Water System Emergency Response Plan Template

For water systems serving 3,300 people or less

Introduction

All Community and Non-transient, Non-community water systems in Oregon are required to develop a written emergency response plan (ERP) as described in OAR 333-061-0064(1). Oregon Health Authority - Drinking Water Services (OHA-DWS) developed this template to assist water systems in meeting the requirement. Having a current and effective plan ensures that water systems can prepare for and respond to emergencies while protecting public health with minimal service disruptions. The optional risk and resilience assessment (RRA) can help water systems assess their system's vulnerabilities and ability to prepare for and respond to natural and man-made hazards and emergencies. OHA-DWS has developed a checklist outlining required components of a completed RRA and ERP.

The ERP should be updated at least every 5 years or whenever changes to water system staff or components are made. Water systems are not required to certify or verify completion of the RRA or ERP to OHA-DWS and should not send documents with critical systems information to our offices. ERPs should be made available for review during the water system survey.

Contents

System Information

Public water system ID number	
Water system name	
Water system address	
Basic description and location of system facilities	
Total population served and total service connections	
Name, title, phone number of owner, primary contact, or DRC	
Location of treatment, distribution, schematics, maps, and operation manuals	
Emergency equipment available	

Chain of Command

Staff name & title	Responsibilities during emergencies	Regular and emergency contact info

Emergency Contact Information

Organization	Contact Name	Contact Info	After Hours Info
OHA Drinking Water Services Duty Officer		**Regular hours: (971) 673-0405**	**(971) 704-1174**
County Health Department			
Fire Department			
Law Enforcement			
Emergency Management Agency			
Oregon Emergency Response System (OERS)	Spill response - 24 hour	1-800-452-0311	Salem: 503-378-6377
ORELAP Accredited Drinking Water Lab			
Equipment or Chemical Supply			
Cybersecurity Emergency - Cybersecurity & Infrastructure Security Agency (CISA) Region 10	CISA Region 10	CISARegion10@hq.dhs.gov	888-282-0870
Engineering Company			
Electrical Utilities			
Alternate Water Suppliers			
Pump Maintenance Company			
Media			
Medical/Nursing/Rehab Facilities			
Schools or Day Care Centers			

To Report a Drinking Water Emergency

Be prepared provide the following when contacting Drinking Water Services or your County Health Department.

1. Your name, address, phone number, current location
2. Type of incident
3. Exact location of incident
4. The date and time the incident occurred
5. Nature of threat to the water system

Emergency Plans

Use the following table to describe plans in place including but not limited to physical security, isolating parts of the water system, emergency disinfection, cybersecurity measures, and coordinating with the local emergency management agency.

Plan Type	Plan Description	Designated Staff
Physical security measures		
Isolating all parts of the water system (if applicable)		
Emergency disinfection		
Cybersecurity measures (password policy, software update plan, monitoring suspicious activity, updating anti-virus or anti-malware software, etc.)		
Coordinating with local emergency management agency		

Emergency Response Procedures

Use the following table to describe procedures for staff to complete during emergency situations, immediate actions, equipment needed, who to notify, and follow-up actions. Include procedures for reasonably anticipated emergencies. Make a note in the “response procedures” column to reference any pre-existing procedures utilized by the system and its location. Unlock this document to insert additional rows/columns and add other emergency types that can impact the water system.

Emergency Type	Response Procedures	Designated Staff
Loss of electrical power		
Distribution loss of pressure		
Disruption or failure of disinfection or other treatment		
Detection of E. coli or chemical contaminant over the MCL		
Issuing public notices (boil advisory, do not drink advisory, etc.)		
[Example: treatment plant shutdown procedure]		
[Example: loss of computer networks, SCADA, or other automated controls]		
[Example: wildfires]		

In any event, take these general steps:

1. Confirm and analyze the type and severity of the emergency
2. Take immediate action to reduce injuries, save lives and prevent system damage
3. Make repairs based on priority demand
4. Take steps to return your system to normal operations

Notification Procedures

If your system does not have procedures in place for notifying customers, your primacy agency or other important contacts use the following chart to identify steps to be taken and by whom. Water systems should consider identifying vulnerable populations they are serving and notifying them during a water advisory or emergency. Customers serving vulnerable populations can include hospitals, daycares, schools, nursing homes or rehabilitation facilities, etc.

Notify water system customers

Who is responsible?	
Procedure:	

Issuing a boil water advisory or other public health issue

Who is responsible?	
Procedure:	

Notify OHA-DWS, local public health department, emergency manager, etc.

Who is responsible?	
Procedure:	

Emergency intertie, alternate water sources

Who is responsible?	
Procedure:	

Risk and Resilience Assessment (optional)

Conducting a risk and resilience assessment (RRA) can identify hazards likely to impact your system, strategies, procedures, and equipment that can improve water system resiliency and be implemented during an emergency. You can use the findings of the assessment to develop actions and procedures needed to improve the system's resiliency to future emergencies.

1. List the critical components and assets of your system (source water, intake, emergency sources, pre-treatment and treatment facilities, storage and distribution system, computer and automated systems, financial infrastructure, chemical storage, monitoring practices, procedures, etc.):

2. Select the hazards below that could post a significant risk to critical components or assets of your system and provide a brief description of potential impacts.

Natural hazards	Critical components at risk to this hazard	Brief description of potential impacts
Flooding		
Earthquake		
Landslide		
Inclement weather		
Wildfire		
Cyanotoxins/HABs		
Drought		
Tsunami		
Other:		

Man-made hazards or malevolent acts	Critical components at risk to this hazard	Brief description of potential impacts
Physical attack		
Theft		
Source water contamination		
Intentional or accidental contamination of finished water		
Cyberattack on process controls or automated systems		
Cyberattack on financial infrastructure		
Other:		

Physical Security

Wells, springs, intake, protective structures, offices, and treatment plants	Yes	No	Comments
Locks on all doors and windows	☐	☐	
Adequate alarms, motion sensors, video cameras or security lighting	☐	☐	
Entry restricted to authorized personnel	☐	☐	
Chemicals are properly stored	☐	☐	
Chemical storage is locked and posted	☐	☐	
Fencing around buildings (if needed)	☐	☐	
Finished water storage			
Fenced area around reservoir/storage tank	☐	☐	
Access gate is locked and posted	☐	☐	
Ladder guard and access hatches locked	☐	☐	
Adequate security lighting or motion sensors	☐	☐	
Vents adequately screened	☐	☐	
Overflow adequately protected	☐	☐	
Other:	☐	☐	
Distribution system			
Pumphouses adequately secured or locked	☐	☐	
Manholes, hydrants, and other access points are secured	☐	☐	
20 psi maintained at all service connections	☐	☐	
Backflow protection plan implemented	☐	☐	
Other:	☐	☐	
Procedures			
Background checks done for new hires	☐	☐	
Visitors or contractors checked in/out	☐	☐	
Passcodes/keys/access changed when employees are no longer employed	☐	☐	
Emergency notification procedures up to date	☐	☐	
Employees are regularly trained	☐	☐	
Sampling plans and procedures up to date	☐	☐	
Other:	☐	☐	

Risk Mitigation

After completing the RRA, DWS recommends reviewing actions needed to improve the system's preparedness or ability to "bounce back" after an emergency.

Actions to Mitigate Risk	**Description** Briefly describe steps to complete the mitigation actions and how they could reduce risks that could impact the water system.
[Example: complete written protocols for under-certified operators]	
[Example: develop procedures for public notifications]	
[Example: obtain and install auxiliary power for pumps, disinfection or treatment systems]	
[Example: coordinate with local emergency management agency, key partners, and critical customers (hospitals, day-care facilities, etc.)]	
Other:	
Other:	

Additional Resources for Water Systems

- Oregon Local and Tribal Emergency Manager Contact List
- Oregon Environmental Laboratory Accreditation Program (ORELAP) Lab Search
- Oregon Water/Wastewater Agency Response Network (ORWARN) system to system mutual aid assistance
- Cybersecurity Incident Reporting - Cybersecurity & Infrastructure Security Agency (CISA)
- OHA-DWS Emergency Response and Planning:
  - Emergency response resources
  - Preparedness and planning resources
- OHA-DWS Public Notice Templates
- OHA-DWS Fact Sheets and Best Management Practices (BMPs)
  - Service Outages Due to Reduced Pressure Events
  - Cutting Into or Repairing Existing Water Mains
- EPA's resources for water system emergency response and preparedness planning:
  - EPA's Vulnerability Self-Assessment Tool (VSAT)
  - EPA's Free Cybersecurity Assessments
  - EPA Incident Action Checklists for Water Systems