital to every community.

Drinking water utilities in Rhode Island face many challenges such as drought, pollution, competing water uses, and aging infrastructure. Additional impacts from emergency events can increase current challenges and present new risks to the water utilities and the consumers they serve. These issues must be addressed proactively to ensure the continued safety, affordability and dependability of the water we provide to our communities.

Emergency response planning is an essential part of managing a drinking water system. Most public water systems have had routine operating emergencies such as pipe breaks, pump malfunctions, bacterial contamination, and power outages. These are manageable if the water system has an Emergency Response Plan that can be put into action quickly and efficiently.

More serious non-routine emergencies may result from intentional acts of sabotage, chemical spills, floods, storms, or droughts. These can drastically affect the water system and the community that depends upon it.

Each emergency has unique effects on different parts of a water system. Floods can cause widespread bacterial contamination. Storms can disrupt power supplies. The common element is that each emergency may threaten the system's ability to deliver safe and reliable drinking water.

Emergency response planning

is a process by which water system managers and staff identify vulnerabilities, make improvements, and establish procedures to follow in an emergency. It is also a process that encourages people to form partnerships and get to know one another. Preparing a response plan and practicing it can save lives, prevent illness, enhance system security, minimize property damage, and reduce liability.

i

How to use this document

The purpose of this document is to assist water systems serving up to 3,300 people in developing an Emergency Response Plan.

The document has 3 sections:

- The Guide contains sections separated by blue tabs. Each section provides background information and instructions for completing the templates in the Emergency Response Plan (Plan) section of this document. Each section in the Guide references a corresponding section in the Plan. The Guide also can be used as an educational tool to help system staff and board members understand the key components needed for a well thought-out Emergency Response Plan.
- The Plan contains sections separated by yellow tabs. Each section contains templates to complete and develop the Emergency Response Plan. Each section in the Plan references a corresponding section in the Guide.
- **The Resources** section is a place to store additional information specific to the water system and its Emergency Response Plan.

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. 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 copy in the binder.

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



See Section A of the Plan

This section focuses on defining the water system's mission and emergency response objectives. This is a key element to the success of the Emergency Response Plan. It provides a starting point to bring the system back into standard operation as quickly as possible.

The objectives should reflect the water system's mission of protecting public health and the safety of its customers, staff, and infrastructure by restoring safe and reliable drinking water.

System personnel should begin by understanding what needs to be accomplished during an emergency. Protecting your customers' health is a priority. If the water has been contaminated, you must notify customers quickly. Then you must resolve the situation at hand and restore safe and reliable water throughout the system.

Example: Emergency Response Mission and Objectives

Mission Statement	In an emergency, the mission of the ABC water system is to protect the health of our customers by being prepared to respond immediately to a variety of events that may result in contamination of the water or disruption of service.			
Objective 1	Quickly identify an emergency and initiate timely and effective response actions.			
Objective 2	Quickly notify local, state, and federal agencies to assist in the response actions.			
Objective 3	Be able to quickly determine if the water is unsafe for consumption or use and be able to effectively notify customers to advise them of appropriate protective actions.			
Objective 4	Be prepared to respond quickly and repair damages to minimize system down time.			

The mission and objectives are always the same, but your response procedures should be flexible because every emergency is different and may require a specific sequence of response actions to protect lives and minimize damage. There are a series of general steps that a water system should take:

- 1. Confirm and 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. Make repairs based on priority demand.
- **5.** Return the system to normal operation.



See Section B of the Plan

This section discusses the general stages of emergency response. Later, Sections 6 and 9 address specific types of emergencies, for example, power outages and flooding.

There are 4 general stages to emergency response. These include:

- 1. Assess
- **2.** Notify
- 3. Respond and Recover
- 4. Evaluate and Revise

In the event of an emergency, immediately assess the situation, notify key players, respond accordingly to the emergency in order to recover from it and return the system to normal operations, and evaluate the emergency response process. Based on the evaluation of the emergency response process, modify and update the Emergency Response Plan as needed. The specific actions taken may vary depending on the particular emergency.

The following flowchart outlines this general course of action when responding to an emergency.

▶ **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.



See Section C of the Plan

This section contains two important checklists. The first is the Emergency Operations Checklist to ensure that all necessary information is completed and included in your Emergency Response Plan. The second is the Threat Confirmation Checklist.

A sample of the Emergency Operations Checklist is provided below. 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 Checklist

Emergency Response Plan Content Checklist				
Yes	No	Does the Plan Include	Comments	
\boxtimes		Contact information for internal personnel?		
	\boxtimes	Contact information for external personnel, such as critical users, state agencies, repair and service providers, media outlets, analytical laboratories, utility companies, etc.?	System owner will identify contact info for critical users.	
	\boxtimes	A pre-determined line of authority structure for the owner, board members, the lead operator, and any other operators?		

Threat Confirmation Checklist

The second checklist in this section is the Threat Confirmation Checklist. It has three categories of threats including possible, credible, and confirmed. The Threat Confirmation Checklist helps you keep track of the actions taken in response to vandalism or a terrorist threat.

You can use this checklist to:

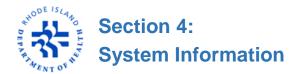
Possible Threat

- 1. Keep track of the response actions taken.
- 2. Remind you of response actions that still need to be taken.

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?
$\hfill\Box$ 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?



See Section D of the Plan

The System Information section details the system's infrastructure, including the distribution system, buildings, and storage facilities. This section also includes information on the location of important documents and resources that describe the water system's facilities and components.

Additionally, copies of the system's as-built plans and other important system maps or drawings should be included with the Emergency Response Plan for easy access during an emergency. You can put these documents in the **Resources** section of the binder or in either the front or back binder pocket.

The following table is an example of how to complete the system-specific information.

Facility #1

Name: Pump Station

Approximate Dimensions: 1,200 sq. feet and 2 floors

Location: Building A

Description of Facility: Bldg A has controls and equipment for pumping water from the aquifer

Facility #2

Name: Distribution System

Approximate Dimensions: 2,200 sq. feet

Location: Building B

Description of Facility: Bldg B has the distribution controls, piping structure, and important

equipment

Treatment Facility (if applicable)	Chemical Storage (if applicable)
Name: Treatment Facility Building	Name: Chemical Storage Building
Location: in Building C Approximate Dimensions: 4,000 sq. feet	Location: attached to Building C Approximate Dimensions: 1,500 sq. feet
and 2 floors Description of Facility: Houses equipment and chemicals used for treatment procedures	Description of Facility: Houses chemicals used for water treatment



See Section E of the Plan

This section focuses on identifying and listing contact information for Internal and External Contacts. Also, you will assign and list the specific responsibilities for key personnel in the event of an emergency.

Internal Contacts

The Internal Contacts section has templates to list the contact information for the water system owner, board members, and operator(s). In this section, you will also identify the responsibilities of each of these key people during an emergency. This will help prevent a situation where some tasks are duplicated while others are not being addressed at all.

The following are suggested responsibilities to assign to these key individuals when responding to the emergency situation:

- Notify the owner(s), designated operator, and board members
- Assess the impact of the emergency
- Initiate response actions
- Contact state agencies
- Contact service providers
- Locate on-site spare parts and equipment
- Develop water use advisories and/or press releases
- Notify customers
- Notify media

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Below is an example of how to complete the System Operator and Other Operator(s) Contact Information table.

System Operator and Other Operator(s) Contact Information			
Name and Title	Responsibilities	Phone (Day) Phone (Night)	Email
Stephen Doe, DO	Notify board members and the owner. Contact service providers for spare parts.	(401) 000-0000	stephendoe@domain.com
John Doe, OT	Assess situation and initiate response actions.	(401) 000-0000	jdoe@domain.com

External Contacts

In the event of an emergency, it may be necessary to notify first responders and appropriate state agencies like the RI Department of Health. Include name and contact information for those on the lists in this section. Include any additional listings that are appropriate for your water system.

The following is an example of the Emergency Responders and State Agency Contact List.

Emergency Responders and State Agency Contact List			
Organization	Department or Contact Name	Phone (Day) Phone (Night)	Email (if applicable)
Local Fire Department	North Kingstown Fire Department	(401) 294-3346 ext. 7201	
Local Police Department	North Kingstown Police Department	(401) 294-3311	

Continued on next page ▶►

Emergency Responders and State Agency Contact List			
Organization	Department or Contact Name	Phone (Day) Phone (Night)	Email (if applicable)
Emergency Medical Service	Goodservice EMS	(800)-000-0000	
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	



See Section F of the Plan

This section provides examples of suggested actions to take when responding to some of the more common emergencies that affect water systems. You will use the information in this section to help you develop your response plans in Section F of the Plan.

Why do emergencies happen? There are a variety of reasons including:

- Natural disasters
- Accidents
- Deliberate acts of vandalism or terrorism
- System neglect or deferred maintenance

An emergency may affect the entire water system or only isolated sections of the system. You should evaluate a variety of possible emergency events and their potential effects on the water system. Each type of event can cause different types of damage to system components or contamination of the water that can cause a disruption in service. How a specific type of emergency affects the water system should be reflected in the water system's vulnerability assessment. Suggested actions for responding to specific emergency events are outlined in the flowcharts later in this section.

Natural Disasters

Consider common natural disasters when developing an Emergency Response Plan including extreme weather events. Damage resulting from temperature extremes, flooding, hurricanes, and sea level rise can result in structural damage to virtually all water system facilities, including supply sources, transmission and distribution lines, storage reservoirs, and pump-houses.

Emergency Response Plans should evaluate what facilities are at risk during an extreme weather event to determine what can be done to mitigate impacts and what actions can be taken in response. It is also important to have backup communication plans, because radios and cell phones may not work during or after an emergency.

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Response Actions

An Emergency Response Plan contains response actions for what to do in case of a specific type of emergency like a power outage or loss of system pressure. Response actions contain information to:

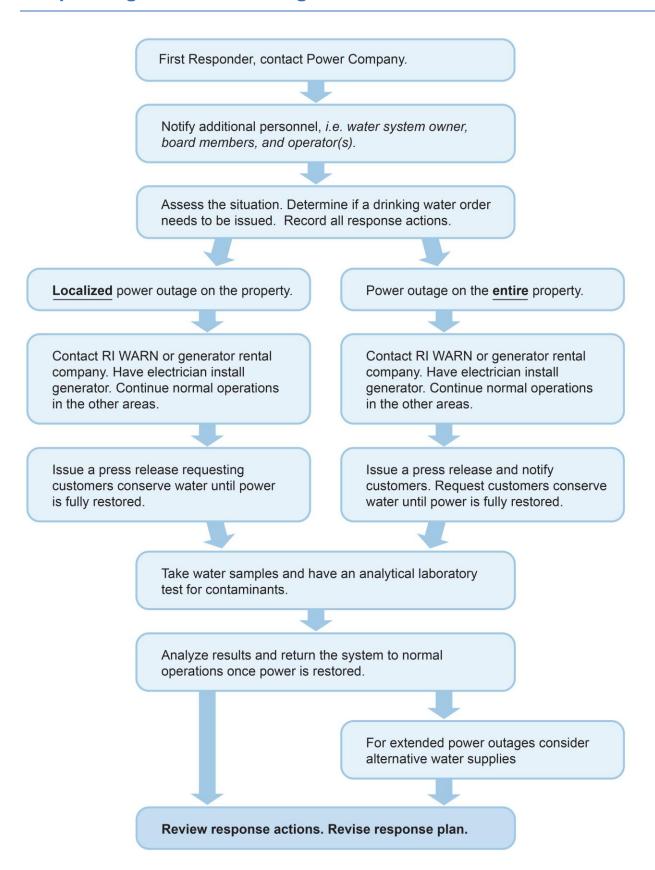
- Notify key people or personnel
- Assess the situation
- Respond to and recover from the emergency
- Evaluate and revise the Plan

The flowcharts on the next few pages have a suggested list of steps for water systems to follow for some of the most common emergencies, including:

- Power Outage
- Loss of Pressure
- Contamination
- Flooding

Use these flowcharts as a reference when completing the templates in Section F to develop your Emergency Response Plan.

Responding to a Power Outage



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

Responding to a Loss in Pressure

Notify water system owner, board members, and operator(s).

Assess the emergency. Identify reason and isolate pressure loss. Determine if a drinking water order needs to be issued. Record all response actions.

Notify RI HEALTH if loss in pressure is prolonged.

Return the pressure to normal settings.

Disinfect the system with chlorine. Flush the system to remove possible contaminants.

Take a water sample and bring to an analytical laboratory to check for contaminants.

Analyze results. If contaminants <u>are</u> present, notify customers.

Disinfect the system with chlorine. Flush the system to remove possible contaminants.

Re-test the supply for contaminants.

Analyze results. If contaminants <u>aren't</u> present, return the system to normal operations.

Analyze results. If contaminants <u>aren't</u> present, return the system to normal operations.

Review response actions. Revise response plan.

Responding to Flooding

Notify water system owner, board members, and operator(s). Assess the emergency. Determine if a drinking water order needs to be issued. Record all response actions. Respond to the flooding with necessary equipment. Record all response actions. Disinfect the system with chlorine. Flush the system to remove possible contaminants. Take a water sample and bring it to an analytical laboratory for testing. Analyze results. If contaminants aren't Analyze results. If contaminants are present, present, return the system to normal notify customers. operations. Disinfect the system with chlorine. Flush the system to remove possible contaminants. Review response actions. Take another sample and bring to an analytical laboratory to be tested. Revise response plan. Analyze results. If contaminants aren't present, lift any Boil Water notices. Return the system to normal operations.

Responding to Contamination

Notify water system owner, board members, and operator(s). Assess the emergency. Attempt to isolate contamination. May need to shut down water system or parts of the water system and issue a Drinking Water Order. Preserve crime scene and evidence for investigators. Record all response actions. Was contamination accidental? Was contamination intentional? Contact an analytical laboratory and Contact state agencies, 911, and take samples. Homeland Security. Notify customers and issue a water Contact an analytical laboratory and use notice. take samples. Respond to the contamination. Flush the Respond to the contamination with system. Disinfect the water supply. guidance from RI HEALTH and Record all response actions. other agencies Analyze results. Notify customers and Analyze test results. issue a water use notice. If contaminants If contaminants Re-test the water supply. Analyze results. aren't present, are present, flush Determine an alternative water supply, lift the water use and/or disinfect if needed. notice. the system again. With recommendations from agencies, Return the Re-test the either return the system to normal system to normal water supply. operations or shut down the water system. operations. Review response actions. Revise response plan.



See Section G of the Plan

This section focuses on identifying and listing contact information for the water system's critical customers. It also references Drinking Water Orders and a sample press release in Section G of the Plan when you need to contact your customers during an emergency.

Critical Customers and Contacts

Section G of the Plan contains tables for you to identify the following important contacts who may be able to provide assistance during an emergency, or are particularly affected by the emergency. These contacts include:

- Hospitals
- Neighboring water systems that may provide emergency water connections
- Critical customers (schools, shelters, hospitals, etc.)

Public Notices for Drinking Water Orders

Also, in section G of the Plan you will find Public Notices for:

- 1. Boil Water Notices for
 - a. Loss of pressure
 - b. Presence of E. coli
 - c. Presence of Total Coliform bacteria
- 2. Do Not Drink
- 3. Do Not Use
- 4. Do Not Give Water to Infants

Example Press Release

There is also an example press release for a boil water notice. You can use this press release and modify it for other public notifications.

When writing a press release, consider the following tips:

- Disclose information as soon as possible.
- Provide customers with facts, not assumptions.
- Have a clear message.
- Inform customers of the "next steps" for the recovery process.
- DON'T include expert terminology or jargon.
- Think like customers would: What do they know? What do they want to know?



See Section H of the Plan

This section focuses on assessing and minimizing some potential water system vulnerabilities including: taking inventory of equipment and spare parts to ensure emergency preparedness; identifying service contractors and suppliers; and sizing a back-up generator to meet the system's power needs.

Equipment and Spare Parts Inventory

Efficient emergency response requires that you have equipment and spare parts in stock. Section H has tables to take inventory of tools, equipment, and replacement parts that may be necessary for emergency recovery. Taking inventory will help you determine the parts and equipment that are on hand and those you need to acquire so that you are ready in case of an emergency.

Each item should be listed with descriptions, including whether or not the item is on-site or must be acquired. Most tables contain space to record the item quantity on-site or the amount of the item you need to acquire.

Tools, equipment, and spare parts are listed in the tables. For each item provide descriptions of the dimensions, quantity, and additional information. For example, list every sized coupling, their materials, and where in the piping network they would be used.

Important: After completing the inventory, use it to acquire the materials so that they are on-site and available in case of an emergency.

The following is an example of the inventory table.

Emergency Response Tools and Equipment				
Item	Quantity	uantity Location		Additional Information
Tool kit including cordless drill	1	⊠ On-site	☐ Need to acquire	Located in the main office.
Flashlights Head lamps	4 2	⊠ On-site	☐ Need to acquire	Located in the cabinet in the main office.
Extra batteries D batteries for flashlights A batteries for head lamps Spare battery for electric drill Truck battery	4 4 1 1	□ On-site	Need to acquire	
Water sampling equipment	2	□ On-site	Need to acquire	

Service Contractors and Supply Contacts

This section includes tables for listing the water system's service contractors, State-certified analytical labs, and utility company contacts (gas company, electric company, etc.). Quick and easy access to this information can help to expedite recovery from an emergency.

The following is an example of how to complete two types of contact information tables within this section of the Emergency Response Plan:

Water Sample Analytical Laboratories				
Laboratory	Contact Name	Phone (Day) Phone (Night)	Email (if applicable)	
ABC Laboratory	Lab Contact	(401) 000-0000	labcontact@email.com	
Physical Address: 123 Main Street, Anytown, RI 02910 Analysis for: : ⊠ Pathogens ⊠ Chemical ⊠ Radiological □ Other:				

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Service Contractors and Suppliers					
Service	Contact Name	Phone (Day) Phone (Night)	Email (if applicable)		
Electrician	John Johnson	(401) 000-0000	jjohnson@domain.com		
Plumber	David Williams	(401) 000-0000	davidwms@domain.com		
Bottled water company	James Scott, Generic Springs Co.	(401) 000-0000	jscott@genericsprings.com		

Emergency Power - Sizing a Generator

Power outages disrupt the system's ability to provide water to its customers. You may need to buy or rent a backup generator to provide power.

The U.S. Environmental Protection Agency developed a worksheet to determine what size generator will provide adequate backup power for your system. The worksheet is in Section H of the Plan. Complete the worksheet and work with your electrician to properly size a generator to meet the water system's electricity needs in the event of our power outage.



See Section F of the Plan

This section focuses on identifying specific actions to take when responding to a specific type of emergency event.

Responding to Specific Events

There are a number of different emergencies that may affect your water system. Likely causes of emergencies in Rhode Island that a water system should be prepared for are power outages, transmission or distribution line breaks, chlorine treatment failure, surface water treatment malfunction, source pump failures, microbial (Coliform, E. coli) contamination, chemical contamination, acts of terrorism, vandalism, loss of water in the well, drought, floods, ice storms, and hazardous spills in the vicinity of water sources or distribution lines. In any of these situations your priority is to protect the people using the water. Rely on others to help assist in your emergency response by contacting the local emergency response coordinator and/or law enforcement agencies.

Be observant of what is going on around you, and if you suspect vandalism or terrorism, contact local law enforcement and make every effort to preserve evidence. Refer to the Threat Confirmation Checklists in Section C.

In Section F of the Plan, you will develop a detailed response plan for each type of emergency event that the system may experience. Since each water system and emergency is unique you may need to modify your response actions. There are a series of general steps that a water system should take:

- 1. Confirm and 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. Make repairs based on priority demand.
- **5.** Return the system to normal operation.

In Section F of the Plan, you will find:

- **1.** Four checklists you can use for responding to the most common emergencies. An example checklist, Responding to a Power Outage, is on page 9-2.
- **2.** Blank tables for listing specific steps to take based on a particular emergency. An example of a completed power outage table is on page 9-3.

Checklist: Responding to a Power Outage

Power outages will interrupt the pumping and distribution of the water supply. A power outage might result in contamination of the supply or loss of pressure.

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

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.				
\square 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

The following table presents a way to identify an event, summarize the vulnerability assessment, identify immediate response actions, define what notifications need to be sent out, and describe important follow-up actions.

Assessment	The ABC water system is vulnerable to power outages, experiencing an average of three outages per year that last several hours. The system does not have a back-up generator but has a connection so that a generator can be rented and plugged into the system.		
Immediate Actions	 Assess whether the outage is likely to last more than 6 hours. If no, be on alert for changing conditions and monitor storage tanks. If yes, complete the following steps: Call on availability of back-up generator at JJ's Rentals. Obtain generator if available. Connect generator to system and resume operations. Implement water shortage response actions to inform customers to cut back on water usage until power is restored. 		
Notifications	 Power Company – Let them know that a public water system is experiencing an outage and the generator will be turned on until power is restored. JJ's Rentals – Obtain generator. Customers – cut back on water usage until power is restored. 		
Follow-up Actions	 Turn off and disconnect back-up generator Return system to general power supply Inspect reservoirs and pumping facilities to ensure proper operation. Return generator to JJ's. 		



See Section I of the Plan

This section contains the Rhode Island Department of Health's procedures for well disinfection and its policy on bulk water delivery.

Well Disinfection Procedure

Well disinfection eliminates harmful bacteria and viruses that can affect human health. Disinfection should be performed because of the following situations:

- Presence of Coliform bacteria
- Flooding
- Pump installation
- Casing or pump repairs
- Routine maintenance

The Emergency Response Plan includes the Rhode Island Department of Health's recommended procedures for proper well disinfection. Contact the Rhode Island Department of Health's Office of Drinking Water for updates to these procedures.

Bulk Water Delivery Policy

During long-term emergencies, water systems should consider using an alternative water source. Bottled water and bulk water hauling are two common options.

If a Rhode Island water system chooses to use bulk water, it must comply with the Rhode Island Department of Health's policy.

Section I of the Plan provides an excerpt from the *Rules and Regulations for Bottled Water* (*R21-23-BB*) pertaining to bulk water hauling. Consult this policy prior to considering bulk water. Contact the Rhode Island Department of Health's Office of Drinking Water for updates to these procedures.



See Section J of the Plan

This section focuses on identifying water use restrictions and conservation measures that may need to be put into effect during an emergency situation.

An emergency may require mandatory water use restrictions. In this section of the plan, identify ways to reduce water use in advance. Possible water conservation practices may include watering lawns, washing cars, or filling swimming pools and hot tubs. There can be various combinations of voluntary and mandatory measures. The water system should develop and formally adopt water conservation measures through ordinances, resolutions, or by-laws.

As part of this effort, consider ways to inform customers about the need to conserve water. Examples include door-to-door postings, phone contact, posting of signs in visible community areas, and contacting the news media. Water conservation messages should be pre-scripted to ensure proper messages are delivered.

Below is an example for completing the water conservation table.

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. Post water restriction notices in places where customers will see them. (Be specific here, list places and who is responsible for posting and taking down.)			



See Section K of the Plan

This section focuses on returning the water system to normal operations as the emergency passes.

As the emergency passes and you regain control, the water system must prepare to return to normal operating condition. The recovery process may be simple or complex depending on the type and severity of the emergency. Returning to normal operation may entail that power is restored to the system and the back-up generator is disconnected. Or it could mean the water system has to obtain the proper number of satisfactory Coliform tests and be disinfected in order to lift a health advisory.

Many factors need to be considered before you decide to return to normal operation.

For example:

- Has the system been repaired to the point that it can meet demand?
- Has the system operator made a safety and operational inspection of all system components?
- Has the system been properly flushed, disinfected, and pressure tested?
- Has the water been adequately tested in accordance with sampling regulations?
- Does the water meet standards?
- Is there adequate staff to operate and manage the system?
- Do federal, state, and local agencies support returning to normal operation?
- Have you developed the proper public messages?

The Emergency Response Plan should include a description of the actions that the water system must take before returning to normal operation and the person responsible for doing it.

Continued on next page ▶▶

Below is an example for completing the Returning Water System to Standard Operations table.

Returning Water System to Standard Operations		
Action	Description and Responsible Person	
Inspect, flush, and disinfect the system	Water system operator and support staff inspect all system facilities, ensure all water quality tests have been done and the system has been flushed and disinfected if necessary.	
mopeot, nam, and distinct the system	Water system operator makes a report to the water system manager.	
	Water system manager makes decision on current condition of system.	
Verification of water quality	Water system manager verifies water quality sampling results.	
Coordinate with Rhode Island Dept. of Health	Water system manager coordinates with Rhode Island Department of Health on system condition and water quality results.	
Notify customers	Water system manager meets with water system operator and communications lead to write notice to customers. Water system manager directs communications	