Guidance for Developing Drinking Water Source Protection Contingency Plans

Table of contents

Developing a Contingency Plan - Summary Guidance

Contingency planning is a crucial part of the Drinking Water Source Protection Plan, focusing on water purveyor responses to water supply contamination or disruption. These plans should address:

- Recognition of Potential Threats: Identify possible threats to the water supply.
- Development of Response Procedures: Outline steps to follow if these threats materialize

Key Elements of a Contingency Plan

1. **Inventory of Potential Threats**:
    - Identify and prioritize likely threats to the drinking water supply.
    - Consider factors like water source, local geology, hydraulic conditions, land uses, contamination sources, climate, and system design.
2. **Prioritization of Water Usage**:
    - Understand water use and demand to choose appropriate short-term and long-term replacement supplies.
    - Prioritize community needs, considering residential, commercial, industrial, agricultural, recreational, fire, and health and safety uses.
3. **Response Protocols**:
    - Develop scenarios for likely events that could disrupt the water supply.
    - Include descriptions of incidents, complicating factors, and remedial actions.
4. **Identification of Key Personnel and Notification Roster**:
    - Establish a chain of command with recognized and qualified individuals.
    - Designate a response coordinator at the water system level.
    - Include local, county, and state contacts, as well as local health departments.
5. **Short-Term and Long-Term Replacement of Potable Water Supplies**:

- Evaluate alternative water supplies to meet minimum needs during disruptions.
- Ensure alternatives meet health standards and are adequate for community needs.

6. **Short-Term and Long-Term Conservation Measures**:
    - Prioritize water usage and identify surplus water users.
    - Implement conservation measures, such as reducing surplus water use and restricting certain uses to conserve limited supplies.
7. **Plan Testing, Review, and Update**:
    - Conduct mock exercises for high-priority scenarios.
    - Schedule periodic reviews to update procedures, protocols, personnel, and new developments.
8. **Training Provisions**:
    - Ensure key personnel are properly trained and up-to-date on the Contingency Plan.
    - Encourage continuing education and training opportunities for the response coordinator and any other water system personnel or volunteers within the chain of command.
9. **Public Education**:
    - Develop educational materials to build public understanding and confidence in the Contingency Plan.
    - Use newsletters, brochures, bill stuffers, public forums, newspaper articles, etc… to inform water users.
10. **Logistical and Financial Resources**:
    - Identify and coordinate key personnel, equipment, and technical resources.
    - Maintain inventories of materials and resources.
    - Evaluate financial resources and funding options to ensure availability during emergencies.

Developing a Contingency Plan – Complete Guidance

Contingency planning is an essential component of the Oregon Wellhead Protection Program, focusing on water purveyor responses to the contamination or disruption of the groundwater supply to a public water system. Generally, these plans should focus on:

- The recognition of potential threats to the supply.
- The development of procedures to be followed should these threats materialize.

The primary responsibility for the development of these plans lies with the individual water purveyor. However, effective development and implementation may require local, regional, and state involvement, depending on the structure of emergency response coordination protocols in the area. Where possible, water suppliers should coordinate with existing local emergency response coordinators in developing their contingency plans.

Guidance for the development of a contingency plan is available through USEPA's technical assistance document entitled "Guide to Groundwater Supply Contingency Planning for Local and State Governments" and this guidance document.

Note that: where there are overlaps between the Contingency Plan and the Water System Emergency Response Plan, elements that are included in the Water System Emergency Response Plan can simply be referenced in the Contingency Plan, they do not need to be included in their entirety. These would include elements such as:

- Emergency Procedures
- Chain of Command
- Emergency Contacts List
- Notification Procedures
- Risk Mitigation

1. Inventory of All Potential Threats to the Drinking Water Supply

Each water system must identify all likely contingencies that might impact the flow of water to consumers. Systems may vary depending on the water source, local geology, hydraulic conditions, area land uses, sources of contamination, climatic conditions, and water system design and operation. Accordingly, contingency plans must identify and prioritize the most likely threats that could occur.

2. Prioritization of Water Usage

Each water system should develop a detailed understanding of its water use and demand in case it becomes necessary to replace the water supply. In order to choose an appropriate replacement, planners need to know what community needs should receive the highest priority as well as minimum and maximum daily consumption levels and peak demands. Usage rates may differ based on whether the water use is for residential, commercial, industrial, agricultural, recreational, fire, or health and safety needs.

3. Protocols for Responding to Potential Incidents

Scenarios should be developed for the most likely events that may disrupt the water supply and how the water system will respond in each case. Scenarios should include a description of the incident that threatens the water supply, complicating matters that may arise during the episode, and remedial actions that must be taken.

4. Identification of Key Personnel and Development of a Notification Roster

In any emergency, it is necessary to have a chain of command of recognized and qualified individuals who have been specifically chosen for that purpose. A response coordinator should be designated at the water system level to work in conjunction with the established emergency response coordination system of the county. Most counties in Oregon have some program already developed for this purpose. The roster should include local, county, and state contacts as well as local health departments. The Oregon Emergency Management (OEM) staff can help with the development of your contingency plan, locate your county's coordinator, and inform you if your county has an existing approved emergency plan. The OEM website and resources can be found here.

5. Identification of Short-Term and Long-Term Replacement of Potable Water Supplies

Depending on the type of disruption, the water purveyor should evaluate alternative water supplies that will meet the minimum needs of the system during the event. The alternative supply must meet applicable health standards and be in adequate quantity for the community needs. Emergency or short-term options should be evaluated first

where the need may be measured in hours or days, and then medium and long-term options should be evaluated where a permanent alternative supply must be developed.

6. Identification of Short-Term and Long-Term Conservation Measures

Each water system should prioritize their responsibility to their users. Users that purchase surplus water should be identified and water usages prioritized in case of emergencies. In certain cases, some usages must be curtailed to conserve a limited water supply or protect a threatened water source. Conservation measures may include the reduction of use of surplus water, restrictions on agricultural or domestic use of irrigation water, or recreation use in favor of usages that affect fire, health, and safety. A model water curtailment program for public water supplies is available on the Oregon Water Resources Department website in addition to a Guidebook for Water Management and Conservation Plans. These documents may provide background information or ideas that may be useful in developing short- and long-term conservation measures.

7. Provisions for Plan Testing, Review, and Update

Water systems should develop mock exercises for the high-priority scenarios to determine the efficacy of the plans. Water system planners should schedule periodic reviews of contingency plans to reevaluate and revise procedures, protocols, personnel changes, and new developments as needed. Summaries should be kept for each scenario, and a master schedule maintained identifying parties responsible for plan review, frequency of review, and revision updates.

8. Provisions for Training

To be effective, contingency planning must rely on properly trained individuals, operating within a well-organized and effective system with up-to-date information. Water systems should encourage continuing education and training opportunities in all aspects of contingency planning to help key personnel stay abreast of new and ongoing developments. County and state agencies may provide some training opportunities; however, opportunities should be developed by the water system as well.

9. Provisions for Public Education

Water systems should develop educational materials to build and maintain public confidence in the Contingency Plan. Development of newsletters, brochures, bill stuffers, public forums, and newspaper articles can help water users focus on areas of concern and help nurture support and assistance when contingency plans are put into effect.

10. Identification of Logistical and Financial Resources

Essential to the success of implementing contingency plans is the ability to make available key personnel, equipment, and technical resources in a well-organized and timely manner. Contingency plans should enable local officials to quickly identify and coordinate all pertinent resources to respond to the needs at hand. To the degree possible, equipment and contractor services, chemical and treatment supply services, and water hauling equipment/service should be identified and cataloged. Inventories of materials and material resources should be maintained and revised as needed to be current. Since lack of financial resources is often a limiting factor in responding to emergencies, water purveyors should evaluate their own financial resources as well as federal, state, and local funding resources to ensure funding is available when the need arises.

Public Health Division
Center for Health Protection, Drinking Water Services
2080 Laura Street
Springfield, OR 97477-2133
Voice: 971-673-0405
www.healthoregon.org/dws