



Water System Security and Emergency Response Planning

Security and emergency response planning are more important than ever



Security and emergency response are essential in managing drinking water systems and high priorities for the Department of Health Office of Drinking Water.

Historically, water system security and emergency response activities focused on vandalism, contamination, and natural disasters. However, after the September 11, 2001 terrorist attacks, the idea of what constitutes a credible threat to drinking water supplies changed.

The attacks and recent natural disasters heightened concerns among drinking water professionals and citizens about the security of safe and reliable drinking water. Natural events and intentional acts of destruction that used to seem unlikely or “low risk” are now important considerations.

This heightened emphasis on emergency planning and infrastructure security is evident throughout the nation. The federal government set requirements for assessing system vulnerabilities and developing emergency response plans. Water systems, federal and state agencies, and industry associations such as the American Water Works Association are developing training and technical assistance materials to better prepare to deal with emergencies.

Vulnerability assessment and emergency response planning requirements

Federal law requires all community water systems serving more than 3,300 people to complete a vulnerability assessment. Within six months after completing a vulnerability assessment, systems must also develop or revise their emergency response plans to incorporate the results of the vulnerability assessment.

Do not submit your vulnerability assessment to the Office of Drinking Water. The law requires water systems to submit their vulnerability assessments directly to the U.S. Environmental Protection Agency. Instructions for submitting a vulnerability assessment are online at

<http://cfpub.epa.gov/safewater/watersecurity/index.cfm>



HELPING TO ENSURE SAFE AND RELIABLE DRINKING WATER



Planning is critical

Emergencies may result from natural disasters, equipment failure, human error, or intentional acts such as vandalism or terrorism. All public water systems, from the smallest to the largest, should have an emergency response plan to guide them through such emergencies. As part of the plan, the water system must assess security measures that will help to guard against an attack.

Stop for a moment and think about how you, as a water system professional, would react if a catastrophic event shut down the water supply indefinitely. How would you notify customers? What would you tell them? What alternative means for delivering water might be available?

There is no clear definition of what constitutes an emergency. Each is unique, requiring case-by-case evaluation based on the actual event. Advance planning increases the likelihood that you will respond in an organized and efficient manner. A few minutes can often mean the difference between a minor mishap and a major event. Emergency preparedness planning is an essential function, and is never a wasted effort.

In addition to emergencies, such as contamination, line breaks, water shortages and natural disasters, we now face water system security and infrastructure protection issues on a different scale. Continued acts of foreign and domestic terrorism are a very real threat in America.

Even though it may seem unlikely, it would only take one well-staged event to undermine confidence in drinking water safety in communities across the nation. Being prepared and knowing what to look for are crucial to prevent an attack on your system. Call our regional office for additional information on emergency planning. (See page 4)

A water system could be attacked

There are many potential threats to drinking water systems, including:

- Chemical, biological, or radiological contamination.
- Damage to system infrastructure or computer systems, resulting in supply disruption.

In most cases, biological or chemical contamination would cause the most concern for a drinking water system. However, given the size of most water supply systems, it would be difficult to contaminate a water system with these agents due to the sheer volume of contaminants needed to cause harm to people.



Attacks could occur in three areas of a water system:

1. Source water
2. Treatment plant
3. Distribution system

The distribution system is the most likely target because it is more readily accessible and is a direct link to consumers. Attacking a water system with the intent to cause major damage or harm to people may be somewhat difficult, but we should not view the possibility lightly. The threat is real, and water supply systems must be prepared.

Top 10 ways to prepare for an emergency

1. **Prepare or update** an emergency response plan including security considerations.
2. **Post** updated 24-hour emergency contact information in highly visible areas around the water system. Give the information to key persons and local response officials.
3. **Get to know** your local law enforcement. Ask them to add your facilities to their routine rounds.
4. **Fence and secure** your water system facilities and vulnerable areas (pump houses, wellheads, reservoirs) and install adequate lighting around critical facilities such as sources, pump houses, treatment plants, and parking lots.
5. **Watch** for suspicious activity, suspicious deliveries, changes in water quality, and increased customer complaints.
6. **Make security a priority for employees.** Ensure employees know the importance of vigilance and seriousness of security. Provide staff training and checklists on how to handle threats. Rehearse response actions to familiarize staff with the process.
7. **Conduct** a vulnerability assessment to determine vulnerable components and possible disruption points, and identify security measures to include in your emergency preparedness plan.
8. **Designate** an emergency coordinator to ensure effective preparation, communication, and procedures for an event.
9. **Identify and establish** agreements for a safe alternative water supply if a supply disruption occurs. Options include an emergency source, water truck, bottled water, or intertie.
10. **Know how to** issue a Health Advisory, i.e. boil water order or drinking water warning, in consultation with the Department of Health, Office of Drinking Water officials.

In case of emergency, follow your chain of command to reduce confusion and optimize response time. If there is a security breach call “911” immediately to inform local law enforcement, then call our regional office (See Page 4).

Good communications are essential

Information is extremely important, especially during an emergency. Good information is more than accurate. It is complete, consistent, timely, and appropriate to the audience.

Managing information requires ongoing attention. You must get it from reliable sources and pay attention to how it is stored, processed, and distributed.

During emergencies, people are often concerned or upset, so you must earn their trust to communicate with them effectively. How you communicate can be just as important as the information you are trying to deliver. Your body language, tone of voice, and expressions of concern all help to lay the foundation for delivering your information.

In an emergency, you should understand and plan your messages as carefully as you can. Coordinate with local and state health officials to help develop your key messages and deliver them. Above all, strive for clarity. Avoid jargon and technical terms. Also strive for a logical flow of ideas—events in time sequence, activities from high to low priority, or some other way to give a sense of order.

Don't miss the opportunity to deliver good news when an emergency is over. Thank those who helped resolve the event. Ask people to evaluate your communications and suggest what would work better the next time an event occurs.



Health Advisories

If the quality of the water is in question, you may have to issue a health advisory. A health advisory is advice and recommendations for the public. It explains how to protect health when drinking water is considered unsafe. We issue health advisories when the water system, the state department, or local health officials believe the health risks to the public are sufficient to warrant such advice.

Health advisories usually take the form of a drinking water warning or boil water order. Our staff will work closely with you to help determine if an advisory is necessary. In any event, health advisories should be well thought out and provide very clear messages.

Issuing a health advisory will go much more smoothly if you learn something about the process in advance. We have a packet of tools including fact sheets, brochures, forms, and templates to help water systems prepare for coliform-related health advisories. The packet is online at <http://www.doh.wa.gov/ehp/dw/Coliform/coliform.htm>

For more information

Visit the Office of Drinking Water online at <http://www.doh.wa.gov/ehp/dw/default.htm> or call:

- **Eastern Region – Spokane Valley** (509) 329-2100
- **Northwest Region – Kent** (253) 395-6750
- **Southwest Region – Tumwater** (360) 236-3030
- **Security Coordinator** (360) 236-3180
- **After Hours Hotline** (877) 481-4901

Water system security in Washington: <http://www.doh.wa.gov/ehp/dw/Security/security.htm>

Publications: <http://www4.doh.wa.gov/dw/publications/publications.cfm>

Local Law Enforcement: 911

FBI Emergency Number: (206) 622-0460

U.S. Environmental Protection Agency—Drinking Water Security:
<http://cfpub.epa.gov/safewater/watersecurity/index.cfm>

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