



# DomPrep Journal

[Subscribe](#)

Volume 13, Issue 5, May 2017



**A Revised Definition of Homeland Security**  
*By Judson M. Freed*



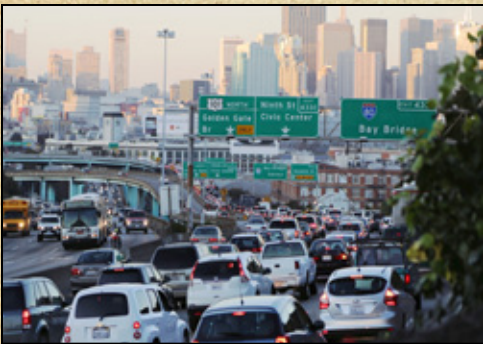
**Podcast: Federal Grant Programs – Why They Are Still Needed**  
*Moderated By Andrew Roszak*



**Native Community Resilience Leaps Forward**  
*By Lynda Zambrano*



**Protecting Water as a Lifeline in Disaster**  
*By Mary Lasky & William Harris*



**Putting Transportation Under the Resilience Umbrella**  
*By Laurel Radow*



**A Failure to Over-Communicate**  
*By Terry Hastings*



**Resilient Communities – More Than Just “Grit”**  
*By Nicolette Louissaint*



**Ham Radio Support for Tribal Emergency Preparedness**  
*By Steve Aberle*



BRNE || EOD || COMMUNICATIONS || TACTICAL || TRAINING || MANAGEMENT || SPEC OPS || CBRN

# SOLUTIONS

CRITICAL MISSIONS REQUIRE EXPERT TRAINING.  
FEDERAL RESOURCES DELIVERS.

HazMatIQ | Integrated New Equipment | Decon Procedures  
EOD Training | HME-IQ | Train-The-Trainer Courses



800.892.1099 | [www.federalresources.com](http://www.federalresources.com)



[/federalresources](https://www.facebook.com/federalresources)



[@fedresources](https://twitter.com/fedresources)



[/federalresources](https://www.instagram.com/federalresources)

[#WEAREFR](https://www.instagram.com/federalresources)

**Business Office**

P.O. Box 810  
Severna Park, MD 21146 USA  
www.DomesticPreparedness.com  
(410) 518-6900

**Staff**

Martin Masiuk  
Founder & Publisher  
mmasuk@domprep.com

Catherine Feinman  
Editor-in-Chief  
cfeinman@domprep.com

Carole Parker  
Manager, Integrated Media  
cparker@domprep.com

**Advertisers in This Issue:**

American Military University

BioFire Defense

Federal Resources

FLIR Systems Inc.

International Association of Fire Chief's  
(IAFC) Hazardous Materials Response  
Teams Conference

PROENGIN Inc.

© Copyright 2017, by IMR Group Inc. Reproduction of any part of this publication without express written permission is strictly prohibited.

*DomPrep Journal* is electronically delivered by the IMR Group Inc., P.O. Box 810, Severna Park, MD 21146, USA; phone: 410-518-6900; email: subscriber@domprep.com; also available at www.DomPrep.com

Articles are written by professional practitioners in homeland security, domestic preparedness, and related fields. Manuscripts are original work, previously unpublished, and not simultaneously submitted to another publisher. Text is the opinion of the author; publisher holds no liability for their use or interpretation.



## Featured in This Issue

Editorial Remarks  
*By Catherine L. Feinman* .....5

A Revised Definition of Homeland Security  
*By Judson M. Freed* .....6

Podcast: Federal Grant Programs – Why They Are Still Needed  
*Moderated By Andrew Roszak* .....9

Native Community Resilience Leaps Forward  
*By Lynda Zambrano* .....11

Protecting Water as a Lifeline in Disaster  
*By Mary Lasky & William Harris* .....14

Putting Transportation Under the Resilience Umbrella  
*By Laurel Radow* .....20

A Failure to Over-Communicate  
*By Terry Hastings* .....23

Resilient Communities – More Than Just “Grit”  
*By Nicolette Louissaint* .....26

Ham Radio Support for Tribal Emergency Preparedness  
*By Steve Aberle* .....29

*Pictured on the Cover: (top row) Homeland Security, Source: ©iStock.com/egdigital; Federal Grant Programs, Source: ©iStock.com/egdigital; (second row) Native Communities, Source: ©iStock.com/photoworks1; Protecting Water, Source:©iStock.com/caristo; (third row) Transportation Resilience, Source: ©iStock.com/polybutmono; Communication, Source: ©iStock.com/dickf; (bottom row) Resilient Communities, Source: Michelle Keller; Ham Radio, Source: National Tribal Emergency Management Council, 2017.*

Our commitment to **BioDefense**  
has allowed us to be ready  
for the **Ebola outbreak**  
in West Africa.

Now, with the **FilmArray system**  
and our reliable **BioThreat Panel**,  
we are able to test for 16  
of the worlds deadly  
biothreat pathogens  
all in an hour.

**Now That's Innovation!**



Learn more at [www.BioFireDefense.com](http://www.BioFireDefense.com)



## Editorial Remarks

By Catherine L. Feinman



All disasters may begin locally, but their effects and resource needs can span jurisdictions and can even have national implications. This edition of the *DomPrep Journal* examines ways to protect critical infrastructure and communities from widespread catastrophe. To begin, building a robust homeland security enterprise requires efforts at all government levels. With the right mix of local, regional, and federal resources and capabilities, the nation as a whole will be better protected from outside threats (see [Judson Freed](#)'s article). Resources needed to protect the homeland against both natural and human-caused disasters include federal funds. Preparedness at the local level promotes national security, but also requires national support (see [Federal Grant Programs Podcast](#)).

Critical infrastructure is a good example of where local to federal interests collide. Food, water, electricity, transportation, and communication are just a few resources that are crucial for mitigating threats and rapidly recovering from disasters. When any one of these infrastructures are lacking, the community and its surrounding areas suffer. For example, ensuring power supplies and water/wastewater operations during non-disaster times promotes resilience during disasters as well (see [Mary Lasky & William Harris](#)'s article). Thorough research can help identify interdependencies and infrastructure gaps – such as in transportation – to help communities adapt as threats evolve (see [Laurel Radow](#)'s article).

Communication and education can take on many forms, and a variety of methods and messages is needed to help bridge such gaps. There is no “one and done” solution, so repetition is the key (see [Terry Hasting](#)'s article). Repetition with technology is also beneficial to ensure information sharing under diverse situations. Ham radio, for example, can fill gaps that have formed between other modes of communication (see [Steve Aberle](#)'s article).

Communities are faced with many threats and hazards on a daily basis. Having the right tools and the right resources at the right time builds community resilience, but the community members themselves fuel the determination to fully recover and reach their new normal. Collaborative partnerships among all key stakeholders build valuable social networks for sharing lessons learned and best practices. One such partnership introduced resilience guidance that had previously been lacking to Native American and Alaska Native populations (see [Lynda Zambrano](#)'s article). In another case, strong community bonds spurred much needed action during a flood when official resources were overwhelmed (see [Nicolette Louissaint](#)'s article). By defining problems, identifying resources, building knowledge, and promoting social networks, communities are equipped to face and overcome whatever challenges they face.

# A Revised Definition of Homeland Security

By Judson M. Freed

***A top-down approach provides guidance and support from federal agencies to local jurisdictions. A bottom-up approach ensures that local needs are being heard at the top. However, when local agencies are tasked with national security efforts, more guidance and support may be needed from above. It is time to prioritize resources, measure preparedness and response capabilities, and build and support national capabilities locally by redefining homeland security in today's environment.***



The U.S. Constitution, seeking to “secure the blessings of liberty,” separates powers between the three branches of the federal government and between the federal government and the states. The states in turn have separations of power within state government and between state and local governments (counties/boroughs/parishes and cities). This structure presumes that these separated powers will work to integrate the separate activities of each branch and level of government to create a functioning governance structure, “separateness but interdependence, autonomy but reciprocity” ([Youngstown Sheet & Tube Co. v. Sawyer](#), 343 U.S. 579). Such integration and reciprocity are not always present in practice, however. The conflicts inherent to this arrangement result in differing views of the homeland security role at different levels of government.

## ***Prioritizing in the Post-9/11 Enterprise***

Since the terrorist attacks of 2001, the United States has worked to create a homeland security enterprise that spans the federal, state, and local levels. Originating within the federal government and as a result of acts of terror, this enterprise follows a federal-first, top-down method of mandates and funding aimed at terrorism. In an effort to coordinate disparate constitutional responsibilities into a common mission space, the Department of Homeland Security and Congress have promulgated a near-constant stream of federal mandates to the state and local governments – and neglected the probability factor in considering nation-affecting incidents. The homeland security framework now rests on the capabilities and resilience of local governments. It concentrates on law enforcement, yet neglects other critical threats; it trusts that resilient communities will be both less likely to require federal and state aid, and more likely to be in position to offer assistance nationwide.

The reality of politics and government is that the people of a local area pay their local taxes to ensure that they have the local capacity to cope with local impacts of day-to-day and worst-case most-probable threats. The entire homeland security enterprise relies on the capability of local government to provide “hometown” security. However, the federal view of homeland security too often relegates the myriad other hazards the nation faces to a lower priority. The sheer volume of policy, law, hearings, and committee records demonstrate that homeland security guidance has been directed toward federally mandated priorities applied uniformly across all states and localities.

The suite of federal homeland security grants such as the Urban Area Security Initiative ([UASI](#)) generally aim to build local capability and capacity to prevent, prepare for, respond to, and recover from terrorism, with allowances for confronting other hazards added as a virtual afterthought. The UASI program wisely requires that capabilities funded by the grants be able to deploy elsewhere, or at least support the deployment of capability elsewhere in the nation – and locals try to leverage these funds to confront “all hazards.”

### ***Measuring Preparedness & Response Capabilities***

Congress and the people demand some assurance that these efforts are “[measurable](#).” Yet, when DHS calculates UASI risk, some of the factors they use are secret. This means locals cannot be certain that their grant investments directly address these federally identified priorities. Further, one cannot measure what does not happen. As a result, many questions are raised, for example:

- If a law enforcement agency in a small city trains to cope with a situation similar to the terrorist bombing of concert goers on 22 May 2017 in Manchester, England, and such an event does not happen, can one say that the training “prevented” any incident?
- If that city uses that training to respond to a school shooting, can anyone deny that benefit?
- If resources are developed to allow the rapid clearing of interstates after a blizzard that has not yet happened, can one measure the fact that this capability is also useful in the aftermath of hurricanes?
- Although a subjective understanding exists that the billions spent on homeland security since 9/11 have had some a positive effect, how can the United States “measure” this effect?
- Since “homeland security” is ill-defined, how are metrics best applied?

The study of any endeavor requires that some boundaries be established for the study. However, any web search for “definition of ‘homeland security’” reveals millions of different definitions for the term. Without an agreed-upon definition, the states and locals logically invest in projects that fund statewide and local

response teams, equipment, personnel, programs, training, and other resources that meet their particular definition. As referenced above, “state” teams and resources used to provide nationwide responses to affected jurisdictions are made up of local personnel and equipment housed, trained, and maintained locally and coordinated through the states. Despite federal rules and oversight concentrating almost exclusively on terrorism, in reality, homeland security

*With the entire homeland security enterprise relying on the capability of local governments, it is time to revise the definition of homeland security.*



is almost completely dependent on local capacity to provide capabilities useful in all hazards, and state-to-state coordination in time of need. In short, homeland security is not merely an anti-terrorism function of the national security apparatus. It is a bottom-up process building local capacity and resilience to all hazards, so that local communities and states can afford to send aid elsewhere. Without federal funds to develop nationally available local and state capacity, there is no security for the homeland.

### ***Building National Capabilities Locally***

Perhaps the best way to measure capability starts with ensuring that every city and county has the capacity to be a part of the larger homeland security enterprise – and not solely anti-terror capability. Raw numbers of persons trained or counts of specific hardware are not sufficient. In the years since 9/11, large cities such as New York have built extensive capabilities and, although it is not possible to determine how many attacks have never taken shape as a result, it is known that some have been prevented. It is also known that New York is equipped to respond rapidly to terrorist and other events. Yet, even with all of those resources on hand, Superstorm Sandy in 2012 still resulted in a need for assistance to be sent to New York from other parts of the nation – *national* homeland security capability.

Those resources were available because *other* jurisdictions had built up enough capacity to send some of it to aid their neighbors. Building collapses due to storm or flood require the same types of resources as collapses due to terror or natural gas explosion. Cleanup and recovery requires public works and utilities workers. Coordination, strategic planning, and documentation require emergency managers. Building enough local capacity in all of these fields requires federal programs such as UASI. Identifying and measuring national capability to deal with all of these hazards requires a revised, bottom-up, definition of homeland security.

---

*Judson Freed, MA, CEM, has served as director of emergency management and homeland security for Ramsey County, Minnesota, since 2003. He is an adjunct professor in emergency management. For the past seven years, he has served as vice chair of the Emergency Management and Homeland Security subcommittee for the National Association of Counties (NACo). In 2016, he was appointed by former DHS Secretary Jeh Johnson to the Homeland Security Information Network National Advisory Committee. He holds an MA in Security Studies (Homeland Defense and Security) from the Naval Postgraduate School.*



## Federal Grant Programs – Why They Are Still Needed

On 16 May 2017, DomPrep hosted a podcast recording with a panel of subject matter experts to discuss the topic of federal grant funding. The Urban Areas Security Initiative (UASI) Program focuses federal funds on dense urban areas where threats and consequences of attacks are significant. By enhancing the planning, training, and resources in these high-risk areas, the nation as a whole is more prepared for terrorist and other threats. By building and sustaining capabilities in these critical areas, all communities benefit. This podcast addresses potential federal budget cuts to the program, but these subject matter experts explain how cuts to the UASI program would be short sighted. As with any program, it has its flaws, but the regional collaborative support capabilities that it builds are an essential component to national homeland security protection.

[Click](#) to listen.

**Andrew Roszak, Moderator**, *Senior Director for Emergency Preparedness, Child Care Aware® of America*

**Judson M. Freed**, *Director, Ramsey County Emergency Management and Homeland Security*

**Donald (Doc) Lumpkins**, *Chief Financial Officer, Maryland Emergency Management Agency (MEMA)*

**Jacob (Jake) Terrell**, *Associate Legislative Director – Telecommunications & Technology, NACo*



### ***Resources for Additional Information***

[Federal Emergency Management Agency \(FEMA\) Homeland Security Grant Program](#)

[Maryland Emergency Management Agency](#)

[National Association of Counties \(NACo\) Advocacy Page](#)

[Ramsey County Emergency Management and Homeland Security](#)



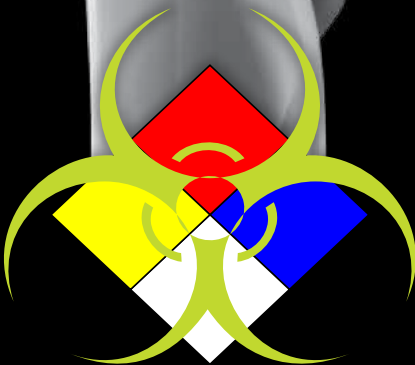
# Invisible Threats Exposed



## AP4C

**Portable Chemical Detection System  
Protects First Responders, Military & Infrastructure**

- Fast, Reliable Analysis of Invisible Hazards Saves Time & Lives
- Unlimited Simultaneous Detection Exposes Unknown Agents
- Low Maintenance & Operation Costs Save Money
- Rugged Handheld Design is Easy-To-Use With Minimal Training
- Complete System Includes Accessories & Case for Easy Transport



[Learn More Online](#)

# PROENGINE

**Chemical and Biological Detection Systems**

# Native Community Resilience Leaps Forward

By Lynda Zambrano

*As in any community, a solid network of partnerships is needed to address the specific needs of its community members. Native American and Alaska Native populations span the nation, but face similar preparedness challenges. To address resilience gaps, a public-private sector collaborative approach was used to create a tool as a foundational document for community outreach by tribal stakeholders, as well as tribal emergency managers and others to train new staff.*



There are [567 federally recognized tribes](#), living on more than 300 reservations, representing 22% of the 6.6 million Native American and Alaska Native population. Many tribal families live in remote rural communities, where [68% of homes](#) on tribal lands still lack access to broadband internet service, as of January 2016. This rate is lower than that of some developing countries. In contrast, [more than half](#) of African-Americans and Hispanics and about three-fourths of Caucasians have high-speed access at home in the United States, according to the U.S. Department of Commerce. A [2012 report](#) from the Federal Communications Commission's (FCC) [Office of Native Affairs and Policy](#) noted, "Reservations of many Tribal Nations are located in rural areas with challenging terrain." The FCC cited the badlands of the northern plains states and the mountainous forests of the Pacific Northwest as particularly challenging situations.

## ***Statistically Challenging Circumstances***

Because the vast majority of disaster preparedness material resides on the internet, this information is nearly impossible to obtain for many Indian Country families. For those born on reservations, the economic outlook can be especially challenging because Native American households earn only a little more than half as much as the average American ([\\$37,227 compared to \\$53,657](#) for the nation as a whole). Approximately [28.3%](#) of Native American and Alaska Natives are living below poverty and, without basic preparedness plans, these families are even more vulnerable to injuries and fatalities in a disaster. With the growing number of floods, wildfires, tornadoes, earthquakes, and other natural catastrophes, and the ever-present threats from man-made contamination of tribal lands, family preparedness has become an even greater challenge for survival in Native communities.

To further exacerbate the preparedness dilemma, most tribal nations are in remote, rural communities with few response resources readily available. This increases the chances for delayed response in a major event, leaving families to care for themselves for extended periods without assistance. As many Native communities struggle to maintain a meager existence, the resilience gap continues to widen.

## ***Tribal Handbook – Closing the Resilience Gap***

To address the Native resilience gap, [Preparedness Matters](#), a disaster preparedness consulting group specializing in underserved community preparedness, collaborated with key stakeholders in the tribal emergency management community and Native communications experts to develop a strategy and discuss ways to reach tribal families who have limited electronic media access. The challenge was not just to develop a tool, but to make it comprehensive and accessible to a wide audience of stakeholders. Working with [Native Public Media](#), the nonprofit organization that coordinates training and support for the 59 radio and TV stations broadcasting in Indian Country, and the National Tribal Emergency Management Council (NTEMC), which represents 277 tribal emergency management groups in the Pacific Northwest, Preparedness Matters launched a project to develop the “[Native Family Disaster Preparedness Handbook](#).”

The publication was designed to consolidate the vast amount of preparedness information into a single resource guide that would be easy to digest, culturally relevant, and affordable for tribal residents. Additional collaborators with expertise in mitigation,



disaster trauma, and tribal recovery were included to provide subject-matter expertise. The group set forth several goals for the design of the Handbook. The main objectives were to “demystify” the tribal disaster process by explaining the sometimes-complex procedures and nuances of tribal recovery, and to provide simple steps families could take to protect children, homes, livestock, and pets. The added challenge was how to get the Handbook to communities where daily survival is their main priority, and preparing for disasters poses a difficult task few are likely to

undertake without help. To accomplish distribution of the handbook, the team developed an outreach strategy to reach key stakeholders in all sectors of the Native community, as well as non-Native partners and supporters.

Sorting through a massive amount of disaster preparedness data presented its own challenges for the handbook project team. Initially, a book outline was created to keep the team on track, with a course of action that adhered to “less is more” when developing the chapter information. Throughout the process the team had to stay focused on the main goal, which was to keep the information culturally relevant, while providing a flexible tool that

could be updated and customized by the user. To accomplish this, the spiral bound booklet has a convenient rear pocket that can be used to add information, and a tear-out family plan template to make it easy to copy or secure personal family plan data.

### ***Developing a Culture of Preparedness***

Major concerns for Indian Country families in disaster include the reunification of families, and the safety of displaced children. The Tribal Handbook team identified 17 categories of functional needs in Indian Country, and ways tribal stakeholders can address them, including but not limited to:

- No 911 services
- Limited or no internet access
- No street addresses
- No paved roads
- Limited or no telephone access or service

Because of these vulnerabilities, active participation in preparedness activities must become a way of life for Native communities, not an afterthought. This means creating a culture of empowerment and awareness, essential to bring about meaningful behavior and attitude changes, especially among those in greatest peril. Preparing to protect or minimize damage to vital agricultural resources is equally important to the economic recovery of post-disaster tribal communities. The loss of livelihood from damaged crops, wildlife, fishing, mineral mining, livestock, and other resources can have lasting effects on any community, especially one as dependent on these sources of income to support its people.

***Just a few resilience gaps faced by Native communities: limited or no 911 services, internet or telephone access, street addresses, paved roads.***

In addition, protection of a Tribe's sacred sites cannot be ignored, but rather integrated into all phases of the emergency planning process. If a disaster destroys a sacred site such as a burial ground or historical site, the impact on the Tribe can be devastating physically, emotionally, and spiritually. Spiritual connection to the land is a hallowed tradition – where Native ancestors lived and are buried, where the future generations will grow and prosper in the rich heritage and history of Native culture.

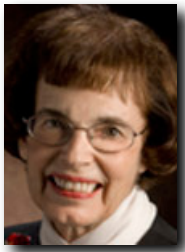
---

*Lynda Zambrano is the executive director of the National Tribal Emergency Management Council, a nonprofit organization providing free consultative services in homeland security and emergency management as it pertains to the areas of planning, mitigation, response, and recovery for more than 277 member tribes throughout the United States.*

# Protecting Water as a Lifeline in Disaster

By Mary Lasky & William Harris

***Water is vital to life. Water and wastewater are taken for granted, with people believing that the faucet will turn on and the toilet will flush. That is until a disaster. To ensure access to critical resources such as water when needed the most requires understanding the scale and scope of the problem, identifying ways to preserve such lifeline services, and strategizing to best allocate these resources during both disaster and non-disaster times.***



**A**s the lack of electrical power continued for days, Hurricane Sandy in 2012 provided many lessons learned. Generators started to break down because most emergency generators are not designed for continuous use for days or weeks. Competition for generators increased as the outage continued. Many generators ran out of fuel and too many, even for hospitals, were located in basements subject to flooding. Some emergency managers did not understand the need for the water sector to have generators. And, according to the Electric Infrastructure Security

Council's [E-Pro® Handbook II](#), fuel transport companies needed emergency credits when their customers could not pay for fuel deliveries.

## ***Understanding the Scale & Scope of the Problem***

In the eight hardest-hit states, about [11 billion gallons of untreated and partially treated sewage](#) (including 3.45 billion gallons of raw sewage) flowed into rivers, bays, canals, and, in some cases, city streets. Downstream water treatment plants were designed for normal raw water sources, but not these heavily contaminated sources. Additionally, citizens attempting to use such contaminated surface water sources as potable water or to create potable water faced health risks akin to those in third world nations. The American Water Works Association (AWWA), in its 2013 [after action report on Hurricane Sandy](#), stated that giving the water/wastewater sector priority for generators and fuel during power outages is important.

Many of the water utilities have found it too risky and too costly to obtain generators “just-in-time” after a disaster, in lieu of owning them. Unfortunately, obtaining “just-in-time” generators may not be possible in disasters such as hurricanes and less feasible if there were long-term, widespread electric power outages caused by threats to the power grid such as a cyberattack, physical attack, solar storm, or electromagnetic pulse. Another issue is that there are a limited number of emergency generators. For example, the Federal Emergency Management Agency (FEMA) has 400 generators for its 10 regions. The U.S. Army Corps of Engineers has 25 locations with 30 generators each, primarily reserved for Defense Department requirements. To put these numbers in perspective, there are 160,000 water/wastewater systems. In addition, there is a challenge to allocate skilled people capable of installing the generators and handling the logistics of getting the equipment and fuel stocks to the right locations (see the “[Limited Supplies of Emergency Power Generators](#)” section in the E-Pro Handbook II).

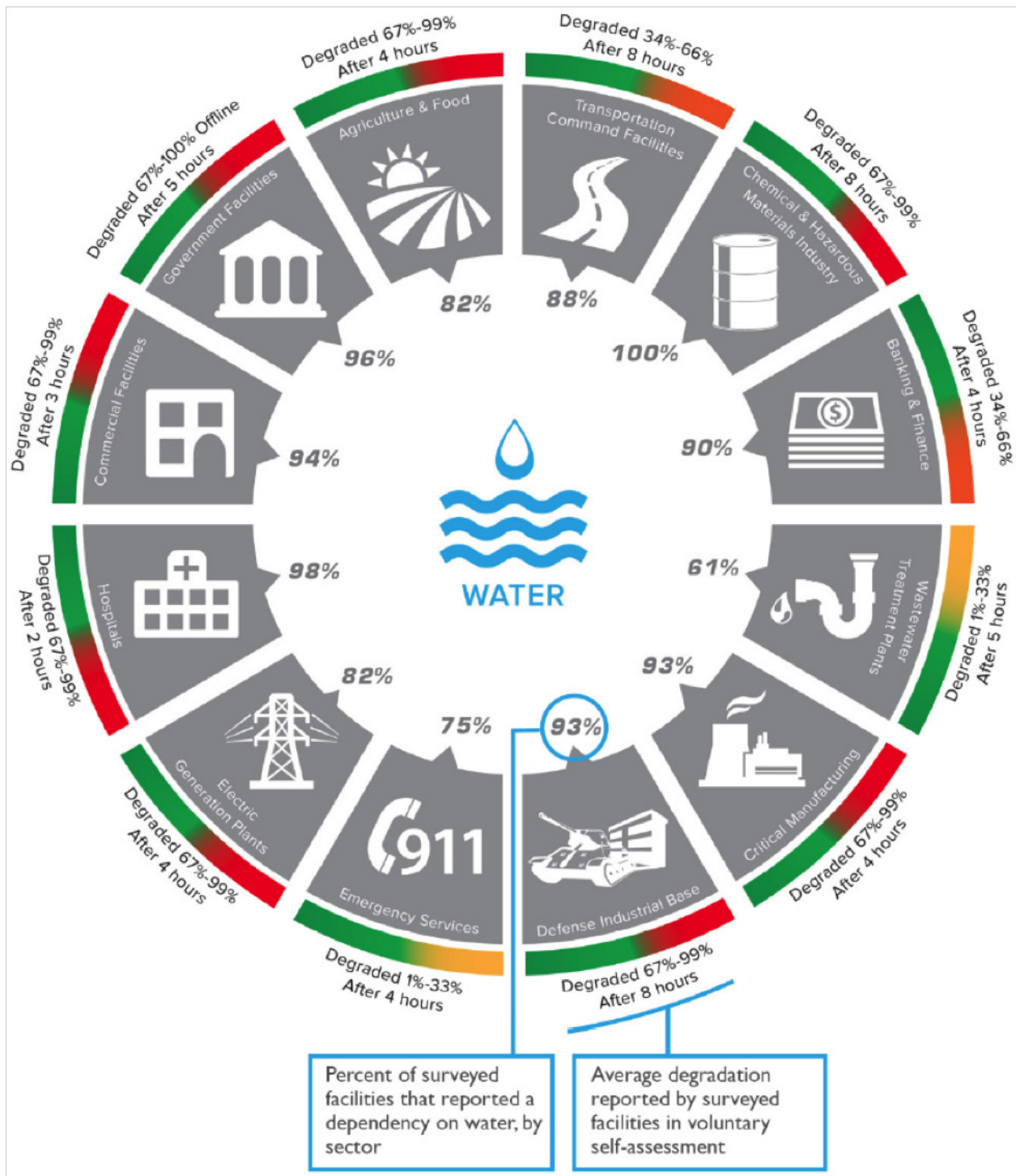
Critical infrastructure is greatly dependent upon water, and water is dependent on electric power. [Powering Through: From Fragile Infrastructure to Community Resilience](#) examined the July 2016 National Infrastructure Advisory Council (NIAC) [Report on Water Sector Resilience](#) (see Figure 1). The NIAC report:

*provides an excellent illustration of how tightly coupled modern civilization is to modern water delivery systems. It clearly illustrates that every category of water user surveyed will experience significantly degraded capabilities after 8 hours without water. Thus, even if they have emergency generators that can provide on-site power for an extended period, they are degraded nonetheless by a lack of water. Additionally, should the water utilities have electric power, they maintain a limited quantity of treatment chemicals on site, and chemical supply chains depend upon electricity. Catastrophic loss of potable water has many consequences to include degrading or eliminating much of healthcare capacity both in hospitals, and via first responders. The NIAC Report on the Water Sector indicates that hospital capabilities may be degraded by 67% to 99% within just two hours of loss of water services. Emergency replacement of healthcare facilities relies on nearby facilities being operable. This is not a feasible planning consideration in the event of an extended regional or larger-scale loss of electrical power and corresponding loss of water and wastewater utilities. (See p. 27 of [Powering Through](#))*

### **Identifying Ways to Preserve Lifeline Services**

One of the goals during a long-term power regional or national outage would be to keep people in their homes where they are safer than becoming stranded attempting travel elsewhere. In a severe power outage that is wide spread, there would be no place for the population to flee because no reachable destination would have power. If water and wastewater are available, people are more likely to remain in their homes. Without water, there could be a “tipping point” beyond which lives will be lost. Then FEMA Administrator Craig Fugate has remarked that loss of water service threatens lives and urges, “Keep the water on” (see [2015 Koppel article](#)). Ideally, the highest priority for generators, fuel, chemical distribution, and maintenance materials would be the water/wastewater systems.





**Fig. 1.** National Infrastructure Advisory Council (NIAC) critical infrastructure dependence on water and potential function degradation following loss of water services (Source: NIAC, July 2016).

As mentioned in *Powering Through*, uncoordinated and unplanned self-evacuations are contraindicated. The Three Mile Island (TMI) Nuclear Incident of March 1979 showed that self-evacuation was not beneficial and caused prolonged congestion of transportation systems and fuel shortages. Between March 28 and April 4 of that year, an estimated 144,000



[regional residents self-evacuated](#) from the area surrounding the power plant. Within the 20-mile radius of TMI, the residential population was about 600,000; so roughly one-quarter of the population evacuated, mainly before official instructions were broadcast. *Powering Through* stated, “Since that incident, the Nuclear Regulatory Commission has mandated installation and monitoring of radiological sensors within designated evacuation zones of licensed nuclear power plants, in part to avert rumor-based evacuations that congest and undermine recovery capabilities.”

Ted Koppel explored the real or potential contradictions among federal policies to prepare for and to recover from a long-term grid blackout in his book, *Lights Out* (2015). He wrote, “In the case of a power grid going down urging people to stay in their homes may be exactly the right thing to do . . . leaving routes open for resupply convoys.”

For a long-term electric grid outage, relying on “shelter in place” as the preferred policy to the maximum extent feasible has multiple advantages, including conservation of scarce fuel, prioritizing uses of transportation routes, preserving law and order, and benefitting from community networking by those in their own neighborhoods. Others, such as the [EPRO® Black Sky Systems Engineering Process](#), share this preference for “shelter in place” outcomes. A preferential policy to shelter in place depends on the resilience of “lifeline services” such as pre-positioned food, restoration of water and wastewater services, essential transportation, and communications. The former FEMA administrator, Craig Fugate, in 2015 expressed concern about the advisability of mass evacuations for long-duration disasters. The government, he noted in Koppel’s *Lights Out*, “Can’t move ’em fast enough.” And Koppel replied, “anyway where are you going to move them?”

*When electrical power is lost, other critical resources may also become unavailable. What strategies can help communities ensure continued access to water?*

### ***Strategizing for Re-Allocation of Resources***

In managing the water supply, a water mitigation strategy could aim at providing just enough water to sustain most of the population without fully energizing the water system. Typically, when communities are without power, the demand on water is reduced because people and businesses are not running water-intensive appliances, such as washing machines and dishwashers. Utilities could also define the level of service goals for long-term emergencies – for example, water quantity and quality.

One possible level of service goal might be average winter daily demand since this is typically significantly lower than water demand during other times of the year. Emergency

response plans/playbooks ideally would reflect these reduced levels of service goals. For example, if water and wastewater systems were re-engineered to provide just 20% of capacity, recoverable within 24 hours, one could sustain wastewater system pressure and support emergency water rationing. The huge waste of water under normal conditions could serve as a cushion for emergencies. It would also be best to maintain water pressure even if the water cannot be properly treated for human consumption. This would allow for delivery of water to each residence where it could be boiled or otherwise decontaminated, and also provide water for firefighting (see p. 150 of [E-Pro Handbook II](#)).

Additional information about emergency water supply preparation, sanitation, and hygiene can be found at the Centers for Disease Control and Prevention's website. In conclusion, keeping water and wastewater facilities operational during disasters is critical and needs to be a high priority. Citizens could be prepared using CDC guidelines and having supplies and water filters in households and businesses.

---

*Mary Lasky (pictured above), a Certified Business Continuity Professional (CBCP), serves as the program manager for business continuity planning for the Johns Hopkins University Applied Physics Laboratory (JHU/APL), where she coordinated the APL Incident Command System Team. She also as a member of: InfraGard, where she is the vice chair for the InfraGard EMP-SIG. In Howard County, Maryland, she served as: president of the Community Emergency Response Network Inc. (CERN); president of the board of directors of Grassroots Crisis Intervention Center; and for Leadership Howard County is co-chair of the Steering Committee for the Leadership Premier Program. For many years, she has been on the adjunct faculty of the Johns Hopkins University Whiting School of Engineering. She is the immediate past president of the Central Maryland Chapter of the Association of Contingency Planners (ACP) and has held a variety of supervisory positions in information technology and in business services. Her consulting work has included helping nonprofit organizations create and implement their business continuity plans.*

*William R. Harris is a senior advisor to the congressionally mandated EMP Commission since January 2017. He serves on the board of directors, and is the secretary of the Foundation for Resilient Societies, a New Hampshire-based nonprofit engaged in research and education on critical infrastructure protection. He is an international lawyer (Harvard, J.D., 1966) and former energy, nuclear non-proliferation, environmental, and national security project manager at the RAND Corporation. Working with physicists and engineers, he supports electric and other critical infrastructure "reliability standard" development for international, federal, and state institutions.*

*Significant contribution to this article was provided by:*

*Stephen Volandt, who is vice president of Auroros Inc., a contracting and management-consulting firm based in Raleigh, North Carolina. He specializes in successfully connecting strategic purpose, risk management, decision-making, enterprise project portfolio management, operational user requirements, and the technology that supports them. He co-authored the DoD CIO Executive board governance charter. Mr. Volandt served as the lead architect for transforming the multi-billion-dollar United States Marine Corps business enterprise to better support combat operations and readiness cycles. He provided policy, operations modeling, IT and communications modeling, planning, and budget justification for a global U.S. Army weapon of mass destruction response capability; and was a principal operations planner and architect for joint U.S. Army and National Guard response to smuggled nuclear weapon ground burst terrorism in the homeland. He is a former U.S. Marine Corps. He graduated from The Citadel. He is the 2nd vice president for the Eastern North Carolina InfraGard Chapter, as the deputy director, InfraGard SE Region EMP-SIG, and as the National InfraGard EMP-SIG administrative officer. He authored the exercise scenario, exercise process, provided the maturity model for the 2015 EMP SIG annual workshop and conference. His current passion is the design, funding, and creation of resilient communities.*

# EMERGENCY SERVICES WEBINAR SERIES 2017

KNOWLEDGE WHEN YOU NEED TO RESPOND

In the world of emergency operations, conditions change. So does the knowledge needed to respond effectively. American Military University (AMU) is proud to host a series of free, 1-hour webinars for responders and emergency managers, covering these and other essential topics:

- Violent Incident Consequence Management, the Emergency Manager's Role
- Principal Investigator for the Firefighter Injury Research and Safety Trends (FIRST)
- Drafting and Implementing Effective Fire Department Policies and Procedures
  - Financial Systems Management for Fire and EMS Agencies
    - Organized Response to Mass Casualty
    - Firefighter Health: Heart Healthy Solutions

Webinar attendees may receive a 5% tuition grant for degree and certificate courses at AMU.

REGISTER FOR THE WEBINAR SERIES TODAY AT  
[PUBLICSAFETYATAMU.COM/ DPJ](http://PUBLICSAFETYATAMU.COM/DPJ)

FOR MORE INFORMATION ABOUT CUSTOMIZED  
TRAINING TO MEET YOUR NEEDS, CONTACT ANTHONY MANGERI AT  
[AMANGERI@APUS.EDU](mailto:AMANGERI@APUS.EDU).



# Putting Transportation Under the Resilience Umbrella

By Laurel Radow

*As interdependencies between and among critical infrastructure sectors and the potential for cascading effects increase, communities must be able to recover and adapt to new normals. One organization incorporates research to help enhance communication between sectors by identifying and addressing research gaps. As threats evolve, communities with a solid framework for resilience are better prepared to update plans and adapt to new normals.*



Preparedness, and more importantly resilience, remains a priority at the Transportation Research Board ([TRB](#)), which is the transportation arm of the National Academy of Sciences. In an April 2013 article, "[Key Hazards & Security Guide](#)," Stephan Parker, senior program officer at TRB, shared that TRB committees responded to 9/11 by creating "a 'bookshelf' of [security resources and guides](#) for transportation professionals, decision makers, and members of the general public. In addition, TRB maintains a wide-ranging website on transportation system security and emergencies, and disseminates monthly updates on [TRB](#) and [National Academies](#) security activities." The TRB continues to update these publications.

## ***Adapting to a New Normal***

Since 2013, the TRB has continued to make security one of their key focus topic areas. To strengthen the previous dozen or more years of research, in 2014, the TRB established a new section for the first time in many years. This section, "Transportation Systems Resilience," solidified the transportation agencies' focus on transportation security, emergency management, evacuations, and logistics under the broader umbrella of resilience.

The resilience section naturally builds on the National Academies' previous efforts, embodied in "[Disaster Resilience: A National Imperative](#)," released in 2012. This recent focus has been on resilient communities and the effects of climate change. The definition that TRB and the section use is, "The ability to prepare and plan for, absorb, recover from, or more successfully adapt to actual or potential adverse events."

The Transportation Systems Resilience Section was approved by the TRB Technical Activities Council in 2014 and began its internal organization in 2015. At the most recent TRB annual meeting in January 2017, the reach of the section's interest could be found in the range of the resilience-focused sessions. To raise awareness of what is meant by transportation resilience, on each day of the annual meeting, multiple "must attend" sessions were highlighted and labeled as "Hot Topic – Resilience" in the event program, beginning with a Sunday morning workshop, entitled "Resilience Tabletop Simulation: What You Need to Know Before and After Disaster Strikes." Similar interactive exercises are planned for future conferences.

## ***Staying Focused With Goals & Leadership***

The section's mission is to, "Promote discussion among principals, disseminate research findings and identify priority research topics" in the area of transportation systems and services before, during, and after periods of increased stress service disruptions, and critical human need to enhance recovery. The goals of the Transportation Systems Resilience Section include:

- Promote communications, especially among the "lifeline sectors" (power, communications, and water/waste and transportation stakeholders), to enhance acknowledgement of these sectors interconnectedness and common vulnerabilities, including cyber vulnerabilities.
- Build understanding of the sources of risk potential mitigation options at the community, regional, and national levels for implementation prior to significant disruptions or failure of transportation assets during periods of increased stress.
- Develop an integrated conceptual framework and guidelines that map the system of physical and social infrastructures that are essential to maintaining transportation services and mechanisms to increase resilience and reliability.
- Identify and promote new research that leads to crosscutting and interdisciplinary methodologies that integrate resilience practices and adaptation measures for the transportation sector.
- Support the needs of end users by providing guidance that encourages the incorporation of system resilience and sustainability into the routine planning, engineering, financing, management, and maintenance activities of transportation.

The Transportation Systems Resilience Section seeks to:

- Advance resilience research into the nature of interdependencies and cross-sector complexities in a comprehensive fashion;
- Identify policy, protocols, and operational practices that promote greater transportation systems resilience, including adaptive capacity; and
- Communicate best practices to meet the needs of society from the whole population to individual citizens and end users.



To ensure resilience remains front and center in the transportation community, two key activities are currently underway. First, in the summer of 2017, the TRB will publish a resilience-focused issue through its journal [TR News](#). The articles have been written and

*Ongoing research in the transportation and its interdependent critical infrastructure sectors is a best practice that promotes community resilience.*

are currently being reviewed by the TRB editorial board. Second, in the fall of 2018, TRB will host its first International Transportation Resiliency Conference. One of the key audiences of the conference will be state transportation chief executive officers or secretaries of transportation.

### **Call to Action**

The following leadership of the Transportation Systems Resilience Section and its three committees are continuously looking to broaden their network:

- [Section](#) Chair Thomas Wakeman and Vice Chair John Contestabile
- Standing Committee on Critical Transportation Infrastructure Protection ([ABR10](#)) Chair Laurel Radow and Vice Chair Duane Verner
- Standing Committee on the Logistics of Disaster Response and Business Continuity ([ABR20](#)) Chair Anne Strauss-Wieder
- Standing Committee on Emergency Evacuations ([ABR30](#)) Chair Brian Wolshon

As such, those interested in learning more about the Transportation Systems Resilience Section or its standing committees may connect with any of these TRB committee chairs at [MyTRB](#). In the coming years, the TRB will continue its work to understand how a focus on resilience will begin to shape the transportation community, its projects, and its programs.

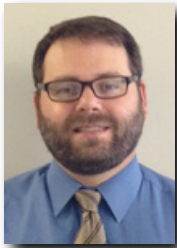
---

*Laurel Radow is the current chair of the Transportation Research Board (TRB) of the National Academy of Sciences' Standing Committee on Critical Transportation Infrastructure Protection (ABR10). From 2014 through 2016, she served as the vice chair of the ABR10. She joined the Federal Highway Administration (FHWA), U.S. Department of Transportation in 1996. From 2004 until her retirement at the end of 2016, she served as a member of the FHWA Office of Operation's Traffic Incident and Events Management Team. In that capacity, she served as program manager for the agency's Evacuations/Emergencies and Planned Special Events (PSE) programs as well as managed a range of traffic incident management (TIM) tasks. Recent TIM and PSE responsibilities included: management of the publications, "Making the TIM Business Case," and "Climate Change Adaptation Guide for Transportation Systems Management, Operations, and Maintenance"; deployment of the "TIM Incident Management Outreach Toolkit"; member of the TIM SHRP2 (Strategic Highway Research Program 2) TIM responder training program; management of the Planned Special Events Capability Maturity Framework workshops; and author of the August 2016 publication, "2017 Solar Eclipse Transportation Fact Sheet for State and Local Departments of Transportation."*

# A Failure to Over-Communicate

By Terry Hastings

***Emergency managers (and others) often fail to truly engage and educate their various stakeholders. With numerous competing priorities and a vast array of information outlets to contend with, getting a message to resonate requires more effort than ever before. As such, emergency managers must be willing to over-communicate and explore new ways to educate people. Much like disaster preparedness, communication is an ongoing process that requires a sustained commitment.***



As a discipline, emergency management has matured greatly over the past several years. It has evolved from a civil defense mindset focused on a potential nuclear attack to a much broader all hazards approach involving “whole community” stakeholders from the public, private, and nonprofit sectors. With this evolution has come a myriad of doctrine and concepts. For example, the [National Incident Management System](#) and associated [Incident Command System](#) provide a standardized approach to managing disasters and integrating the response efforts of all levels of government and other whole community partners. Yet, despite the doctrine and associated training, many jurisdictions and organizations still fail to adhere to or apply the concepts effectively. One reason for this is a lack of effective communication and education.

## ***Identifying Current Efforts & Gaps***

The Federal Emergency Management Agency (FEMA) and others have spent a great deal of time developing the [National Planning Frameworks](#) and other guidance, and there is a great deal of associated training available. However, FEMA, state emergency management agencies, and other emergency management organizations need to place a greater emphasis on communicating the practical application of the various concepts. Simply pushing out the plans and relying on webinars to explain them is not enough; and, yes, training is available but much of it is web-based and not truly interactive or educational.

It is incumbent on all emergency management professionals to make a more concerted effort to help educate the various stakeholders and better communicate how and why the emergency management principles are applied. Additionally, more needs



to be done to educate elected leaders because they too need to understand the emergency management process. Otherwise, when disasters happen, they may lose faith in the system and look past emergency managers for answers. When it comes to engaging elected officials, emergency management professionals must be willing to adapt to them, and this may include developing specific training for executives, one-on-one meetings/briefings, or other more tailored solutions. It is simply unrealistic to expect elected officials to have the time to read and digest reams of paper or to sit through hours of training and associated PowerPoint slides. Different audiences require different approaches, and this is especially true when trying to engage elected officials.

### ***Solving the Under-Communication Problem***

The emergency management community must over-communicate and constantly seek new and innovative ways to educate the various stakeholders. Although this may sound easy, there will inevitably be numerous competing priorities and many distractions to contend with, and it can be a challenge to get people's attention absent a crisis. One strategy is to use someone else's crisis as a learning opportunity for others. Nobody wants to be caught

*Getting people to pay attention sometimes requires over-communicating a message and finding new ways to engage the audience.*

off guard when something bad happens, so real-world events can be opportunities to help educate others on how to potentially avoid or at least prepare for similar situations. Emergency managers must also do a better job of packaging information and avoid relying on dense, three-

ring binders full of materials that nobody has the time to read. Checklists, job action sheets, executive briefings, and other tools should be considered to help elected leaders and others with busy schedules to better digest and understand the various plans, policies, and procedures. Collaborative workshops, exercises, and other simulations are critical to help operationalize the key concepts as well.

Researchers have noted that it takes multiple communications before people truly understand a message, and the marketing "[Rule of 7](#)" states that people need to hear a message seven times before they are likely to take any action (hence the reason that same car commercial seems to play every 10 minutes). This notion can be applied to emergency management education as well; therefore, repetition and constant contact are strategies to consider when explaining important information. Emergency managers must look for ways and opportunities to reinforce the message and always be willing to engage. When it comes to educating people about emergency management, it is impossible to over-communicate.

---

*Terry Hastings is currently the senior policy advisor for the New York State Division of Homeland Security and Emergency Services, and an adjunct instructor for the College of Emergency Preparedness, Homeland Security and Cybersecurity at the State University of New York at Albany.*



# INTERNATIONAL HAZARDOUS MATERIALS

Response Teams Conference



[IAFC.org/HazmatConference](http://IAFC.org/HazmatConference)



**REGISTER  
TODAY!**

**Conference: June 15-18**

**Exhibit: June 16-17**

Hilton Baltimore | Baltimore, Maryland

Presented by the IAFC  
in partnership with



Premier Media Partner



Powered by the IAFC



# Resilient Communities – More Than Just “Grit”

By Nicolette Louissaint

*The upcoming hurricane season and recent reports of disease outbreaks – domestically and abroad – serve as reminders that there are several threats that communities face at the same time. Creating resilient communities requires an understanding that communities contend with competing priorities, and must find ways to harness their existing strengths to improve their preparedness and response capabilities.*



In addition to the [upcoming Hurricane Season](#), there are several additional potential threats to which the public health and emergency management community must respond, including the potential spread of the [Zika virus in the United States and U.S. territories](#). There are often multiple priorities to be managed during a single event. As emergency responders already know, disasters and disease outbreaks do not occur in silos. At the systemic level, every event involves [multiple components of critical infrastructure](#) – including telecommunications, healthcare, financial systems, and a host of other sectors. At the patient level, events are normally accompanied by other concerns – for example, managing the care of loved ones, dealing with the complexities of evacuation, or even managing chronic disease. Resilience requires balancing the needs of both the systemic and individual to create plans that sustain public health during crises and through recovery.

## Visible & Invisible Disasters

At its very core, resilience relies on people to make it work. The ability for a community to rebound after a disaster is more dependent on the [cohesion and sense of interconnectedness](#) that is shared throughout that community, more so than the infrastructure that is in place. Every disaster, global or local, leaves behind a community to clean up and rebuild. The more “[visible](#)” disasters – for example, tornadoes, earthquakes, hurricanes, floods – leave tangible reminders of the damage done, so rebuilding focuses on improving the physical and visible evidence that the community has been affected. These [rebuilding efforts](#) may

involve construction and repair of infrastructure like bridges and roads, reopening schools, and rebuilding workforces.

On the other hand, chemical and biological events are less tangible and are almost “invisible” disasters – such as infectious disease outbreaks. Although these disasters

do not often leave the same fragmented physical infrastructure, they still can cause [significant damage](#). The strain of a pandemic on healthcare infrastructure can be measured in hospital system recovery, impacts to public health first receivers and responders, and efficiency of the public health community’s response and recovery efforts.

*Resilience requires balancing the needs of both the system and individual to create plans that sustain public health during crises and throughout recovery.*

One of the most important measures of recovery is the rebuilding of the community linkages that must occur. There is a need to measure and respond to the [social cohesion](#), including the mental and emotional strain on the community, as community linkages are a critical part of a population's health and well-being. Rebuilding community networks and re-establishing cohesion are components of disaster recovery that are as important as built infrastructure. Often, community connections and social norms that reinforce those linkages can be crucial factors that help control or exacerbate an event.

### ***The Ability to Strain or Strengthen Communities***

During the Ebola outbreak of 2014, [cultural norms of expressing care](#) played a major role in disease transmission. The responders realized that the process of caring for loved ones and preparing them for burial was responsible for a significant amount of the transmission. In West Africa, the preparation for burial incorporating an extensive process of preparing the body exposed the preparers to body fluids filled with the Ebola virus. It would have been almost impossible to [stop the spread of the virus](#) without addressing cultural norms, which resulted in major changes in community dynamics in order to get the epidemic under control. However, the same measures necessary to contain the spread of the virus also fragmented the community by [creating stigmas and other negative reactions](#) at the exact time when a sense of community needed to be restored after the pandemic subsided. This is just one of many examples of the strain communities experience after events.

On the other hand, there are events that are able to strengthen community culture and bring them together. Media coverage of the August 2016 flooding in Baton Rouge, Louisiana, showed devastation and families that had lost everything, but alongside those stories were snapshots of [local heroes](#) who worked to rescue neighbors and get them to shelters (see Figure 1). Also in 2016, while news coverage of the Baltimore uprising focused on civil unrest, residents made sure that elderly patients were [able to get medicines](#) they needed and that community programs continued.

In the emergency management and healthcare spaces, there has been an increased focus on building resilience within local communities. As more catastrophic events and disasters occur, there is an obvious need to ensure that healthcare operations are able to withstand the threats posed by these events.

### ***A Need for More Than Just "Grit"***

A term rising in popularity and usage within this space is "grit." Although the term recognizes the positive trait that some individuals and communities have the capacity to fight back against their circumstances, focusing on "grit" as a quality that communities need to be



**Figure 1.** Neighbors helping neighbors evacuate after the August 2016 Baton Rouge flood in Louisiana (Source: Michelle Keller, 2016).

successful or vibrant misses the point – the reality is that communities need resource gaps plugged and systems failures addressed to be successful in any crisis. To suggest that some communities are more resilient and better at bouncing back because of “grit” ignores the determination and togetherness even the most vulnerable communities already possess and demonstrate as they work to survive. That determination is a core component of what holds these communities together and exactly what makes them resilient.

Community resilience is about more than roads and bridges, it is about the fabric of the community being strengthened and healed after an event. Pivoting away from infrastructure and toward a people-centered approach to resilience may help decision makers determine the best measures to protect communities from disasters and ensure they quickly recover. When instituted and nurtured correctly, community can be a system as powerful as any other.

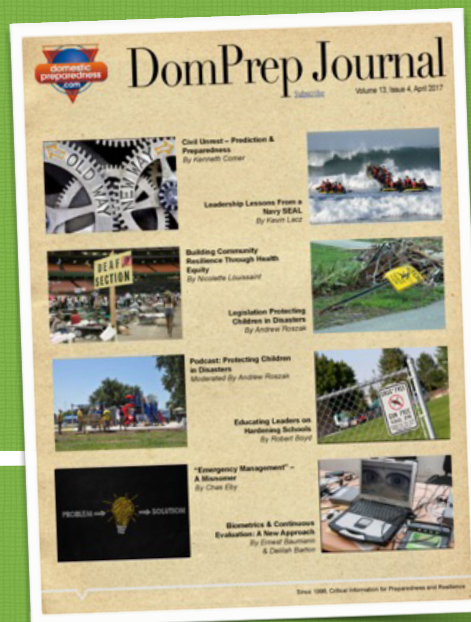
---

*Nicolette Louissaint, Ph.D., is the interim executive director at Healthcare Ready. Previously, she served as a foreign affairs officer at the U.S. Department of State in the Bureau of Economic and Business Affairs as the lead officer for health intellectual property and trade issues. During the height of the Ebola Epidemic of 2014, she served as the senior advisor to Ambassadors Nancy J. Powell and Steven A. Browning, the State Department’s special coordinators for Ebola. She holds degrees in Chemical Engineering and Biological Sciences from Carnegie Mellon University, as well as a Ph.D. in Pharmacology and Molecular Sciences from Johns Hopkins University School of Medicine.*

## Don't Miss Last Month's Issue!

### April 2017

- Civil Unrest
- Leadership
- Health Equity
- Children's Disaster Legislation
- Children in Disasters
- School Security
- Emergency Management
- Biometrics



Click to  
download now

# Ham Radio Support for Tribal Emergency Preparedness

By Steve Aberle

*In collaboration with many local, state, and federal partners, the [Northwest Tribal Emergency Management Council](#) hosted the 14th Annual Regional Joint Tribal Emergency Preparedness Conference on 1-3 May 2017, at the Suquamish Indian Tribe's center overlooking dx<sup>w</sup>səq<sup>w</sup>əb ("place of the clear salt water" in the Southern Lushootseed language) at Agate Pass in Puget Sound, Washington. Amateur radio operators from Washington, Oregon, California, and Arizona all contributed to the success of this conference.*

Radio amateurs affiliated with the [Kitsap County Department of Emergency Management](#) shared information with tribal emergency management leaders on how to establish and enhance amateur radio capabilities within their communities. Through seminars and live demonstrations, including a radio contact with a ham radio operator in Belgorod, Russia, attendees gathered information on valuable resources to help build tribal preparedness and response capabilities. The [Quileute Nation](#), for example, made arrangements to hold a Technician License class for its tribal members. The following amateur radio licensees (call signs in parentheses) shared a variety of knowledge and experience with attendees:

- Suzanne Everson (KI7EGE), regional emergency management specialist at Region 10 [Administration for Children and Families](#), discussed how this U.S. Department of Health and Human Services' division works with tribal nations to promote social and economic well-being of children and families.
- Lou Schmitz (KE7RYR) of the American Indian Health Commission (AIHC) presented information on the [AIHC Tribal Community Emergency Preparedness Toolbox](#), which includes resources for mitigating, preparing for, responding to, and recovering from various disasters.
- Jim Sande (KG7NRF), Certified Emergency Manager and chair of the [National Tribal Emergency Management Council](#)'s Education Sub-Committee, addressed opportunities for continuing education to build emergency management knowledge and skills.
- Nathan Nixon (N7NAN), president of the National Tribal Amateur Radio Association (NTARA) and training coordinator for the [Inter-Tribal Council of Arizona](#), encouraged collaborative partnerships for improving communication through the [Indian Country Intelligence Network](#).





- Tracy Depew (KI7EGC), director of emergency management for the [Cow Creek Band of Umpqua Tribe of Indians](#), shared details about how the Federal Emergency Management Agency's [Hazard Mitigation Assistance External Stakeholder Working Group](#) and [Pre-Disaster Mitigation Program](#) are assisting members in Indian country.

- Bart Kus (AE7SJ), founder and lead developer of [HamWAN](#), spoke about communications resilience using a high-speed digital network operating on amateur radio service microwave frequencies, which is capable of providing continuous data exchange between key emergency management facilities within a region.
- Steve Aberle (WA7PTM), assistant state RACES officer, talked about the role of amateur radio operators activated under Emergency Support Function 2 (ESF #2 – [Communications](#)) in supporting ESF #6 ([Mass Care](#)) and ESF #8 ([Public Health](#)) during emergencies and disasters.
- Adam Geisler (KJ6YHN), regional tribal government liaison for [FirstNet](#), moderated an interactive discussion on FirstNet's progress toward creating this new nationwide public safety broadband network.
- Lynda Zambrano (KE7RWG), executive director of the Northwest and National Tribal Emergency Management Councils ([NWTEMC-NTEMC](#)), facilitated an open panel discussion between attendees and the NWTEMC-NTEMC board of directors.

The success of this conference would not have been possible without the extraordinary relationships that are being built by the NWTEMC-NTEMC and in partnership with both tribal and non-tribal amateur radio operators throughout the nation.

*Look for more information on the topic of amateur radio capabilities for tribal communities in the June 2017 edition of the DomPrep Journal.*

---

*Steve Aberle, WA7PTM, is a FCC-licensed amateur radio operator and currently serves as the (volunteer) Radio Amateur Civil Emergency Service (RACES) liaison to the tribal communities in the State of Washington. He has been active in the Amateur Radio Emergency Service (ARES) since 1976 and in RACES since 1979. During his multifaceted career, he was a trooper with the Oregon State Police, a county emergency communications director, a data network manager, and a cybersecurity consultant. He has over four decades of experience in volunteer emergency communications planning, training, responses, mentoring, and exercise evaluation, and is a former mountaineering and search and rescue leader and instructor.*



“BECAUSE  
**PASS OR FAIL**  
COULD MEAN  
LIFE OR DEATH.”

**Grant Coffey**  
CBRNE/Hazmat expert

**FLIR PRIMED** is your go to source for CBRNE best practices, field checklists, cutting edge training and street truth. With videos featuring Grant Coffey, CBRNE/Hazmat expert, FLIR PRIMED contains CBRNE information and materials you can use right now!

 **FLIR**  
**PRIMED**

Tune in at [flir.com/primed](http://flir.com/primed)  
Class is now in session.



The World's **Sixth Sense**®

