

Ask the Experts?

Each issue, we ask members of the *On Tap* Editorial Advisory Board to answer a drinking water-related question. We then print as many responses as space permits. The opinions expressed are not necessarily those of NESCA.

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By the end of 2004, most systems had completed vulnerability assessments and revised their emergency response plans. What are the next steps water utilities should take to continue improving infrastructure security and protecting drinking water supplies?

Remain Vigilant

Infrastructure security has taken on a new importance in managing our water utilities. No longer are we simply concerned with the occasional vandal that may spray paint his or her name on the water tower, but with those who are capable of creating serious problems. From now on, our infrastructure will have to be monitored and guarded, and securing our drinking water supplies will involve much more than participating in source water assessments.

The vulnerability assessment was a valuable exercise in identifying weak spots in our systems and the U.S. Environmental Protection Agency (EPA) has done a terrific job of providing our water utilities with useful information about protecting our infrastructure. Over the years, EPA has also studied chemical and biological threats to the water supply and has continued to report that it would take very large amounts of these agents to threaten the water supply.

Obviously, the best thing we can do is to never let our guard down. We should make it a point to see that all emergency plans are kept up to date and exercised at least annually, if not more frequently. Tighten up and increase the frequency of inspections and make sure that all devices designed to keep our facilities secure are kept in good repair.

Another important thing we can do is to make sure the general public knows that they play a big part in guarding our infrastructure and protecting our drinking water. Let them know that they need to call authorities when they observe something out of the ordinary. The public will be our best defense against any manmade threat. These are indeed extraordinary times.

Frank DeOrio

Director of Municipal Utilities
Auburn, New York



Bureaucracy Meets Best Intentions

I've mentioned in previous responses that I work for a young water business in a well-established electrical monopoly company. In addition to the difference in revenue generated and total number of customers served, the water portion of the company is in a competitive environment. There are two other state-approved satellite management agencies (SMA) in the area competing for businesses. Because of this, we focus a lot of energy on providing services—including engineering services, backflow-assembly testing, repairs, and new construction—to systems we do not manage or own. We do not satisfy all the state's planning requirements that we should, but we are working toward that goal.

To be an SMA, we must have a state-approved plan. For each Group A water system we should have a small water system management program for non-expanding systems and a water system plan updated every six years for expanding systems. Because we have multiple systems, we are preparing an umbrella water system plan and individual plans for each Group A system. Finding the time to write these plans is next to impossible given all the work we have to accomplish on a daily basis to keep our existing customers in water and satisfied.

I have found that, internally, no one reads these planning documents or uses them to look up information. They collect dust in our office. However, to satisfy state requirements these documents are fairly comprehensive and detailed.

The state wants to see individual water quality plans, individual water right evaluations, etc. As a multiple system manager and owner we cannot operate that way. It's difficult to track the different contracts (agreements for service) without complicating our operation and maintenance routines.

Once written, these planning documents quickly become out-of-date. For instance, we having been adding new

water systems and change our financials on a yearly basis. These planning documents would be out-of-date as soon as we add one more system.

Having said all this, we are making baby steps. We have a company-wide emergency response manual. Instead of just having a written cross-connection control program, we are trying to implement it in stages beginning this year. We already had to do individual coliform monitoring plans, but we had to do disinfection byproduct (DBP) plans this year for all our systems with disinfection. We already do the annual consumer confidence reports with conservation education, but next year we are going to focus on doing our mandatory wellhead protection program education. This education is important for our customers to understand how their activities might impact their drinking water.

We have limited funds that go for the most urgent improvements: leaking roofs, electrical repairs, etc. Our capital improvement wish list includes such items as fencing. If we have a problem or suspect a problem, we know who to call.

<p>Lisa Raysby Water Department Manager Peninsula [Washington] Light Company</p>	
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Have Enough Water

Make sure your system has adequate water storage at all times to respond to a hazardous materials or terrorist incident. Water is likely your community's first line of defense when it comes to emergency response tasks, such as fire fighting, drinking water decontamination (i.e., flushing out contaminants from service lines and sources of supply), and decontamination of people, buildings, and places that have been attacked by chemical, biological, and radioactive agents. Does your system have the water supplies and/or interconnections to meet these types of needs?

Determine how much water your system needs to respond to a hazardous materials or terrorist emergency. Consider that New York City used over a million gallons of water a day, for months, just to put out the fire at the World Trade Center after September 11, 2001. Fortunately, NYC has a massive supply of water and was able to

control the fire after the buildings collapsed, but there are many systems that don't have significant supplies in storage yet who are just as vulnerable to terrorist attacks. Further, too many U.S. water systems have allowed their water storage levels to drop to precarious levels during recent drought periods because they did not want to impose sensible water use restrictions. The result is that some have been left with less than 40 percent of capacity—supplies that could rapidly diminish in an emergency.

There are many factors to take into account when evaluating system storage capacity needs. An inexpensive and quick-to-implement option is water conservation. By permanently reducing customer demands through reasonable water efficiency policies and programs, particularly during peak summer months when outdoor watering is usually high, water supply capacities can be increased. If you want a water system that is robust and ready to respond to security threats, a water conservation plan and program should be part of your system operations.


<p>Amy Vickers Engineer and Water Conservation Specialist Amy Vickers and Associates</p>	
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Practice Makes Perfect

An emergency response plan is only worthwhile if you know how to implement it immediately. As an operator or manager of a public drinking water supply, you should know the vulnerabilities of your system and have a good working relationship with those in the community you will rely on in an emergency.

Don't let your guard down but do take a level-headed approach to protecting your customers and be alert to abnormal conditions and events. Use the vulnerability assessment and emergency response plan as a living document. Keep it updated and know how to put it to use at any time.

What are the next steps? Practice, practice, practice!

<p>Kevin Kundert Training Director Montana Water Center</p>	
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The Drop Box

Do you have a suggestion for improving this magazine or an idea for an article we should explore?

Do you have a question for our "Ask the Experts" column or a Web site that you find particularly helpful?

On Tap editors are always eager to learn from you. Here's how to contact us:

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Put Those Plans to Use

Vulnerability assessments (VA) are performed so that system managers and operators recognize and understand where their system is lacking in security measures. The VA should also emphasize where the system may be deficient in terms of adequate managerial, operational, and treatment needs. It is a tool to help the system correct those deficiencies and help prioritize funding and other needs so that they can be addressed in an orderly manner and not forgotten or left on the shelf.

An emergency response plan (ERP) is only as effective as the managers and operators make it. In addition to being a tool for security breaches, the ERP is also vital should the system have any kind of catastrophe. A flood, a violent storm, or a lightning strike can all create a situation of uncertainty and bewilderment. Everyone responsible for the system should know the details of the ERP, where it is kept, and how to use it should the need ever arise.

Who will take charge, who is responsible for which action, and what kind of notification is to be made to whom, are questions that should be answered in a good ERP. In order for system managers and operators to best understand the details of an ERP, tabletop exercises should be run for a number of situations. These are acted-out scenarios where a pretend emergency takes place. All members of the community that have responsibility in an emergency situation rehearse just what they have to do for that particular emergency.

With luck, the people involved will improve lines of communication, find errors that need to be corrected in the ERP, and become familiar with their role in a real emergency. The more familiar with the ERP and the more practice that is put into its use, the quicker and more efficient the response will be when it is finally needed.

These documents are not one-time pieces of regulatory paperwork to be put away until they are needed. They are living documents. A system is constantly evolving and so is the

community. The documents need to be revised on a regular basis to take account of changes in the system and the community. Only then can the documents play the role that was meant when they were produced in the first place: the protection of the water system and the public health and safety of the community.

Jerry Biberstine
Principal Engineer
National Rural Water
Association



JOBS AT NESC

Executive Director

National Environmental Services Center

West Virginia University

West Virginia University seeks expressions of interest and names of nominees in anticipation of a search to be undertaken for the position of Executive Director of the National Environmental Services Center [NESC]. The Executive Director will oversee programs such as the National Small Flows Clearinghouse, the National Environmental Training Center for Small Communities, and the National Drinking Water Clearinghouse.

The NESC is a division of the National Research Center for Coal and Energy [NRCCE] at West Virginia University, an organization dedicated to advancing innovations for energy and the environment. This position reports to the NRCCE Director.

An official announcement and call for applications, when available, will be posted at:
www.nrcce.wvu.edu/employment_opportunities

For more information about this anticipated job opening, contact Lynnette Loud, Assistant to the Director, National Research Center for Coal and Energy at **(304) 293-2867** extension **5407**.

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