

Small Water System Vulnerability Assessment and Emergency Response Plan Template

For water systems serving up to a population of 3,300 people



State of Oregon
Oregon Health Authority
Drinking Water Services

Updated April 2020

[Public Water System Name]
[PWS #410000]

Emergency Response Plan

All public water systems in Oregon are required to develop a written Emergency Response Plan (OAR 333-061-0064) which incorporates the results of a Risk and Resilience Vulnerability Assessment. Drinking Water Services developed this template to assist system operators and managers in meeting the requirement. Having a current and effective plan ensures that water systems can respond to emergencies while protecting public health with minimal service disruptions. This can help water providers assess their system's vulnerabilities and ability to respond to natural and man-made hazards and emergencies.

Drinking Water Services requires that water systems update the plan at least every 5 years or when changes to the water system or personnel are made and replace outdated copies of the plan immediately. Keep copies of the plan where they will be accessible to all staff on duty. If your water system already has an Emergency Response Plan that lacks any of the elements included in this packet, please amend and organize the plan to best suit your water system's needs and priorities.

Under the EPA's America's Water Infrastructure Act (AWIA) of 2013 and 2018, all water systems serving more than 3,300 people must conduct a risk assessment and implement an emergency response plan. The EPA has specified deadlines for water systems to certify that their risk assessment and emergency response plans have been completed, and are appropriate for the population size they serve. Systems serving more than 3,300 people are welcome to incorporate sections of this template in their own plan, but are encouraged to use other resources from the EPA found here: <https://www.epa.gov/waterresilience/americas-water-infrastructure-act-risk-assessments-and-emergency-response-plans>.

CHAIN OF COMMAND

(Review/update annually)

Staff Name & Title	Responsibilities During Emergencies	Emergency Phone Number(s)

Where will the Emergency Response Plan be stored? _____

Have all the people listed above been informed of the location(s)? Yes ☐ No ☐

Would they all have access to the stored plan in an emergency? Yes ☐ No ☐

EMERGENCY CONTACTS

(Review/update annually)

Organization	Contact Name	Business Hours	After Hours
OHA Drinking Water Services		(971) 673-0405	(971) 704-1174
County Health Department			
Fire Department			
Law Enforcement			
Emergency Management Agency			
Equipment or Chemical Supply			
Engineering Company			
Electrical Utilities			
Alternate Water Suppliers			
Pump Maintenance Company			
Media			
Medical Facilities			
Nursing/Rehab Facilities			
Day Care Centers			
Schools			

TO REPORT A DRINKING WATER SYSTEM EMERGENCY

Be prepared provide the following when contacting Drinking Water Services, OERS, and/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

RISK & RESILIENCE VULNERABILITY ASSESSMENT

Conducting the Risk and Resilience Vulnerability Assessment can identify strategies, procedures and equipment that can improve water system resiliency and be implemented during an emergency. Answer the questions below or alternatively, use the EPA's online vulnerability self-assessment tool to identify the highest risks your system is vulnerable to and cost-effective measures to reduce those risks. The online tool can be found here: <https://www.epa.gov/waterriskassessment/conduct-drinking-water-or-wastewater-utility-risk-assessment>

1. List the critical components and assets of your system (wells, pumps, pressure/storage tanks, computer systems, etc.):

2. Is your system vulnerable in any way? (infrastructure, pipes, lack of locks, unrestricted access to critical components, inadequate sampling plans, etc.)

3. What are your current cybersecurity measures? (password protection, firewall, etc.)

4. What procedures, technologies and detection strategies does your system already have in place for natural or man-made hazards? (auxiliary power supply, emergency water supply, etc.) Are they effective?

5. Do you have procedures for notifying your customers of service interruptions, boil water advisories, chemical detections, etc.?

6. What training programs or exercises do you or your staff take part in? (positive coliform samples, line breaks, breach of distribution system, wildfires, etc.) Are all staff trained?

7. Do you have a source water protection program?

SYSTEM SECURITY ASSESSMENT

The system security assessment below should be done at least annually and is intended for water systems to identify and correct any deficiencies in their system. After completing this assessment, make a plan of what areas in your system could use added security measures and activities to be completed.

System name: _____ PWS # 41 _____

Date of review: _____ Assessed by: _____

Wells/spring/intake protective structures, pumphouses, offices and treatment plants:

	<u>Yes</u>	<u>No</u>	<u>Comments</u>
Locks on all doors	<input type="checkbox"/>	<input type="checkbox"/>	_____
All windows secured	<input type="checkbox"/>	<input type="checkbox"/>	_____
Adequate alarms, motion sensors, video cameras or security lighting	<input type="checkbox"/>	<input type="checkbox"/>	_____
Entry restricted to authorized personnel	<input type="checkbox"/>	<input type="checkbox"/>	_____
Chemical are NSF 60 certified and properly stored	<input type="checkbox"/>	<input type="checkbox"/>	_____
Chemical storage is locked and posted	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fencing around buildings (if needed)	<input type="checkbox"/>	<input type="checkbox"/>	_____

Reservoirs or storage tanks:

	<u>Yes</u>	<u>No</u>	<u>Comments</u>
Fenced area around reservoir/storage tank	<input type="checkbox"/>	<input type="checkbox"/>	_____
Gate is locked and posted	<input type="checkbox"/>	<input type="checkbox"/>	_____
Ladder guard and access hatches locked	<input type="checkbox"/>	<input type="checkbox"/>	_____
Adequate security lighting	<input type="checkbox"/>	<input type="checkbox"/>	_____
Working motion sensors or video surveillance	<input type="checkbox"/>	<input type="checkbox"/>	_____
Vents/overflow pipes properly protected with screens and/or grates	<input type="checkbox"/>	<input type="checkbox"/>	_____

Distribution system:

	<u>Yes</u>	<u>No</u>	<u>Comments</u>
Manholes, hydrants, and other access points are secured	<input type="checkbox"/>	<input type="checkbox"/>	_____
Positive pressure is monitored and maintained	<input type="checkbox"/>	<input type="checkbox"/>	_____
Backflow protection plan implemented	<input type="checkbox"/>	<input type="checkbox"/>	_____

Procedures:

	<u>Yes</u>	<u>No</u>	<u>Comments</u>
All facilities locked and alarms set	<input type="checkbox"/>	<input type="checkbox"/>	_____
Background checks done for new hires	<input type="checkbox"/>	<input type="checkbox"/>	_____
Employees are regularly trained and have participated in exercises or drills	<input type="checkbox"/>	<input type="checkbox"/>	_____
Visitors or contractors checked in/out	<input type="checkbox"/>	<input type="checkbox"/>	_____
Passcodes/keys/access changed when employees are no longer employed	<input type="checkbox"/>	<input type="checkbox"/>	_____
Emergency notification procedures up to date	<input type="checkbox"/>	<input type="checkbox"/>	_____

PRIORITIZATION OF NEEDED ACTIONS

After completing the Risk & Resilience Vulnerability Assessment Questionnaire and the System Security Assessment, review the actions needed to improve your system's security and resilience. Note the questions to which you answered "no" on this worksheet and summarize the areas your system needs to improve.

Needed Action	Scheduled Completion
[Example: completing written protocols for under-certified operators]	
[Example: procure back up generators or auxiliary power for storage tanks]	
[Example: establish procedures for public notifications (ex. boil water advisories)]	

EMERGENCY PROCEDURES FOR EVENTS

Use the following table to describe emergencies common to your water system, procedures to be taken staff to complete the procedure, and who to notify and follow-up actions. Make a note in the “procedure” column to reference any pre-existing procedures for emergencies that are in your operations manual. Emergencies can include; power outage, main break, loss of pressure, chlorine treatment failure, microbial or chemical contamination, oil spills affecting source water, flooding or other natural and man-made emergencies.

Emergency Type	Procedure	Designated Staff
[Example: winter storms]		
[Example: contaminants detected in distribution system]		
[Example: flooding events]		
[Example: power outage]		

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. 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 boil water advisory or emergency. Customers serving vulnerable populations include hospitals, daycares, schools, nursing homes or rehabilitation facilities, etc.

Notify water system customers

Who is responsible:	
Procedures:	

Notify local/state drinking water services, emergency managers, local public health officials

Who is responsible:	
Procedures:	

Emergency intertie, alternate water sources

Who is responsible:	
Procedures:	

Issuing a boil water advisory or public health issue

Who is responsible:	
Procedures:	