

Water Connection



Boott Mills South, 100 Foot of John Street, Lowell MA 01852-1124

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How Safe is Our Water Supply From Terrorism?

In the aftermath of September 11, everything has taken on a new perspective of doubt and fear, even the one thing we have long taken for granted: safe drinking water. Is even the water from our taps not safe from the threat of terrorism?

As part of our nation's homeland defense efforts, the drinking water and wastewater industries are striving to secure our water infrastructure against terrorist attack. Still, a nervous public wants to know: How safe is our water supply? What steps have been taken to protect it? What steps still need to be taken?

This issue of Water Connection seeks to answer those questions. By closely examining the true vulnerability of our water supply and the efforts being made to limit that vulnerability, Water Connection hopes to both assure its readers and prepare them.



Over 50 Years . . .

- ♦ Coordinating Interstate Water Quality Programs
- ♦ Training Environmental Professionals
- ♦ Providing Public Education & Outreach

New England Interstate Water Pollution Control Commission

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Who We Are

For more than 50 years, NEIWPCC has coordinated regional water pollution control programs, trained environmental professionals and raised public awareness of water quality issues in the six New England states and New York. NEIWPCC's Environmental Training Center provides training courses throughout the region to help communities meet their water pollution control goals.

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Murky Waters: Answering Questions About Water Security

The terrorists attacks of September 11 left us all with more questions than answers. Even after months of public education on security issues, many of us still are unsure what is being done to protect one of our most vital resources: water. Water Connection tackled some of the most common questions in hopes of filling the gaps.

How safe is our drinking water?

Environmental Protection Agency (EPA) Administrator Christine Todd Whitman was quick to assure the American public the nation's drinking water supply is not nearly as vulnerable as it might seem. "People are worried that a small amount of some chemical or biological agent...could result in significant threats to the health of large numbers of people," Todd Whitman said. "I want to assure people—that scenario just can't happen...Because of our increased security at water reservoirs and other facilities around the country...we believe it would be very difficult for anyone to introduce the quantities needed to contaminate an entire system."

American Water Works Association Executive Director Jack Hoffbuhr reinforced Todd Whitman's reassurances by explaining, "Most systems have so much water and such effective treatment mechanisms, that anything less than many tankers full of dangerous agents would be diluted and easily neutralized. It is hard to imagine that anyone would have the ability to deliver such quantities effectively and without detection."

Is our water supply completely safe?

With 168,000 public water systems in the United States and 16,000



publicly owned treatment works with over 600,000 miles of sewer lines in service, the potential for terrorists to wreak some havoc with our nation's drinking water supply remains considerable. Such acts as interrupting a city's water supply through the destruction of dams and aqueducts,

Even after months of public education on security issues, many of us still are unsure what is being done to protect one of our most vital resources: water.

poisoning tested and treated water flowing through local distribution pipes, disrupting the delivery of power or disinfectants to water utilities, or even simply spreading rumors of tainted water through a hyper-alert media could all cripple a community's access to safe drinking water.

What steps are water and wastewater facilities taking to protect our water supply?

Being prepared for a terrorist attack, or any emergency, is the best way to thwart one. With this in mind, water and wastewater facilities are taking pains to prepare themselves as fully as possible. The following are some areas of preparation and steps being taken by facilities to ensure they will do their best in the face of the worst.

Risk Assessment

Before preparing for an emergency, facilities have been advised to undertake a risk assessment using these steps to determine what sort of emergency they are likely to face:

- Determine the utility's important assets to protect.
- Determine consequences of losing key assets.

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WATER SECURITY from page 3



- Define types of threats and the likelihood of occurrence.
- Define safeguards to protect systems from sabotage.
- Analyze the system to determine constraints.
- Develop a plan to counter or minimize identified risks.

Emergency Operating Plan

Once a risk assessment has been conducted, it is important to have an emergency operating plan designed to meet the most likely risks. Facilities are using the following tips to help put such a plan in place:

- Develop your emergency operating plan based on a “worst-case” scenario.
- Establish a chain of command and emergency call down list.
- Discuss detection, response, and notification issues with local public health officials and establish a protocol.
- Invite local law enforcement to become familiar with facilities and establish a protocol for reporting and responding to threats.
- Provide local law enforcement, fire and rescue departments with a list of chemicals (hazardous and non-hazardous).
- Provide copies of operational procedures to law enforcement and emergency management personnel.

Detect, Delay, Respond

Anti-terrorism experts preach “detect, delay, and respond.” If terrorists think their actions might be detected or if they are delayed from their goal for a significant period of time, some will abandon their plans. With that in mind, facilities are heeding the experts’ tips on improving their ability to detect, delay and respond:



Lowell Wastewater Treatment Facility.

- Increase lightings in understaffed areas.
- Fence and lock vulnerable areas.
- Verify the identification of visitors. Check back-up generators.
- Limit access to facilities.
- Do not leave keys in unattended areas or equipment.
- Train all staff in security procedures.
- Pay attention even to minor incidents.
- Stay alert and watch for unusual circumstances.


What is the government doing to protect the water supply?

State and local authorities are answering the call to reassure the public on the safety of drinking water supplies. New York State temporarily banned recreation along watersheds supplying New York City, assigning helicopters, patrol boats and armed guards to patrol the watersheds. The city of Albany, New York, instituted constant surveillance of its reservoirs and water treatment plants. Houston, Texas, took similar precautions. Massachusetts dispatched state police to lock down vulnerable areas of Boston’s Wachusett Reservoir.



Elected officials are also doing their part. Congress has authorized billions of dollars for anti-terrorism efforts, including those to satisfactorily improve water safety and security. The added benefit of this flow of funding may well be the upgrade in infrastructure experts have long prescribed for the nation's drinking water systems.

How can I help protect my community's water supply?

Simple: stay educated, stay involved. Educate yourself by doing research on the topic of water security on the Internet or at your local library. Involve yourself by attending hearings and meetings conducted by your local or state government or by your community water facilities. Only through the twin efforts of individual preparation and community action can we as a nation hope to keep our homeland safe. 

Some of the above information was taken from the following sources:


"What Wastewater Utilities Can Do Now to Guard Against Terrorist and Security Threats," U.S. Environmental Protection Agency, Office of Wastewater Management, October 2001

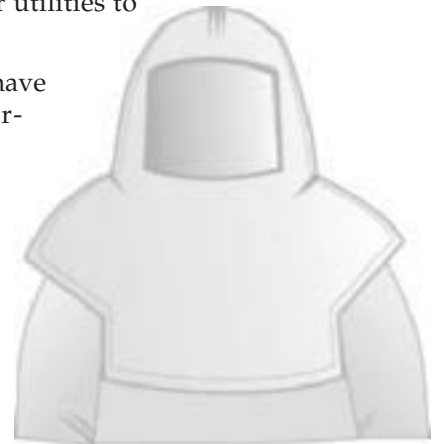
"Water Security Summit Provides Measured Response to Bioterrorist Threat," Proceedings from the Water Security Summit 2001 Offered by Haestad Methods, January 2, 2002

Water ISAC Will Link Water Industry with Counter-terrorism Experts

Funded by a grant from the US Environmental Protection Agency, the Association of Metropolitan Water Agencies (AMWA) is currently developing a Water Information Sharing and Analysis Center (ISAC). The Water ISAC will be a highly secure, Internet-based communications tool and its purpose will be to facilitate communication among drinking water and wastewater utilities and counter-terrorism and law enforcement experts. The goals of the Water ISAC are:

- To disseminate early warning and alerts concerning threats against the physical infrastructure and cyber systems of drinking water and wastewater utilities
- To allow drinking water and wastewater utilities to share information on security incidents
- To provide an opportunity for utilities to have security incidents analyzed by counter-terrorism experts

The Water ISAC is expected to be operational later this year. For more information, visit www.amwa.net/isac. 



EPA CREATES WATER INFRASTRUCTURE SECURITY WEBSITE

The Environmental Protection Agency (EPA) has created a water infrastructure security website that includes information on financial assistance, training, vulnerability assessment tools, emergency response tools, technical assistance, information sharing, and research. It also includes information on the \$89 million supplemental appropriation EPA received from Congress to help improve the safety and security of the Nation's water supply. EPA is soliciting grant applications from publicly owned drinking water utilities that regularly serve 100,000 or more people. The grants may be used to develop a vulnerability assessment, emergency response/operating plans, security enhancement plans and designs, or a combination of these efforts. EPA will award up to \$115,000 to each eligible utility system. The Request for Application and a fact sheet on the Security Planning Grants is available on the site. The site can be found at:

www.epa.gov/safewater/security/index.html.

A Serious Threat: An Interview with Peter Beering on Water Security

In this interview, Peter Beering, a terrorism preparedness coordinator in Indianapolis, Indiana, educates us on why, despite the sincere assurances of Environmental Protection Agency Administrator Christine Todd Whitman and others on the safety of our water supply, the threat of terrorist attack against our water infrastructure is not one to be taken lightly.

Peter Beering is one of the experts who trains officials in terrorism preparation and response in cities across the country for the US Department of Defense. Beering is the deputy general counsel for IWC Resources Corp. and its subsidiary, the Indianapolis Water Co., one of the nation's largest privately held water utilities. He is a member of the Department of Justice State and Local Advisory Board of the National Domestic Preparedness Program. Beering is also a member of the Executive Session on Domestic Preparedness, a joint initiative of Harvard University and the Department of Justice. This appointment places him among the 20 leading US experts on counter-terrorism who will study the topic and make various US policy recommendations.

Question: Water terrorism is something that people probably don't think about much. How big a concern is this?

Beering: Water is the quintessential target. It has been targeted for centuries both in real conflict and in cinematic conflict. Because of its importance to life, the public has a very emotional response to its water supply, more so than any other utility.

People typically do not become emotionally attached to their electric service, or to their telephone or their natural gas provider. But they do become very emotionally involved with their water, because it's the only utility that is consumed. So a threat to contaminate a water supply, or the actual contamination of a water supply is, in point of fact, the most significant of the infrastructure interruptions, because it literally has the ability to impact people's lives.

You're inconvenienced if your electricity goes out, but if you don't have a water supply, it very realistically can affect your health and, in fact, if you don't have a water supply for a long enough period of time, it will kill you.

This has been well known in military circles and is the reason that, typically, when military planners are looking at the vulnerability of an enemy, they look to the infrastructure.

Contemporary warfare and terrorists—terrorism has become, in a very real way, the contemporary warfare that we must be concerned with—would find a very easy collection of targets in any of America's water systems.

This is an insidious threat. It's one that is not well understood. The parties who would carry it out largely do business lurking in the shadows, so they are difficult to identify. Certainly, for many in the utility industry, [terrorists] are outside of the scope of things that they pay attention to. And given that water systems are, by their very nature, open, they are easily identified because most systems have hydrants sticking up out of the dirt every five hundred or a thousand feet or so, and it's difficult to hide water tanks and treatment plants.

Question: What kind of problems do you deal with? What kind exists right now?

Beering: Well, we learned in January, when what was believed to be an Osama bin Laden sympathizer had, in his apartment, a letter indicating that the water supplies in a number of major—28, in this case—major American cities were going to be cont-

aminated. That was intercepted by the New York police and by the FBI. The FBI communicated with one of the national water organizations and was looking for some background information to determine whether this was a credible threat.

That organization then posted the information on their listserver electronically, which gave rise to e-mails throughout the United States to water operators. The FBI was not aware that this information had been effectively disseminated throughout the water industry and what ensued was on a range of continuum from flat panic to measured responses for those systems that had thought a little bit about what contamination threats might look like.

Ultimately it was determined, after a day or so, that this was not a credible threat and that the means that was contemplated would not have been effective in any of the systems—the normal disinfection processes would have taken care of it. However, it underscores that a terrorist needn't actually contaminate the water, they merely have to threaten it.

My fear has been, as an executive here in Indianapolis with the Indianapolis Water Co., not that someone would actually contaminate the system, but that someone put forth a credible enough threat that they per-

sueded the news media that they contaminated the system. Because the impact and the costs are every bit as real as if the actual contamination had been there.

Question: *You're talking not only about economic impact but panic in general?*

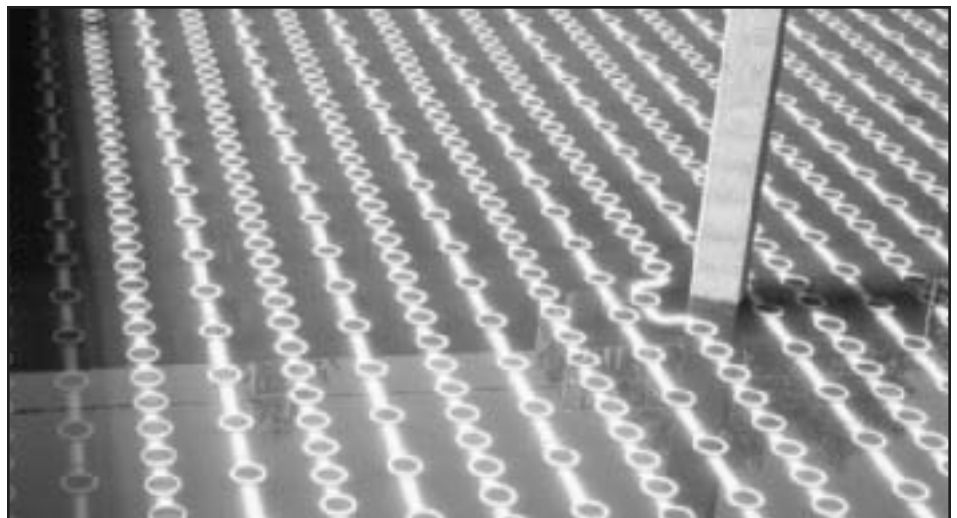
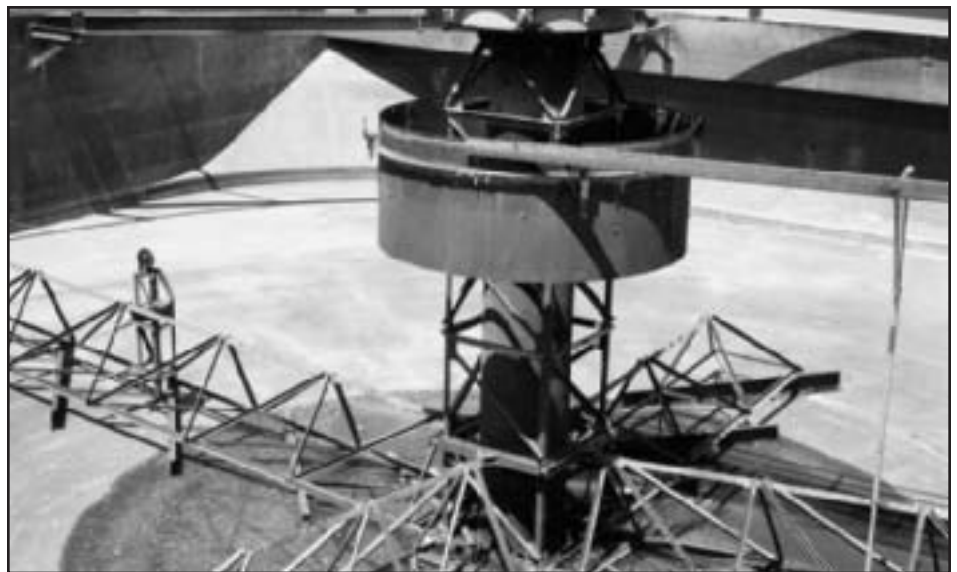
Beering: Well, you have the emotional response and the potential, certainly, for panic among the customers. You have the situation that could, depending on what the threatened agent is, create a run on bottled water and on alternate water supplies. And of course, if you look at the volumes that most systems produce, which are measured in millions of gallons per day, there is not a grocery store on earth that can supply that much bottled water.

The actual hard dollar costs would be in terms of what symbolic things a utility would have to do to restore consumer confidence. And the question that I have asked water operators in a number of different environments is, "Are you prepared to empty a five-, 10-, 15-million-gallon finished water reservoir to prove to the public that it's safe to drink?"

And I don't think it's a far stretch to suggest that, given the images that are present on television and the pervasiveness of electronic news gathering, it is a very real likelihood that if that threat, a credible enough threat, were received, that a utility would have to do something that significant in order to reassure its customers.

We look at what we do to routine kinds of purification questions—whether the plant comes off breakpoint, whether you have a positive test for coliforms, whatever it may be—and you look at the types of actions that we have to take in order to reassure the customers that it's safe to drink the water. The same collection of decisions has to be made if there is a credible threat.

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Top: First stage of wastewater treatment--group waste pumps.

Middle: Second stage--primary clarifier.

Bottom: Third stage--aerators that provide oxygen to bacteria that feed on waste.

A SERIOUS THREAT from page 7

Question: What can water systems operators be doing?

Beering: Well, water system operators need to do a collection of things. The first is that they need to take a long look at physical security of treatment plants, storage facilities and structures, asking simple questions like, "Are the gates locked? Are employees easily identified? Are there surveillance cameras or systems? Can people easily access water tanks?"

There's a classic case that I recall from not so many years ago—where a homicide victim was deposited in a water tank and the decaying body was floating on top of the tank—and this was a finished-water tank—and it wasn't until the public reported that their water tasted and smelled funny that they figured out that there was a body in there.

So it can be as simple as making sure that tanks and access hatches are locked, or the vents in water reservoirs secured in such a way that they can't be opened. Are there surveillance mechanisms for raw water supplies? Are the wells adequately protected? This is an exercise in fences and locks.

The second collection of areas has to do with the training for purification processes and monitoring of the entire disinfection process. That then becomes the question of: Does your normal sampling and laboratory analysis matrix happen upstream enough that if there were contamination that (a) you would be able to detect it, and (b) you would be able to effectively respond to it?

That is a plant operator-type of training question that the plant operator needs to have both the training, the authority, and the confidence that if something is amiss they take the plant off line and they raise the alarm that there could be a problem. That could be an accidental discharge as easily as it can be a deliberate one.

And then the utility needs to have some relationships established ahead

of time with the emergency response community so that if it is attacked, that they are not meeting the representatives from the public safety, emergency management, the state, and all of the regulators who would be involved—you don't want to meet these people for the first time at the scene of the incident.

There has to be a collection of discussions between the utility's public affairs and spokesperson, the media liaisons, so that they understand what the risks and vulnerabilities are and what the utility is prepared to do.

It's much better to have these relationships forged ahead of time so that you know, for example, that if there is a threat that there is a relationship between the utility and the local FBI office, and the local police department, and the local fire department and the hazardous materials units and those types of response agencies that would be involved in helping put this together.

And likewise, there has to be a collection of discussions between the utility's public affairs and spokesperson, the media liaisons, so that they understand what the risks and vulnerabilities are and what the utility is prepared to do.

Question: What's the biggest suggestion you're making to water system operators?

Beering: The best advice that I can give to water system operators is: Don't blow this off; take this threat seriously because it is serious.

Question: Are you finding a good reception, because in some communities, particularly smaller ones, people might be too comfortable and then look at the expense involved in some of these things, and say, "Why should we?"

Beering: Well, people at one time thought that it was very easy to dismiss this as being a low-probability, albeit high-consequence, event. Yet if you look at the numbers of communities that prepare for tornadoes and fires and floods and other natural occurrences, it's not a big stretch to be prepared for a terrorist incident.

It should fall into the normal planning and response matrix that exists for other kinds of emergencies. The same response mechanisms that are already in place to deal with a chemical spill are essentially going to be the ones that respond to this kind of an incident. The big difference is that unlike a normal hazardous materials release, where something is accidentally spilled out of its box, this kind of thing—particularly with the weapons of mass destruction, the chemical agents and biological toxins—is a situation where it has been deliberately released.

So you have to go through the same response matrix. The only difference is that you add a layer of investigation and public relations challenge to the mix.

Question: Are strides being made, as you view things? Do we need to be more cautious?

Beering: Both. I think that two things need to happen. The first is that we think in terms of a national security response to the whole question of terrorism. The national security response has been to first train public safety responders against the most likely kinds of threats, and that's explosives and chemical agents. More recently there's a lot of energy being thrown at understanding what a bio-incident looks like and how the various government agencies would

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NEW ENGLAND STATE PROGRAM SITES

DRINKING WATER PROGRAMS

Connecticut

Connecticut Dept. of Public Health
Water Supplies Section
http://www.dph.state.ct.us/BRS/WSS/water_supplies.htm

Maine

Maine Dept. of Human Services
Division of Health Engineering
Drinking Water Program
<http://www.state.me.us/dhs/eng/water/index.htm>

Massachusetts

Massachusetts Dept. of
Environmental Protection
Bureau of Resource Protection
Drinking Water Program
<http://www.state.ma.us/dep/brp/dws/dwshome.htm>

New Hampshire

New Hampshire Dept. of
Environmental Services
Water Supply Engineering Bureau
<http://www.des.state.nh.us/wseb/>

New York

New York State Dept. of Health
Environmental and Occupational
Health – Drinking Water
<http://www.health.state.ny.us/nysdoh/water/main.htm>

Rhode Island

Rhode Island Dept. of Health
Division of Environmental Health
Office of Drinking Water Quality
<http://www.healthri.org/environment/dwq/home.htm>

Vermont

Vermont Agency of Natural
Resources
Dept. of Environmental
Conservation
Water Supply Division
www.vermontdrinkingwater.org

WASTEWATER PROGRAMS

Connecticut

Connecticut Dept. of Environmental
Protection
Bureau of Water Management
<http://dep.state.ct.us/wtr/>

Maine

Maine Dept. of Environmental
Protection
Bureau of Land and Water Quality
<http://www.state.me.us/dep/blwq/>

Massachusetts

Massachusetts Dept. of
Environmental Protection
Bureau of Resource Protection
<http://www.state.ma.us/dep/brp/brphome.htm>

New Hampshire

New Hampshire Dept. of
Environmental Services
Water Resources & Quality
http://www.des.state.nh.us/water_intro.htm

New York

New York State Dept. of
Environmental Conservation
Division of Water
<http://www.dec.state.ny.us/website/dow/index.html>

Rhode Island

Rhode Island Dept. of
Environmental Management
Bureau of Environmental Protection
Office of Water Resources
<http://www.state.ri.us/dem/programs/benviron/water/index.htm>

Vermont

Vermont Dept. of Environmental
Conservation
<http://www.anr.state.vt.us/dec/dec.htm>

PUBLIC HEALTH DEPARTMENTS

Connecticut

Connecticut Dept.
of Public Health
<http://www.dph.state.ct.us/>

Maine

Maine Dept. of Human Services
<http://www.state.me.us/dhs/welcome.htm>

Massachusetts

Massachusetts Dept.
of Public Health
<http://www.state.ma.us/dph>

New Hampshire

New Hampshire Dept. of Health &
Human Services
<http://www.dhhs.state.nh.us/index.nsf?Open>

New York

New York State Dept.
of Health
<http://www.health.state.ny.us/home.html>

Rhode Island

Rhode Island Dept. of Health
<http://www.health.state.ri.us/>

Vermont

Vermont Dept. of Health
<http://www.healthyvermonters.info/>




Protecting Our Communities: Regional Water Security Training Efforts

Before September 11th, many of us never took notice of the infrastructure that hummed silently and unseen to bring us our power, our communications, and even our water. Now we must take notice of these infrastructures as the loss of them to a terrorist attack could devastate a community.

Organizations across the country are taking the lead in bringing the vulnerabilities of our nation's water infrastructure to our attention, while at the same time working to limit those vulnerabilities. Nationally, organizations such as the American Water Works Association and the Water Environment Federation (WEF) are working with the US EPA to conduct regional workshops on water and wastewater infrastructure security. The first of the WEF workshops was held in Boston, on March 6th. The workshop provided wastewater utilities and professionals with tools and information to ensure effective planning and preparedness. Highlighted were critical areas of concern including how to assess vulnerabilities and how to enhance security.

To address the wastewater treatment plant vulnerabilities in our region, the New England Interstate Water Pollution Control Commission (NEIWPCC) is collaborating with the New England Office of the Environmental Protection Agency, and New England Water Environment Association's (NEWEA) Personnel Advancement Committee to conduct a series of security training workshops across New England. These workshops will provide utilities and professionals with the tools and information needed to improve their infrastructure's security through effective planning and preparedness. EPA – New England's Regional Administrator, Robert Varney, wants this region to be the best prepared

region in the country. These workshops are the first step in accomplishing that goal.




Organizations across the country are taking the lead in bringing the vulnerabilities of our nation's water infrastructure to our attention, while at the same time working to limit those vulnerabilities.

This series of workshops will help prepare us against water infrastructure security risks by delivering critical information to wastewater treatment plant operators and municipal officials on such issues as how to mitigate security threats and how to react in the event of a crisis. The sessions will offer the perspective of the host state's regulatory agency, national planning tools, and an example vulnerability assessment of a treat-

ment plant in that state. Eight wastewater security workshops are planned for New England beginning in June 2002. NEIWPCC hopes to provide one training session in each of the New England states (2 in MA and ME) by October 2002.

Likewise, the New England Water Works Association (NEWWA) is conducting several workshops in each of the New England states to provide drinking water supply utilities with training on security, emergency preparedness, terrorism awareness, and crisis communications.

By training infrastructure managers, in the northeast and across the nation, to protect their facilities not only from terrorist attacks, but also from crises ranging from vandalism to natural disasters, these organizations bring us one step closer to the security we as a nation once imagined we enjoyed, and are now determined to achieve. 

For more information on NEIWPCC's wastewater infrastructure security training workshops, contact Tom Groves, 978/323-7929, ext.225.

NEW AMSA CHECKLIST HELPS WASTEWATER UTILITIES PREPARE FOR CRISIS

The Association of Metropolitan Sewerage Agencies (AMSA) has developed the *Asset Based Vulnerability Checklist for Wastewater Utilities*. This publication assists utility managers and their staff in identifying the vulnerabilities of their plant. It is designed to promote planning and preparation in the event of an unexpected crisis whether it be vandalism, natural disasters, or terrorist activity. A copy of the *Checklist* is available for \$10.00 by contacting AMSA at 202/833-AMSA (2672). A free copy is available for download from <http://www.amsa-cleanwater.org/pubs/2002avcheck.pdf>.

respond to that. So the first piece is just recognition by the utility industry that this whole universe of prospect exists.

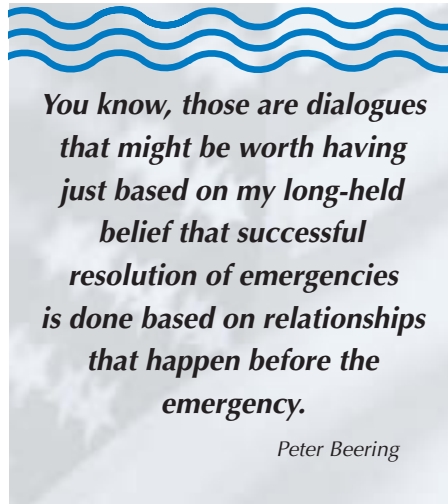
The second thing is that the water industry specifically needs to embrace a discussion of emergency planning generally, and terrorist response specifically, because we, unlike the others, are so terribly vulnerable to it.

This is a manageable situation, but it's one that has been so far below the radar screen, because of other challenges that utilities have faced, that it just hasn't been given very much attention and it's not something that just springs off the paper as being as big a risk as it is.

Question: Overall, do you think this is a problem we can deal with, provided it's in an organized fashion?

Beering: You know, one of the questions that exists, within the water industry, on a kind of national or regional recovery sort of basis, is: Should we put together some capability or a network where we would be able to drop-ship bottled water to a stricken community? If you subscribe

to the notion that water is where it is found naturally unless you pump it or move it, one of the questions that per-




haps we as an industry ought to chew on for a while is: Should we put together a national water response group?

Thinking in terms of a crisis management expert, do we need to put together a hotline of, "Okay, I've got X,Y and Z going on in my water system. Who do I call?" That's one question.

The other question is: Should we identify a half dozen people in regions throughout the country that would be available in the event of catastrophe; that you could call this guy at 3:30 in the morning and say, "Hey, I've got a problem."

And then the third piece of that is: Should we have a situation in which — say, that I'm a bottled water company and I always have X pallets of bottled product sitting around that I could throw on a truck and send to Indianapolis if Indianapolis is suddenly out of water.

You know, those are dialogues that might be worth having just based on my long-held belief that successful resolution of emergencies is done based on relationships that happen before the emergency. So those are kind of, to the extent that I sound like a college professor asking "How high is up?" questions, I think that those are three questions that the water industry could chew on for a while. 

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Water Connection



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Fill out this form and return it to us or call 978.323.7929

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Phone: 978.323.7929
Fax: 978.323.7919
E-mail: mail@neiwpcc.org

SITES OF GENERAL INTEREST

Association of Metropolitan Sewerage Agencies (AMSA)

Presents information on water infrastructure security issues such as a list of AMSA publications, legislative activity, and recent articles.

http://www.amsa-cleanwater.org/advocacy/sec_index.cfm

Federal Emergency Management Agency (FEMA) – Office of National Preparedness

Offers civilians an Emergency Preparedness Checklist for ways to prepare for an emergency of any type.

<http://www.fema.gov/pte/emprep.htm>

FEMA – Office of Response & Recovery

Offers an outline of an organized and coordinated response by Federal agencies to a terrorist threat or act. If you would like to know which agencies are in charge in the event of a terrorist threat and how they are prepared to respond, this site will be of interest to you.

<http://www.fema.gov/r-n-r/conplan/conpln1a.htm>

John Hopkins Center for Civilian Biodefense Strategies

Offers a summer institute on bioterrorism, information on biological weapons, and a listing of publications.

<http://www.hopkins-biodefense.org>

U.S. Army Medical Research Institute of Infectious Diseases USAMRIID's Medical Management of Biological Casualties Handbook

Provides information on history of bioterrorism, current threats, descriptions of bacterial and viral agents along with treatment of them, and biodefense related links.

<http://www.uamriid.army.mil/education/bluebook.html>

U.S. Department of Health and Human Services – Centers for Disease Control and Prevention

Offers a summary of potential bio-chemical threats and important links.

<http://www.bt.cdc.gov>

U.S. Environmental Protection Agency (EPA) Chemical Emergency Preparedness and Prevention Office (CEPPO)

Provides information on EPA's role and authority in counter-terrorism efforts.

<http://www.epa.gov/swercepp/ct-epro.htm>



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