

## Inside the Profession

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*Editor's note: NEHA is committed to providing its members with information specific to the profession of environmental health. The Journal of Environmental Health has taken a major new step in this direction by employing a staff reporter. Rebecca Berg, who has long copy edited the Journal, will be writing in-depth reports on trends and events in the field. Her reports will provide Journal readers with important insights into the profession. They will also be designed to encourage discussion of controversies, challenges, and big-picture issues facing the profession. Readers are invited to participate in these discussions through letters to the editor. Please send your responses, opinions, or comments to Joanne Scigliano, Content Editor, jscigliano@neha.org.*

# Terrorism Response and the Environmental Health Role: The Million-Dollar (and Some) Question

## Introduction

A couple of years before September 11, a needs assessment was conducted in Union County, North Carolina, to determine what resources various agencies needed for disaster preparedness. On that occasion, all the funding that was available ended up going to hazmat teams, to fire departments, to police departments. There was no money left for public health, according to Tom Ward, environmental health director.

"They're buying fire trucks and \$50,000 detection equipment and bomb robots," added Tom Butts, emergency management coordinator with the Tri-County Health Department in Thornton, Colorado, "and we're asking for a pickup truck so that we can tow a trailer.... Our stuff just doesn't look as sexy as their stuff."

September 11 and the subsequent anthrax attacks did to some extent raise the profile of public health. Lawmakers began to express concern about a decaying public health infrastructure. In 2002, Congress passed the Public Health Security and Bioterrorism Response Act, which provided money through CDC for counterterrorism planning.

But today, three years after September 11, public discourse is still dominated by images that, while they are not untrue, tell only part of the story of terrorism preparedness and response—romantic-heroic images of rescues by police and firefighters, of squads in Level A suits entering toxic zones. One sees the effect of this preoccupation in funding and budget decisions, and in the target audiences of training programs offered by federal agen-

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cies. The Department of Homeland Security (DHS) and the Federal Emergency Management Agency (FEMA), for instance, offer a myriad of valuable training opportunities for firefighters, law enforcement, and hazmat personnel. Web, satellite, and on-site courses are all available, as is funding that helps local agencies send its employees to participate. While course descriptions occasionally mention public health personnel as a "secondary" target audience, a search through the agencies' Web sites did not turn up any counterterrorism courses specifically targeted to environmental health.

It is true that with funding from the Public Health Security and Bioterrorism Response Act, the Centers for Disease Control and Prevention (CDC) have been dispensing money for terrorism response through cooperative agreements with the states. Some local environmental health departments have received some money under that arrangement, as will be discussed later in this article. CDC also

has helped fund the Louisville Metro Community Based Emergency Response Program, which provides training geared toward public health and emergency response personnel from around the country. CDC also provides a wide variety of satellite and Web courses for clinicians and lab personnel on topics such as smallpox, plague, and anthrax. (For more information on the Louisville program, go to <http://health.loukymetro.org/>. For links to a variety of general public health-oriented training opportunities, go to [http://www.astho.org/templates/display\\_pub.php?pub\\_id=614&admin=1](http://www.astho.org/templates/display_pub.php?pub_id=614&admin=1).)

But just as the larger public discourse on terrorism has to some extent overlooked the role of public health, public health discussions have often overlooked environmental health.

"We focused right away on the medical side," observed Ron Grimes, director/health officer with the Jackson County Health Department in Michigan, "probably because the first term to come into play was bioterrorism, and we had the anthrax situation shortly after 9/11.... And so I think that little bit moved us away from what the real issues are." For one thing, terrorists—from the Oklahoma City bombers to the train bombers of Madrid, Spain, to those currently operating in the Middle East—often use readily available traditional explosives to create terrible destruction. Environmental health professionals with whom the *Journal of Environmental Health (JEH)* spoke also are keenly aware of the potential for chemical and radiological disasters, intentional or not. "We have plenty of hazardous materials stored and shipped

through our communities every day,” noted Rob Blake, environmental health director with the Dekalb County Board of Health in Georgia.

Von Roebuck, a CDC spokesperson, acknowledged that until recently, the CDC cooperative agreements have focused mainly on bioterrorism. But, he said, the agreements “are being expanded, as our preparation levels in those areas increase, to chemical and radiological areas.”

## Restaurant inspectors? Wastewater permitting officers? What on earth do *they* have to do with terrorism response?

Nevertheless, a recurring theme in *JEH*'s conversations with environmental health professionals was the sense that for them, the scenarios, the training, and the focus, while useful and informative, don't seem quite real; they never seem to address the heart of the matter from an environmental health perspective.

“We can study the diseases, but somewhere along the line we need to look at how it gets disseminated, how it gets through, how it can be prevented, what we do to disinfect. Not just ‘What do we do to give shots to people,’” said Daryl Rowe, counterterrorism manager for biosafety with the University of Georgia.

“So much of the training is geared toward police and fire response. There's not a lot of training out there that is specific to environmental health,” said an environmental health training and resource specialist who asked to remain anonymous.

Pat Maloney, chief of environmental health services in Brookline, Massachusetts, has been deeply involved in emergency preparedness. But, he told *JEH*, “in the two and a half years of my training, there wasn't a course that said, ‘Now, let's look at this: You're the environmental health officer, and *this* happens. Do you have X equipment? Do you need X? *Should* you have X?’”

“I think we just kind of put our environmental sanitation experts out there in a different area, never to be seen or heard from

again, as long as they make their quotas,” said Barry Moore, emergency response coordinator for the Memphis and Shelby County Health Department in Tennessee.

It's enough to make an environmental health professional wonder: *Do we have a role in this?* Is “counterterrorism” really what we're about? And one can imagine members of the general public thinking: Restaurant inspectors? Wastewater permitting officers? What on earth do *they* have to do with terrorism response?

This article will discuss some urgent reasons for environmental health to be involved in the issue and the question of what form that involvement should take. It also will take a frank look at some obstacles to involvement, as well as at some good reasons for a distinct ambivalence that exists within the profession. Finally, some possible solutions to the obstacles will be proposed, including more nationally coordinated leadership.

### A Call to Duty

“For environmental health practitioners to somehow step back from this increasing community need ... would be the same as not rising to the occasion when most needed,” commented Larry Yates, NEHA's Washington representative.

“I cannot see how someone can opt out of this.”

Peter Thornton of Volusia County, Florida, was equally emphatic: “I don't see where there is any choice. I cannot see how someone can opt out of this.”

“I think we've just *got* to engage,” said Rob Blake of Dekalb County, Georgia. “We are part of the public health system.”

Environmental health is grounded in food, water, shelter, air quality, and sewage disposal issues. Those issues almost inevitably come into play when normal life is disrupted, whether through a natural disaster or through a terrorist attack. Also, food, water, and air are generally the routes of transmission for chemical or biological agents. An online training tool offered by the Center for the Study of Bioterrorism at the Saint Louis University School of Public Health offers the following “definition of environmental health”:

the systematic development, promotion and conduct of measures which modify or otherwise control those external physical factors in the indoor and outdoor environment which might cause illness, disability or discomfort through interaction with the human system (Powitz, n.d.).

### A Return to Roots

Terrorism preparedness and response go to “the basis of our existence,” Lou Dooley, director of environmental services in Clark County, Washington, told *JEH*.

Indeed, some environmental health professionals see involvement in the issue as an overdue return to the traditions of the mid-20th century, when the concept of civil defense was important to the country and the profession. “In the start of my career some 35 years ago,” observed Ron Grimes of the Jackson County Health Department, “the unit I was working for had civil-defense responsibilities—with respect to nuclear bombs, basically, because that was the concern. We trained and drilled.” Mr. Grimes believes that the change the environmental health profession is going through now in response to the threat of terrorism is “not that far from our roots.” He added: “It's nothing for environmental health to step in after a hurricane and fix the aftermath. And I think they [people wondering whether environmental health should have a role in terrorism response] would find that it's close to the same thing: What's a safe water supply, what's a safe food supply, what's a safe shelter?”

### All Hands on Deck

As many of those interviewed recognized, environmental health personnel may not always have a choice about getting involved. “Really,” Grimes pointed out, “the event can be thrust upon you.”

If one thinks of the public health system as a ship, then it is a rather battered one that has suffered from decades of poor maintenance and understaffing; it may be little creaky when a storm hits. If the aftermath of an emergency continues for weeks or months (consider, for example, the aftermath of the World Trade Center attacks), all available personnel are likely to be needed.

“I don't think the public health system can function without all it has to offer,” observed Tom Butts.

“Frankly,” Rob Blake said, “personnel are stretched. Even with the funding from the federal level and with the addition of the new

emergency response staff—epidemiologists or whatever you've added at the state or local level—there still isn't a lot of depth and capacity. And so you need to have all your folks trained to some extent so that they can be involved in emergency response."

"Their role may not be environmental at that point," said Barry Moore. "But they need to have some idea of what the department as a whole is trying to accomplish during those first few days."

## **"We are the hands of public health."**

That may mean some familiarity with tasks that normally fall to other parts of the health department. "Even though mass inoculation doesn't seem like an environmental health function," said Pat Maloney, chief of environmental health services in Brookline, Massachusetts, "it is. Because we are the hands of public health. Whether running a center, being an organizer, or keeping track of a line, we'll have a hands-on role."

The question of what, precisely, that hands-on role will consist of is, as Deborah Rosati said to *JEH*, "the million-dollar question." *JEH* will take a more detailed look at that question later in this article.

### **Dangers of Nonengagement**

#### *Starvation*

Mr. Maloney pointed out that it has been a long time since states have received an infusion of federal money for public health like that provided through the CDC cooperative agreements. When he came into the field in the 1970s, he told *JEH*, the states were just exhausting the last of the CDC funding for rodent control programs. "And since then, I'm hard pressed to find another initiative—a federal initiative—with money coming down the pike."

If environmental health is shy about getting involved in terrorism response, it will be passed over as the money is distributed—there are plenty of other hungry mouths—and it may be a long time before there's another feeding.

#### *Displacement*

A ragged, hesitant environmental health program is likely to be supplanted by stronger,

better-fed agencies, even in its areas of expertise. That development would be bad not just for environmental health departments, but also for the public they serve. "Other people in government, other groups in the community," said another interviewee, "are making plans and perhaps establishing a protocol or a response level that could undermine what we need to do.... They may write into their protocol something that is actually detrimental to public health because of inadequate knowledge or an inability to grasp the big picture."

Something like that happened in Union County, North Carolina, in the aftermath of Hurricane Hugo. Initially, according to Environmental Health Director Tom Ward, his department was not a part of the incident command system (ICS) during that event. Facing a chaotic scene and a daunting amount of solid waste, the ICS made some expedient decisions about disposal. "And actually, they authorized some illegal dumps," Mr. Ward told *JEH*, "not thinking about the consequences." Uninformed decisions of that type can have long-term impacts both for public health and for environmental health budgets. "It can really drain your resources when you're dealing with [the impacts of those decisions] after the fact," Ward said. "It certainly would have been easier if we'd been at the table and could have said, 'Okay, this is how that should be handled.'"

#### *Extinction*

When it's a question of "the real provocative issue of the day—something that's on everybody's mind," observed Daryl Rowe of the University of Georgia, "we should be there as part of the community team." Otherwise, he thinks, environmental health "may cease to exist as an important element."

"We become a dinosaur," added Rob Blake.

### **Advantages of Engagement**

#### *Fame*

Union County's experience with Hurricane Hugo suggests that the environmental health practitioner is in a key position to provide insight during terrorism preparedness and response. Participating in this way, as many interviewees pointed out, could help raise the profile of a profession that has had a long-standing invisibility problem. Environmental health might come to be considered "a mainstream and necessary community function," as Larry Yates put it.

#### *Fortune*

A higher profile could help with long-term finances. "The better you can show that you're an integral part of the response, the less likelihood that you're going to see cuts occur in your department," said Mark Miller, senior environmental health officer with CDC. "It might provide some protection."

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Acquiring some new skills associated with terrorism response also would make environmental health practitioners more versatile and more marketable, according to Barry Moore, emergency response coordinator in Memphis and Shelby County, Tennessee. It may seem counterintuitive to think boldly and expansively given the never-ending threat of funding reductions, but it's precisely what is called for: A mentality of contraction and renunciation simply perpetuates the cycle of defunding followed by reduced visibility followed by defunding. "Smart environmentalists will expand their horizons, expand their capabilities," Moore said. "And I think emergency preparedness is a natural way to go."

Several people *JEH* spoke with pointed out that the skill set the environmental health professions would acquire in taking on the terrorism response challenge could feed back into other environmental health activities. That symbiosis also could have financial benefits. "It will probably increase our base and give us a better economy of scale," said Mel Knight, director of environmental management in Sacramento, California.

#### *Improved Service*

Charles Otto, environmental health officer with CDC, noted that heightened surveillance associated with terrorism preparedness programs can help with the investigation of traditional outbreaks. By way of example, he cited a cluster of illnesses that appeared suddenly last New Year's Eve in a Midwestern community:

These families started showing up at a community hospital emergency room. Finally, the doc on duty said, 'Now you were staying *where*?' All the families involved were at a particular hotel. And he looked at his threat level—orange—and said, 'Wait a second, we have to get somebody else involved with this.' So they went through the emergency alert system with the state. Within an hour, an epidemiologist from the state health department was on site, talking to them—this was on New Year's Eve!....They started assembling all the information. Everything pointed to some kind of exposure. Lo and behold—after it was all sorted out by the local environmental health programs and we got called in on it—it was the swimming pool, a disinfection-by-product-type exposure.

Would the problem have been tracked down without the terrorism alert system in place?

"Probably not," Mr. Otto said.

Environmental health professionals who are involved in terrorism preparedness and response may also benefit from more coordination—more daily contact—with state agencies and lawmakers. The Massachusetts Environmental Health Association (MEHA), which has been building a public health coalition with a number of professional organizations and educational institutions in the state, has found that to be the case. "It's brought us to the table more often with state officials," said MEHA President Deborah Rosati, "so we've been able to talk about counterterrorism *and* other issues."

For many of those *JEH* spoke with, the new perspective, the new urgency, and the new training opportunities associated with the counterterrorism issue have been an opportunity—not just to gain fame and fortune, but also, more basically, to become better environmental health practitioners.

### **But What Does Environmental Health Do?**

Asked what specific role environmental health should play in counterterrorism, many of the people interviewed for this article spoke first of what it is not.

"I don't see our department ever taking a role as a first responder in a hazmat incident," Barry Moore said.

"I don't see the role of the local environmental health professional as a first responder," echoed Pat Maloney. "I see us as a second responder. I see us as a technical

resource in the aftermath. I see us as a pre-planning participant."

Over and over, in different terms, interviewees said the same thing: "Do I feel that we're frontline people?" said Deborah Rosati of MEHA. "No. No. But ... we should be at the table with our fire and police officials. We're the only ones who know about disease follow-up and disease outbreaks. That certainly became clear during the anthrax outbreaks. It was police and fire calling boards of health saying, 'Can you help us?'"

"And so, we would be what I would refer to as 'second responders,'" said Mel Knight of Sacramento.

NEHA Executive Director and CEO Nelson Fabian, who has long been a proponent of a major role for environmental health in this arena, argued that environmental health personnel need to be considered "essential responders." He sounded exasperated at the idea that environmental health professionals fight on the one hand to be at the table and to be in the midst of the decision making and then, on the other hand, tag themselves with a label like "second responder." Environmental health personnel either respond or they don't, he said. They either have a role or they don't. Any suggestion that their role is secondary, minor, or in any way inconsequential will, he argued, diminish their chances of getting to the table and being taken seriously there.

The terminology is in flux, which is not surprising given the lack of attention in the media, in statehouses, and in public discourse in general to the issues that would arise in the weeks after a terrorist attack. Environmental health professionals seem to be finding their way toward a language for their role, trying out terms like "second responder," "essential responder," and "early responder."

"As soon as the wounded have been taken care of," said the training and resources specialist who asked to remain anonymous, "that's when we go in and start dealing with those fundamental issues of food, water, sewage, housing. So we're very early responders."

One situation in which environmental health specialists might be the first ones on a scene would be an attack involving deliberate contamination of food. Such an incident has in fact, occurred: In Oregon, in 1984, a religious cult infected restaurant salad bars with *Salmonella*. But to the extent that the term "first responders" evokes images of flashing lights, on-the-spot disinfection, or people being pulled from burning buildings, it does not accurately reflect the environmental health

role even in such a case. Those associations are now so firmly entrenched in the popular imagination, that it may not be particularly effective for environmental health to grab at the coattails of the "first-responder" image. Settling on a term like "second responder" or "early responder," despite its apparent modesty, could be a more strategic way for environmental health to placard its contributions.

Fabian again weighed in with some strong commentary. "We have to choose the metaphors we use very carefully. The words we use create pictures in people's minds. We need people's understanding of our role to be both correct and helpful."

He pointed out that no matter what the issue, terrorism response included, money will always be finite. "That means that priorities will be set. If we go around calling ourselves second responders, you might as well put the fork in the carcass, because we will be as much as telling the policy makers that we are less important and therefore less worthy of financial support."

He added that the problem doesn't end there. "Beyond the financial implications of labeling ourselves as less important than others, the term 'responder' has limited utility. If a crop duster aircraft sprays a biological agent over a wide swath of land, you tell me where the responder—first or otherwise—will go. Many terrible events have no locus or focal point. They materialize as a community-wide concern. If we are 'responders' and, worse, *second* responders, heaven help both the public and the profession to understand exactly what that means in the context of a community-wide event." Fabian used terms like 'community protection,' 'environmental health response,' and 'response team,' which he considers better ways of describing the profession's role in terrorism response.

No one *JEH* spoke with disagreed with Fabian about the importance of the environmental health role. In fact, there was a universal conviction among those interviewed that environmental health personnel do have a crucial contribution to make, because their discipline requires certain useful personal traits, because they have had relevant training, and because their work entails constantly renewed contacts with and knowledge of their communities.

### **Personal Traits**

Environmental health practitioners are "keen observers and excellent shoe-leather epidemiologists," as Daryl Rowe put it. Because

their work often involves outbreak investigations, they have valuable problem-solving experience. They have the people skills that allow them to assume directorial roles if needed. The environmental health tradition of conducting inspections quietly in the background so as not to disrupt business means its practitioners also have the ego control to act as team members. Many are generalists, with enough knowledge about a variety of different areas in science and epidemiology to be helpful in a wide range of scenarios.

“Environmental health professionals offer a really broad range of integrated services,” observed Mel Knight.

### **Training and Expertise**

Because environmental health “is the study of minimizing negative human health impacts through environmental protections, precautions, and controls,” Larry Yates told *JEH*, environmental health practitioners are well acquainted with the exposure pathways by which nuclear, chemical, and biological agents affect human health. They recognize, as NEHA President Jim Balsamo put it, “all the little telltales of an attack.” And, as Ron Grimes pointed out, no matter what “glamour disease,” one might be concerned with, the issue of incubation periods and the principles of bacterial and viral growth are fairly consistent. “We deal with those factors in food poisoning all the time,” he said.

Perhaps, though, there are other entities that would have the primary responsibility for sampling and investigation in the case of a chemical or biological attack?

“All kinds of people,” affirmed Mr. Balsamo—“as soon as ATSDR gets their people on an airplane or EPA ships somebody, or DEQ. But when’s that going to be—three, five, seven, 10 hours into an incident? During those first few hours, people want some answers.” Local environmental health specialists may, for instance, be able to dispense critical advice about whether people should stay in their houses or evacuate an affected area.

### **Contacts and Knowledge of the Community**

“I continue to be amazed,” said Mel Knight, “that the city manager may not realize that we have a list of where every gas station is. We have a list of where every retail food facility is. And with GIS, we can print out maps of where all this stuff is.”

“We’ve gone out and done the footwork in our community,” said Jim Balsamo. “We’ve been to all these places.”

This knowledge can help emergency responders locate critical resources such as refrigeration space, construction contractors that have heavy equipment, and “decontamination resources, including chemicals and facilities” (Powitz, n.d.).

**“Local environmental health people know the infrastructure—the sewage system, the water, and everything else.”**

In addition to providing access to resources, knowledge of the community can provide valuable insight into areas of particular vulnerability. “We have the resources to have an inventory of our water supplies,” Balsamo said. “Our institutions, our hospitals, our grocery stores. Local environmental health people know the infrastructure—the sewage system, the water, and everything else. Surface waters, too.”

This knowledge, he pointed out, is useful not just after an incident occurs, but also before. It can be brought to the planning table.

### **Honing the Role**

This discussion of signature environmental health strengths may begin to provide insight into specific duties environmental health might take on with respect to terrorism preparedness and response.

### *Planning and Prevention*

As interviewee after interviewee emphasized, environmental health departments should be involved in local planning for terrorism response. They should be on the emergency response committee; they should be part of the local incident command system.

And they can contribute to the prevention side of planning. As Barry Moore points out, because environmental health staff regularly go into places like nursing homes and daycare centers, they have “a wonderful opportunity to ask, ‘What’s your plan in case of an emergency? Do you have plans for water? Food?’”

Some jurisdictions already provide advice to restaurateurs about securing their facilities from contamination attempts. The checklist of recommendations that Jackson

County, Michigan, hands out, notes Ron Grimes, “doesn’t veer that far from the HAC-CP principles that we utilize in inspections anyway.”

Pat Maloney of Brookline sees environmental health increasingly contributing to prevention efforts, particularly with respect to food safety. “I think that’s going to be a key role,” he told *JEH*, “preplanning. Protecting the water supply, protecting the food supply, and planning what to do if those supplies become curtailed or contaminated.”

### *Response*

The role of environmental health would take in the response to a terrorist event is the aspect of its duties that has been most confusing to the general public and that perhaps makes members of the profession most uneasy. The duties seem to break down into three categories:

1. sampling, processing samples, and providing information to first responders;
2. shelter management; and
3. limiting exposure and injury.

Everyone with whom *JEH* spoke envisioned environmental health departments doing some sampling, reading the results of sampling done by fire and law enforcement teams, and helping to assess their meaning—“not on the spot, perhaps, but afterwards,” said Jim Balsamo.

“This is what I sense members [of the profession] getting uncomfortable with,” said Pat Maloney. “They see what has already happened—for example with the anthrax scenarios—where they did not have much of a role. It was CDC, FBI—the Feds—and the state coming in.” And so he’s heard some members of the profession say, “We don’t have a role. This is going to be a larger show than we’re capable of handling.”

Maloney disagrees with that analysis. The anthrax episode, he pointed out, occurred in pockets, in Washington, D.C., and Florida. In the case of a less localized event, “the Feds” would be spread very thin and would have to rely heavily on local backup.

The second item in the list above, shelter management, involves many tasks that relate to traditional environmental health duties. Some of them are outlined in the Saint Louis University online training tool mentioned earlier:

- drinking-water safety;
- disposal of sewage;
- safe handling, preparation, and storage of food;

- general sanitation; and
- vector control (Powitz, n.d.).

“It almost comes down to a public works function,” observed Lou Dooley. But the public works department would not have the expertise to deal with the issue on its own. “People living in unsafe conditions after a disaster—those are heavy-duty issues.... Somebody’s got to be out there taking care of that, and it ain’t the sheriff, and it isn’t the public works guys, who have the background to be able to do that.”

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The third area of the environmental health response—limiting exposure and injury—has long-term implications. The first responders to confront a toxic release, for instance, may be a hazmat team. “But when it comes to the question of how a toxic spill or release affects the environment or what residential areas will be affected, that’s where you need to tap into the expertise of your environmentalists,” Barry Moore said.

A train derailment that occurred in the early 1980s in Union County, North Carolina, illustrated the environmental health implications that a toxic release—intentional or not—can have. The train was transporting methanol. Some of the material leaked into a stream used by local livestock operations. “So we had to go to the media to make sure they knew what the hazards were,” said Tom Ward, environmental health director.

“We’re absolutely essential for remediation,” concluded Mel Knight. “They [traditional first responders] are perfect for being there in 45 seconds to 10 minutes.”

### The Role—The Dilemma

No one *JEH* interviewed for this story was able to provide a soundbite description of the environmental health role with respect to terrorism. While most interviewees did not envision environmental health professionals as “first responders,” there was a sense among many that as time goes on and their potential to contribute is increasingly understood by other responders, they will be called on to make increasingly early interventions—perhaps some on-the-spot sampling, for instance. But the degree of “earliness” of the environmental health response will vary widely from jurisdiction to jurisdiction.

Indeed, that variability may be one reason the environmental health role is not more widely discussed in the national media. It certainly makes it hard for practitioners to articulate at a national level the proposition that environmental health departments need more resources and training to meet the terrorism challenge. And despite the sense of urgency expressed by many of those interviewed for this article, the profession itself is not unified on this question.

### Ambivalence

In some places, environmental health has taken a leadership role; Lou Dooley director of environmental services in Clark County, Washington, wrote the public health section of the emergency response plan for his jurisdiction. But there are also obstacles to involvement, and the level of preparedness in environmental health departments is uneven across jurisdictions. In the discussion below, *JEH* looks at some aspects of counterterrorism planning that have generated distinct currents of ambivalence within the profession.

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### The Wager

Although everyone recognizes that a terrorist attack is almost bound to occur again—some time somewhere—in the United States, the odds look different from a local perspective. Environmental health departments that put a lot of resources into terrorism preparedness are betting on an event that for any one jurisdiction (with the exception of those that contain obvious targets) is not a high probability. The “what-if” aspect of this issue—what if it happens? what if it *doesn’t* happen and we’re throwing money down the drain?—can be a brow-scrunching proposition for resource-strapped departments.

“If an event happens, and we didn’t do anything to prepare for it, then absolutely, we probably were negligent in not being prepared,” said one interviewee who asked to remain anonymous. “However, we also have obligations and statutory requirements to get a lot of other things done. And if we don’t do those inspections, we don’t do that outreach, we don’t do that other kind of training and planning, and then a major foodborne-illness outbreak occurs that isn’t terrorism related, then we’ve dropped the ball there.”

In some public health quarters—not just in environmental health—there is an uneasy sense, an almost unspeakable suspicion (unspeakable because the stakes are very high if one is wrong about this) that the threat of terrorism has received too much rather than too little attention, especially by comparison with other, more pressing threats. It has been suggested that human health and well-being could be negatively affected by too unreflecting a shift of “human, financial, and other resources away from other important public health needs” (Levy & Sidel, 2004, p.12). A recent article in *Harp-er’s* wades into this discussion with unusual boldness: “Bioterrorism is a remote threat and a massive attack is very unlikely, but it captures the imagination of weak-minded politicians and a populace raised on movies starring Bruce Willis,” writes James Glasser. He suggests that an influenza pandemic is a much more plausible threat and would be more devastating than a bioterrorism attack because it would strike every part of the country “or less simultaneously.” The pandemic of 1918, he points out, killed 550,000 Americans and 30 million people worldwide (Glasser, 2004, p. 41).

“You just hope and pray that it’s not going to happen,” concluded *JEH’s* anonymous source, who, by the way, *has* been involved

in terrorism response planning, “and by the grace of God that it’s not going to happen in your jurisdiction. We know it’s going to happen somewhere someday. But to what extent—we don’t know.”

### **The Mad-Scientist Factor**

Discussion of terrorism can sometimes veer into imaginative speculation about exotic biological agents, invincible microbes, and scientist-terrorists who can foresee the defense’s every move. It’s a question of not getting surprised, Rob Blake told *JEH*. “The terrorists obviously thought very long and hard about how they were going to attack on September 11 and planned it well.” Imaginative thinking, while it can sometimes get out of hand, is a crucial part of terrorism preparedness. One has to out-imagine terrorists to effectively prevent or respond to attacks.

Nevertheless, a distinction might be made between the fantastical imagination and the practical imagination. Over the years, terrorists have shown themselves to be disturbingly practical and resourceful, putting mundane tools like traditional explosives and airplanes to terrible use. That observation does not preclude bioterror scenarios; there are different kinds of terrorists, even perhaps some “mad scientists,” and as pathogens and radiological waste spread around the world, they too, may become “mundane.”

**The new focus on terrorism in this country and the creation of the Department of Homeland Security have spawned a new language.**

For environmental health departments, as one interviewee pointed out to *JEH*, emergency preparedness means taking time out of daily operations to sit around a table and talk. “It’s a very creative process,” she said. An effective use of the time will put that creativity to work on likely scenarios in preference to fantastic ones.

### **Jargon**

Several people interviewed for this article noted that the new focus on terrorism in this country and the creation of the Department of Homeland Security have spawned a new language.

“Just take the topic itself,” said Ron Grimes. “‘Terrorism response’ to many people is going to mean going after the terrorists. That’s not our thing.”

“First they were talking about ‘chemical, biological, and radiological terrorism,’” said Jim Balsamo. “‘CBR.’ They’re moving away from that now, and they’re moving into ‘counterterrorism’ and ‘emergency preparedness.’”

Ron Burger, senior public health emergency coordinator, sees the term “counterterrorism” as a stumbling block. “‘Counterterrorism’ is preventing the terrorists from doing their dirty deed. And that’s CIA, FBI, secret service—it’s the law enforcement end of it.”

Burger avoids the word “terror” altogether. “When I give talks, I use the words ‘intentional event’ and ‘unintentional event.’ I don’t even use the word ‘WMD.’ It happened naturally, or unintentionally, or intentionally. That kind of defuses things.” Either way, the environmental health response to a disaster is basically the same, Burger pointed out—with one exception. “If it’s an intentional event, then environmental health specialists will probably be surrounded by a lot of people wearing weapons,” he said.

Keeping company with people wearing guns can introduce another set of linguistic difficulties. As Jim Balsamo noted, environmental health specialists speak a different professional language than traditional first responders. “We’re more education oriented. We talk to people and try to educate and explain. Police and fire say, ‘Do it!’ They want to know: ‘This is what I’ve got to do, one-two-three.’”

“And we say, ‘Wait a minute.’” He laughed.

Environmental health can make itself annoying to traditional first responders in this way, he observed, and it can be difficult to build trust. Ideally, all parties should learn something about each other’s professional languages during preparedness training. But when it comes to coordinating activities during the first minutes and hours of an emergency, environmental health professionals are the ones who have to adapt to what may seem a very foreign mode of communication.

### **Impact on Core Services**

“A lot of sanitarians are being pulled away from their jobs to go to seminars on things

like risk communication, incident command structure, police department–health department interactions,” said Ed Briggs, chief sanitarian of Ridgefield, Connecticut. “Between making plans, buying radio equipment, attending training, and just responding to all the e-mails from the state health department about this stuff, it’s basically taken up about 40 percent of my time.”

**Addressing the impact on core services in the long term will require some creative thinking by the profession as a whole.**

Many of those interviewed believe that the new focus on terrorism is detracting from core environmental health functions. “There’s no doubt that has occurred in Massachusetts,” said Deborah Rosati of MEHA, and she sees the impact occurring nationally as well. Levy and Sidel warn that there is already evidence of a negative impact on “the health and well-being of individuals and communities” (Levy & Sidel, 2004, p. 12). A report by the Trust for America’s Health (TFAH) points out that while many national health officials expected the new preoccupation with bioterrorism to improve public health infrastructure within the states, “crucial non-bioterror preparedness is in jeopardy.” Like Glasser, the TFAH report expresses concern about the possibility of an influenza attack; it notes that as of December 2003, only 13 states had a draft or final plan in place for dealing with a pandemic (TFAH, 2003). People interviewed for this article also mentioned housing inspections, lead paint inspections, and food inspections as services that have suffered as a result of the new focus.

The problem could become less acute over time, Ed Briggs thinks. Once environmental health professionals have “ramped up” on the training and planning they need, they may be able to “ease off of it” to some extent. But, warned Charles Otto of CDC, there will always be the need to keep knowledge,

skills, and contacts fresh; some level of demand on environmental health department's time promises to continue indefinitely. Thus, addressing the impact on core services in the long term will require some creative thinking by the profession as a whole.

### Trickle-Down Funding

The 2002 Public Health Security and Bioterrorism Response Act raised federal spending on public health infrastructure from \$67 million in fiscal year 2001 to \$940 million in fiscal year 2002 (TFAH, 2003). The money generally is being dispensed through CDC in the form of cooperative agreements with the states. Within certain guidelines, each state decides how to spend the money.

For environmental health departments, this trickle-down system has worked unevenly. In some localities, environmental health has received significant new funding. In others, little money has made it from the state level down to local health departments or, within health departments, down to environmental health. And at about the same time this money was appearing, as TFAH reports, many states were experiencing budget crises that resulted in cuts to funding for public health. Thus many budgets are declining, despite the infusion of federal money. TFAH concludes that "because of the severe state fiscal problems and decades of underinvestment in state and local health agencies, addressing these problems will take years and continued financial support from the federal government" (2003, p. 11).

Another factor is the traditional problem environmental health has with invisibility. Rob Blake told *JEH* that a year or so ago, a leadership team from the state health department in Georgia came to the Georgia Environmental Health Association conference

and made the statement from the podium:

They'd got so much money so quickly, that they were having to make very rapid decisions. It's kind of hard to transition from having very little to get by and all of a sudden you're flush with millions.

Everybody should have that problem, *JEH* suggested.

"But then," Blake said, "it was readily apparent, as the presentation went on, that environmental health hadn't really been considered as part of the decision making around the available funds." He described hands going up around the audience and stories coming out about departments that were trying to conduct inspections with outdated thermometers or no thermometers at all.

Sometimes it is a question of raising one's hand and speaking up *before* an injustice is committed. "At first we felt that the state needed us for its CDC grant submission and then didn't pay much attention to us," said Deborah Rosati of MEHA. "Yeah, I have to say that, because we've heard it from other states, too. But we kind of fought our way in. And fought our way to the table."

As a result, added Pat Maloney of Brookline, "we're seeing money coming into our environmental health divisions, and we're seeing money coming into our environmental health *association*."

Lou Dooley of Vancouver, Washington, echoed the point. "We knew the money was coming—I mean, we can read the newspapers, too—and we said, we have a role to play here. We sat at the table and helped develop a plan. And so we have dedicated resources that we didn't before. We have seven or eight people working bioterrorism response, where before we had nobody."

The phrase "at the table" recurred in almost every discussion *JEH* had with environmental health professionals who have seen federal money trickle into their departments.

"Those environmental health programs that have been at the table," said Vince Radke, an environmental health specialist with CDC, "that have expressed their needs to their local officials, have gotten funding... Those that have sat back expecting that the money would walk through the door have been disappointed."

Which is not to say that environmental health departments that are passed over when the CDC funds are distributed are necessarily to blame. As Charles Otto of CDC pointed out, sometimes there are structural obstacles to getting to the table.

"Traditionally, environmental health programs are not in a management position to be watching for those funds as they come down from CDC," he observed. In other words, because of this structural disadvantage, environmental health directors need to be extraordinarily alert—like Dooley, keeping their eyes on the newspaper. They may need to be more enthusiastic and more determined than other public health professionals. Raising one's hand may not be enough. Sometimes, it might be necessary to stand up and shout—figuratively speaking, of course.

But that brings us to another question—one that goes to the state of mind within the profession.

### Reluctance Within the Profession?

"Yeah, there's no doubt about it," Deborah Rosati said.

"Yeah. Definitely," said Tom Butts.

"Personally," said Pat Maloney, "I see it as an unfortunate circumstance, that there is no firm agreement."

*JEH* asked interviewees what they thought the source of the reluctance was.

Deborah Rosati suggested frustration. Larry Yates voiced the feeling he's heard from many members of the profession: "Give me the resources and I'll go do the job. As long as the resources are going elsewhere, someone else will have to do the job."

"Oh yes," said Daryl Rowe. "All you have to do is go to most local health departments, particularly rural health departments, and see how many of them have anything beyond a stem thermometer to take temperatures of food. How many of them have light meters, how many of them have *anything* to measure air movement or the like. There are lots of new tools out there, but very few health departments can afford them."

Staffing is a problem as well. "We do have fairly small numbers compared with police department strength and fire department strength," said Rob Blake, "and our plates are pretty full. To add crisis management onto that is maybe overwhelming to some." Federal money is of limited help. "If we wanted to hire a trainer," explained Tom Butts, emergency management coordinator for the Tri-County Health Department in Colorado, "we could. But if we want to pull all of our staff for a week to attend the training, we just have to eat that up through our budget."

The cost of training can be daunting. An anonymous environmental health professional from California told *JEH* that the California Environmental Health Association sponsored training in bioterrorism specifically for environmental health. The workshop was given a couple of times, and there were plans to do a series around the state. Local practitioners expressed a lot of interest, but when the time came, attendance did not match expectations. "It was a funding issue," this source told *JEH*. "The local funding was such that they couldn't send people. Or they could send *one* out of 30."

These frustrations have deep roots.

"We have spent the last 35 years decreasing our ability across the board to do anything in public health and environmental health," said Daryl Rowe.



"I'm sorry to say this," said Tom Butts. "It comes down to the right level of support for local public health. In Colorado, we're under the gun from the state and from our local funding sources to save a nickel wherever we can."

Environmental health has been "cut and cut and cut," noted Lou Dooley, and over the years departments have found increasingly creative ways to keep protecting the public health—providing more with less, according to the mantra.

But there is some sense that a tipping point may have been reached, not just for environmental health departments, but also for individual employees. "We simply can't do it all," *JEH's* anonymous source said.

The terrorist threat has restored some degree of popular consciousness that such a thing as public health exists and is worth supporting. It may be a sad fact of life that there has to be an identifiable villain before the public as a whole finds preparedness interesting. Even now it's not clear that the country is ready to *pay* for public health.

At any rate, there are signs, in the reluctance with which some environmental health staff are meeting the new challenge of terrorism response, that the loss of a collective sense of responsibility for public health is beginning to be mirrored in the attitudes of a weary workforce. "I see this in public health across the board," Larry Yates told *JEH*: "[people thinking] 'In an emergency, I am going to take care of my family first, not my employer' and 'My job description doesn't include that.'"

Several people with whom *JEH* spoke noted that many sanitarians signed on to the profession thinking of it as an eight-to-five kind of job. With the advent of intensive terrorism response planning, those sanitarians may be finding themselves required to do things that are significantly more challenging—without receiving a corresponding increase in pay or recognition. "Now we're all required to be 24-7 employees," pointed out Ed Briggs of Ridgfield, Connecticut.

Because of funding constraints that limit training, and because training that directly addresses the environmental health role is only spottily available, members of the profession may also feel inadequately prepared for the challenge. Lou Dooley sees a lack of self-confidence as part of the problem. "We're scared. We're not very good at stepping out. We say, 'Go get 'em, guys. I'm back here, I'm supporting ya.' That's why in a lot of emer-

gencies, public works or others step up and do the job. They just wade on in and do it."

He paused and reflected.

"A lot of times they get hurt. Environmental health could do it *intelligently*. But we as a profession are afraid to jump—or to look—outside the box. We're so close to the walls that we can't see the big shadows coming."

*JEH* does not want to overstate the level of reluctance within the profession. "Most of the environmental health people I know aggressively went after training," Peter Thornton of Volusia County, Florida, said. "To be quite honest, the first I heard of reluctance to participate was at the NEHA annual conference in Anchorage. To say I was surprised would be an understatement."

Deborah Rosati added, "We have people who are eager to learn and eager to contribute and protect public health and safety. I just think it's the frustration of not having what they need to have."

## Some Solutions

### Terrorism Preparedness and Response = Disaster Preparedness and Response

Almost every area of the country is prone to some sort of natural disaster, as several people pointed out. Tornadoes, blizzards, drought. Hurricanes, wildfires, or earthquakes.

Environmental health departments participate in disaster response all the time. Recognizing this link is perhaps the quickest way to reconcile oneself with the jargon of counterterrorism. Ron Grimes suggested that after environmental health practitioners go through some of the training and exercises, "they will find it's nothing more than the disaster response that they're used to. That's really what a terrorist event is. It's a disaster, a deliberate disaster."

Ron Burger told *JEH* that if "those two airplanes had just flown off course and run into the World Trade Center," the environmental health tasks that followed would have been the same. "Everything there was environment related, from the mosquitoes they had to control to the rodents to the inspection of the restaurants that were opening up, to the inspection of the food and water that just got dropped off on every street corner to the health and safety of responders on the job."

*JEH* notes with interest that in contrast with the general run of humanity, which seems to require a threat from "bad guys" before it will support public health, the environmental health profession has little taste for enmity.

Environmental health professionals have a very un-bloodthirsty preference for natural disasters and unintentional emergencies. At both ends of this spectrum, it might be constructive to cultivate some conceptual flexibility.

As a practical matter, Jim Balsamo thinks environmental health professionals may have to get used to terms like "counterterrorism." He pointed out that the terminology originates in the Department of Homeland Security and that "they're going to drive this thing, whether we want it or not, in terms of what you're going to call it. Because that's where the money is, everybody else speaks that same language. If ... you want to be part of the team and have influence with that group,"—for all the reasons given above under the heading "A Call to Duty" above—"you're going to have to speak their language. I don't have a problem with "counterterrorism," he added, "as long as they also say 'and emergency response planning.'"

Indeed, the entity that is "driving this"—the Department of Homeland Security—is itself increasingly using neutral terminology like "disaster," "emergency," and "incident" on its Web site. At times NEHA uses the term "all-hazards preparedness." From this point on, *JEH* will use terms like "terrorism and disaster preparedness and response" and "terrorism response" or "emergency response" (for short) in preference to the less precise "counterterrorism."

This conceptual shift may help with some of the other obstacles discussed above. Understanding "counterterrorism" as part of general emergency preparedness and response means, for instance, that one is not "wagering" scarce resources on a relatively remote probability. If (with any luck) a jurisdiction does not experience a terrorist attack, the same resources and training can be put to use protecting the public health after the next tornado or earthquake.

**Environmental health needs to be "at the table" with the traditional first responders before an incident occurs.**

## Relationships

Anyone who is “trying to do it independently,” observed Tom Ward, “is not going to be efficient in doing it.”

Over and over, interviewees emphasized that environmental health needs to be “at the table” with the traditional first responders *before* an incident occurs. But, they also pointed out, a place at the table is not a given. Getting to the table “takes some strategy,” noted Pat Maloney.

One thing environmental health departments can do is initiate contact with entities such as

- the local emergency planning or emergency services agency,
- the local Red Cross,
- community-based preparedness groups,
- legislators,
- local utilities, and
- the medical community.

“The incident command structure needs to know what skills environmental health specialists have,” said Vince Radke of CDC.

Tom Ward told *JEH* that because his department was involved in the aftermath of a train derailment and then helped out after Hurricane Hugo, its visibility has increased. “And so we became more involved with local emergency management, became part of their incident command structure,” he said. “So when something happens, we get a call.” As the department got more involved, its visibility was further increased.

“Once you’re part of it, then it snowballs,” commented Pat Maloney. “When things are being formed, now you’re getting called.”

Mel Knight said, “We went from getting a few calls to being a key party that was called all the time.”

## Money

As discussed above, the decision about whether—and how much—CDC terrorism response money goes to local departments is in the hands of the states. In some cases, environmental health has had input into the process by which that decision is made.

Some departments that have not received much CDC funding have “creatively scrounged” money for their terrorism response and emergency preparedness work. Mel Knight said his department received some tobacco settlement money on a one-time basis, and the money “paid primarily for our anthrax calls, which were so high that year.” His department also uses “salary savings”—budgeted money that is not

spent when a staff position is vacant for part of the year.

Creative scrounging is not an ideal way to fund a terrorism response program, Knight admitted. “If we’re going to develop this readiness capacity, then what we should do is find out how much it is going to cost and find out how to have sustainable funding for it.”

Several possible long-term approaches to funding terrorism response were suggested by interviewees:

- In fee-based environments, get buy-in from lawmakers, businesses, and other responders to the idea that fees must cover overhead for the department—and that terrorism and emergency response work should be considered an overhead item.
- Use state environmental health associations to provide and fund training and education geared specifically to the environmental health role in terrorism and emergency response. The Massachusetts Environmental Health Association has been very active in this regard, providing tabletop exercises and emergency preparedness guidebooks to environmental health professionals throughout the state. It funds these initiatives by writing a grant application each year for CDC terrorism response funds being distributed by the state. Of course this kind of activity presents challenges for state associations that may be largely staffed by volunteers. MEHA found a simple solution: hire a grant writer. “It was a good investment,” Pat Maloney told *JEH*, “Because we spent maybe \$1,000 or so, and in return, we received \$40,000. You have to think of that. We almost succumbed to being overloaded.”
- Advocate for regional consortiums or joint-powers agreements that pool the resources of several jurisdictions and several agencies. “Find out all the costs of all the essential responders—fire, public works, *our* departments—put them into a pool, and have the pool funded by a special district,” suggested Mel Knight. “We have to lock in the funding, or it won’t get funded in bad years.” This approach also minimizes the problem of competition among agencies for funding.
- Establish educational partnerships to provide training. In Connecticut, said Ed Briggs, the Connecticut Association of Directors of Health, the University of Connecticut, and Yale University have formed the Connecticut Partnership, which pro-

vides free training courses for local health departments.

- Convince states to put some of the CDC money into a pool that local health agencies can draw on when they find themselves falling behind in core activities such as inspections. The money would be used to hire contractors.

## Cultivating Staff Buy-In

Mel Knight’s department has eight people who rotate in stand-by duty. One-quarter of their pay is earmarked as compensation for this duty. “So they actually make \$10,000 to \$12,000 per year by being part of the response team,” Knight told *JEH*. “And they’re actually called quite often. We’re a metropolitan district with 1.4 million people, and they get multiple calls every week. And when they get called out, they get paid overtime.”

It would help if management, the public, and staff members themselves could view environmental health workers not as blue-collar technicians, but as professionals. A technician’s goal is to complete discrete tasks—and the job is done when the task is done. A professional’s role is to serve the community as effectively as possible.

Barry Moore, emergency response coordinator for Memphis and Shelby County in Tennessee, told *JEH* that he does see a desire among environmental health staff “to be brought into the full picture.” But he also thinks that “they need to be educated to the point where they’re willing—they don’t *want* to just do restaurant inspections, they want to expand their knowledge base.”

Tom Butts sees a willingness to contribute among environmental health staff, but uncertainty about how they should do it. “They’re hungry for a defined job. They don’t necessarily care what it is, but they want to know ‘what I’m going to do.’”

Which returns this discussion to what Deborah Rosati called “the million-dollar question.”

“One of the frustrations we’ve had,” she added, “is that no one’s really defined the role of environmental health. And shouldn’t that have been one of the *first* things that was done? *Before* the funding was even allocated? I think we’ve all fumbled with it for the last few years. But maybe it was inevitable. Maybe we had to go through the last few years to be able to even put that question on the table.”

## Answering the Million-Dollar Question

### "It's Up to the Locals"

*JEH* encountered a curious phenomenon while interviewing for this story. Pressed to describe specifically what they saw as the duties of environmental health professionals in terrorism and emergency response, interviewees grew hesitant. Everyone seemed to think it was up to someone else.

"It starts at the local level," Ron Burger of CDC said.

"I guess it may depend on different health departments," Barry Moore said.

"I think it's going to depend on what the [emergency response] structure is locally," Tom Ward said.

"What is appropriate for rural Alaska is not the same as what's appropriate for rural Georgia," Jim Balsamo pointed out.

Environmental health departments already have such widely varying areas of responsibility, that it is difficult to make generalizations about whether they will be involved in, say, drinking-water systems or public reservoirs, building safety or air quality.

"I think our local officials are the ones who best know their communities and best know their areas," Deborah Rosati said.

The most concrete thinking about the environmental health role has, indeed, taken place at the local level. But the result has not been entirely satisfactory.

"We need to really resolve what our role is," said Pat Maloney.

Who should do the defining?

"Well, I don't know," Deborah Rosati said. "We're looking to national now."

### A Desire for National Leadership

Even as people recognize variability across jurisdiction and the importance of local decision making, there is also a sense of discomfort with current organizational strategies. TFAH has suggested that the lack of a coherent whole could lessen the effectiveness of emergency response: "Whatever the threat, the response is largely dependent on the functioning of a patchwork of state and local public health agencies, whose funding sources, bureaucratic structures, and responsibilities can vary significantly from state to state and even county to county" (TFAH, 2003, p. 30).

"The Feds did this [distributed terrorism response money] in a unique way," Pat Maloney told *JEH*. "You have each state—and

**"You have each state—and I'm not a fan of this—reinventing the wheel. I kind of like it when the wheel is invented and we tweak it to meet our needs."**

I'm not a fan of this—reinventing the wheel. I kind of like it when the wheel is invented and we tweak it to meet our needs."

Tom Butts wants some guidance about the environmental health role "on a larger than local scale—either from CDC or some other entity."

What about the notion that local communities should be responsible for their own safety?

"I'm going to say point-blank," Daryl Rowe told *JEH*, "that it is a misconception that local communities are going to pick it [the full responsibility] up."

### Making It Happen

National direction could come from the federal government, national organizations like NEHA, or both. Fabian told *JEH* that the NEHA Board of Directors considers this issue to be so compelling that it has committed to preparing an official policy paper stipulating what the role of the profession in terrorism response should be. TFAH has called for the President, in consultation with Congress, to "convene a summit on the future of public health to develop a cohesive, national approach to public health protection" (2003, p. 30). Is it whistling into the wind to hope that the federal government will eventually fund the environmental health piece of terrorism and emergency response more fully and more systematically than it has yet done? At any rate, if and when such a conference is called, environmental health must be sure to be on the agenda.

In the meantime, a subcommittee of the U.S. Public Health Service is working on an *Environmental Health Officer Readiness Guide*. Scheduled for completion this fall, the guide

will identify specific competencies and skill sets required for successful deployment under the Commissioned Corps Readiness Force and may prove to be a useful reference for local environmental health departments.

Readers also may be interested to know that Julia Miller, NEHA's terrorism response coordinator, is looking into the possibility of working with federal agencies on a national environmental health practitioner training needs assessment. Although the availability of funding for this project is uncertain, Mark Miller of CDC has told *JEH* that his agency is supportive of the idea and is willing to work with state and local health organizations and agencies to develop an assessment.

According to Deborah Rosati, MEHA is in the process of putting together an emergency preparedness and response template for Massachusetts health departments. It might be helpful for NEHA to do the same on a national level. Something along the lines of the *Body Art Model Code and Guidelines* that NEHA published a few years ago—with a modular format that would accommodate variations across jurisdictions—might help fill the void.

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