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## Special Focus on the IAEM Annual Conference Theme: Emergency Management Ascending

### NOAA’S National Weather Service and IAEM

By Ken Graham, Director, NOAA’s National Weather Service

The author will be speaking as part of the IAEM 72nd Annual Conference on Nov. 18 from 11:00 a.m.-12:00 p.m.

As always, I look forward to talking with many of you at this year’s IAEM Annual Conference in Colorado Springs. The NWS and the emergency management community have a fantastic complementary relationship—we can’t meet our life and property-saving mission without you, and our decision support helps you do your job to attain that same goal.

I also want to express my heartfelt gratitude for your unwavering support, especially your recent outreach and advocacy as we navigate a challenging funding climate. You have made an impact by ensuring broader awareness of our critical partnership and how NWS forecasts, warnings, and decision support services help you keep your communities safe.

As we witness a rise in major weather-related disasters across our nation from Guam to Maine and Alaska to Puerto Rico, the NWS’ role becomes increasingly crucial. Unprecedented flooding from rainfall that is becoming more intense, powerful hurricanes with destructive wind and storm surge, relent-

less heat, geomagnetic storms, and a perpetual wildfire season are just some of the extreme events that are becoming more common than ever in my meteorologist career.

These extreme events underscore the need for a nimble, flexible, and mobile NWS that is eye-to-eye with you! We are committed to providing you with the information you need, when you need it, and wherever you need it. This commitment enables you to make swift, informed decisions that can save lives.

The IAEM Annual Conference provides a unique opportunity for me to interact with emergency managers on the front lines and continue to adapt the NWS to better meet your needs. Last year, I released the NWS Strategic Plan 2023-2033 which set the NWS on a transformative journey to upgrade our technology and our operations model to meet the evolving needs of the EM community during these extreme events and work hand-in-hand. We will provide the next-generation radar coverage for the nation, and

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# From the IAEM-USA President Let the Conference Countdown Begin!

By Carrie Speranza, CEM, IAEM-USA President

Can you believe it? We are less than a month away from the IAEM Annual Conference—my favorite event of the year! I look forward to this all year long, and I always leave feeling motivated and inspired to take what I've learned and apply it to my own practice of emergency management. Not to mention the sheer amount of joy and happiness I experience by hanging out with my IAEM colleagues. It truly is an event and opportunity that I cherish, every year.

This year we'll be at The Broadmoor in Colorado, Springs, Colorado. I visited The Broadmoor two years ago and was completely blown away by its beauty. Nestled at the foot of several ski slopes, the resort has so much to offer in terms of experiences, dining, and relaxation, making this year's conference something you won't want to miss.

I am pleased to share that the conference registration numbers are well ahead of where we've been at this time, in previous years. In terms of an agenda, we have more than six dozen breakout and spotlight sessions that cover everything from career development to the latest FBI strategy to assist communities with intervention before community consequences from terrorism. And we have plenary sessions on artificial intelligence, space weather, and state-level leadership insights. You'll also get to hear a session—moderated by yours truly—with the FEMA Administrator and local emergency managers focused on local resilience and capacity building.

## First-time attendee? WELCOME!

If this is your first time attending

the IAEM Annual Conference, get ready for an action-packed week! The conference committee has curated an amazing program full of learning opportunities, networking socials, and more. But as someone who found her first annual conference a bit intimidating, I thought I'd share some tips and tricks to get you off to a running start.

- First, I always encourage first-time attendees—who may also be new-ish to emergency management—to attend the EMBark program on Sunday, Nov. 17. The program has multiple sections, but it always includes an introduction to the annual conference itself. It's a great place to meet other new attendees, as well, especially during the Speed Networking Palooza Workshop!

- After EMBark, the First Steps Mixer is an opportunity for students, and those new to emergency management, to meet with IAEM leadership and network with other IAEM members.

- The Sunday Night Welcome Party is always a blast, filled with music, food, and fun. This event is the official "kick-off" of the conference and will definitely get you excited for the rest of the week.

- Unsure of where to go? If at any point during the week you have a question or need guidance, find an Ambassador. Every year, dozens of IAEM member volunteers sign up to be Ambassadors to make sure new attendees feel at home. How can you find us? We'll all be wearing an Ambassador button, and we're looking



Carrie Speranza, CEM,  
IAEM-USA President

forward to meeting you.

From a networking standpoint, the conference is always the highlight of my year. But I remember back in 2012 when I attended my first annual conference in Orlando, Florida, I was overwhelmed by the sheer number of people at the event. Being an introvert, it's not unusual for events of this magnitude to jolt my nerves, but that year, I only knew a few folks from my state/jurisdiction and my professional Rolodex was slim. Does this sound familiar to you?

The biggest piece of advice I have for folks like me going into Colorado Springs is to just be yourself! As a slightly shy introvert, I've never had the easy-going swagger of an extrovert in these settings, but that hasn't stopped me from building an amazing network of IAEM friends. Feel awkward walking up to a group of strangers? Me too! But come say hi, anyway! It's taken me 12 years of going to the conference, but there are literally dozens of IAEM colleagues that I call close friends now—not just "colleagues"—and that alone.

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## IAEM Summer Update

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is worth all the awkwardly-timed, introverted, hello's that I may have stumbled through over the years.

### An Update on the DEI Task Force

On Sept. 23, the DEI Task Force held its kickoff meeting. As you may remember from my membership emails earlier this summer, the task force was created to help with the final scoping, budgeting, and implementation of the DEI recommendations provided to IAEM by a consultant back in Jan. 2024. Additionally, the task force was convened to provide the Board of Directors with a recommendation on how IAEM can incorporate equity as a standard principle of emergency management.

The task force is comprised of 14 members from across the regions, and they meet with the first vice president, the second vice president, and president, monthly. The task force will be active until their work is complete, but they were given two time-bound priority assignments to work on in the initial phases of their

initiative.

■ Within 30 days, the task force was asked to provide a recommendation to the board on the future of DEI within the association. This may include recommending the re-establishment of the DEI Committee, creating a new caucus, forming another group, or not forming a group.

■ Within 90 days, the task force will provide a recommendation to the board on the role IAEM should play in instilling equity as a principle of emergency management.

In addition to the requests above, the task force will engage with the board, committees, caucuses, commissions, and staff to monitor the implementation of the 18 recommendations currently in progress. Last, they will help scope, organize, and develop an initial budget projection, for the remaining 14 recommendations that are in need of full development.

If you're interested in receiving updates on the task force's work, please opt-in to the DEI Community page on IAEM Connect. Once there, you'll see a status dashboard of each DEI recommendation, as well as a place for the task force to communicate its progress to other members.

See you in Colorado! ◆



*NHSA President Natalie Gutierrez, Big City Emergency Managers Chair Mark Sloan, FEMA Administrator Deanne Criswell, and IAEM-USA President Carrie Speranza, CEM, gather for a photo at BCEM in Denver, Colorado on Sept. 9.*

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The *IAEM Bulletin* is published monthly by IAEM to keep members abreast of association news, government actions affecting emergency management, research, and information sources.

**The publication also is intended to serve as a way for emergency managers to exchange information on programs and ideas.** Past issues are available in the members-only [IAEM Bulletin Archives](#).

**Publishing an article in the *IAEM Bulletin* may help you to meet IAEM's certification requirements.** Check out the [author's guidelines](#).

Articles should be submitted to Bulletin Editor John Osborne, QAS via email at [john@iaem.com](mailto:john@iaem.com).

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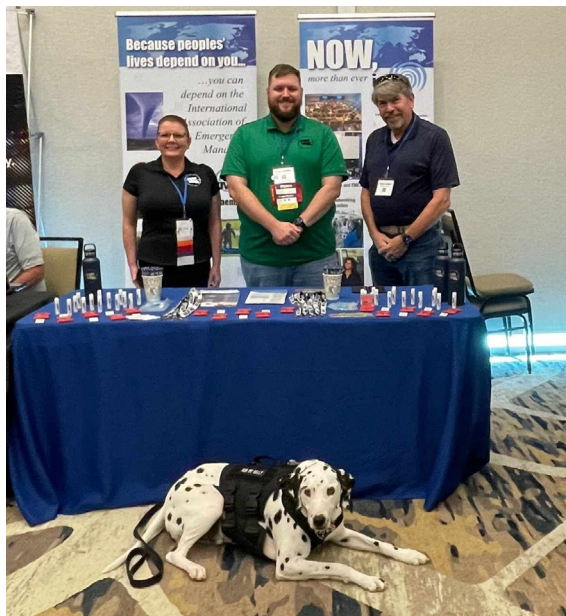
## IAEM in Action



*Bob Goldhammer, CEM, represented IAEM at the World Meteorological Organization meeting in Munich, Germany, on Sept. 9-13. He is IAEM's representative to the American Meteorological Society Emergency Management Subcommittee. IAEM thanks Bob for all his hard work.*



*During the SDEMA conference Sept. 9-12, Robert Hill, CEM, emergency management director, Brookings County, South Dakota (left) was elected president and Steve Esser, director of emergency services at Custer County, South Dakota (right) was elected incoming president. Robert is finishing up his term as secretary-treasurer of Region 8 and he was IAEM-USA president for four years before. Shown here with IAEM-USA Region 8 President Valerie Lucus-McEwen, CEM (center).*



*At the Kansas Emergency Management Association (KEMA) Conference in Manhattan, Kansas, held Sept. 9-11, Susan McMahan, IAEM-USA Region 7 Kansas representative; Morgan Hunter, IAEM-USA Region 7 Conference Committee chair; Duane Hagelgans, IAEM-USA Conference Committee chair; and Beaux the dog from FirstNet gather by the IAEM booth for a photo.*



*On Oct. 3, IAEM Client Services Director Barbara Arango, CAE; IAEM-USA Treasurer Walter English, CEM; and IAEM Assistant Executive Director Chelsea Steadman, QAS, gather for a photo during the fall IAEM financial work session in Chicago, Illinois.*



## IAEM News to Know

### Bylaws Voting Reminder

Don't forget to vote on the proposed amendments to the IAEM-USA Bylaws. All eligible members should have received a unique voting link on Sep. 23 and must cast their vote by Oct. 22. For assistance, please email [Rebecca@iaem.com](mailto:Rebecca@iaem.com). Thank you in advance for your participation.

### IAEM Annual Conference

■ **It is not too late to register:** The IAEM 72nd Annual Conference & EMEX will be one for the record books. Join over 2000 other emergency managers as we ascend into Colorado Springs, Colorado, for the emergency management event of the year. You will not want to miss this event filled with over [200 speakers](#), numerous [pre-post-conference training](#), exciting [special events](#) providing many networking opportunities, EMEX 2024 bringing together the latest technological advances in homeland security and disaster preparedness suppliers under one roof and so much more. [Register Today!](#) Click the links for [more information](#) and our [conference program](#).

■ **Learn how to get the most out of the IAEM Annual Conference:** On Thursday, Oct. 31 at 2:00 p.m. EDT, the Conference Committee will host a webinar on "Expanding Your Conference Experience: Getting the Most out of the IAEM Annual Conference." This is your opportunity to hear from the planners and learn about the events and sessions of importance to you. Don't wait till you get to Colorado Springs. [Register for the webinar](#).

■ **Connect with leaders in emergency management:** Check out our impressive lineup of [conference speakers](#), plus our plenaries and join us to hear lessons learned at the emergency management event of the year. [Register today](#).

■ **Special member-only bonus session:** Check out the recording from the Sept. 18 webinar on "[Emerging Technology & AI: What Emergency Management Leaders Need to Know](#)." IAEM, in partnership with the Center for Homeland Defense and Security (CHDS) from the Naval Postgraduate School, hosted this not-to-be-missed webinar on the potential impact of emerging technologies and artificial intelligence on emergency management. Featuring renowned subject-matter expert, Dr. Rocco Casagrande and moderated by IAEM Conference Chair Duane Hagelgans. Hear more from Rocco at the IAEM Annual Conference in a spotlight session on Tuesday, Nov. 19 from 1:30–3:00 p.m. ◆



*Get your Conference Challenge coins for only \$15. These highly sought-after coins will be the talk of the conference. Hurry, there is a limited supply. Coins will be sold at the registration desk starting on Sunday, Nov. 17, 2024.*

## IAEM Announces Recipients of IAEM-USA Awards

The IAEM-USA Awards & Recognition Committee proudly announces the recipients of this year's IAEM-USA Awards. The recipients will be honored during the President's Banquet and Certification and Awards Program on Wednesday, Nov. 20, at The Broadmoor, in Colorado, Springs, Colorado, during the IAEM Annual Conference.

This prestigious Awards Program recognizes and honors programs and individuals who have significantly contributed to the emergency management field this past year.

Congratulations to the following recipients!

### Programmatic Awards

■ **Emergency Management Education and Training Program of the Year** – Blue Lake Rancheria Tribe and their Resiliency Training Initiative (Blue Lake, California)

■ **Preparedness Award** – Sonoma County Department of Emergency Management Model EOC Summer 2024 (Sonoma, California)

■ **Technology and Innovation Award** – NC State University Emergency Preparedness and Strategic Initiatives Team (Raleigh, North Carolina)

### Public/Private Sector Awards

■ **Business and Private Sector Integration and Public Sector Partnership Award** – Civil Air Patrol, Ready OP

### Individual Awards

■ **Emergency Management Educator of the Year** – William Schlosser (Pennsylvania College of Technol-

ogy, Williamsport, Pennsylvania)

■ **Emergency Manager of the Year** – Thomas Walmsley, CEM (Albuquerque, New Mexico)

■ **Rising Star Award** – Dr. Kesley Richardson, CEM (Bradenton, Florida)

### Lifetime Achievement Awards

■ **Career Excellence Award** – Dr. Robert L. Ditch, CEM

■ **Clayton R. Christopher Memorial Award** – Mark Ihrig, CEM (Boone County Emergency Management, Kentucky)

### Student Awards

■ **Student Advocate of the Year Award** – Alvin Galang (San Jose, California)

■ **Student Chapter of the Year Award** – Jacksonville State University (Jacksonville, Alabama)

■ **Student of the Year Award** – Brittany Giles-Jones, CEM (Stone Mountain, Georgia)

### Volunteer Awards

■ **Voluntary Organization of the Year** – Civil Air Patrol

### Uniformed Service Awards

■ **USC Auxiliary Emergency Manager of the Year Award** – Col. Jack Ozer, Civil Air Patrol (Raleigh, North Carolina)

■ **USC Civilian Emergency Manager of the Year Award** – Kenneth Jones, CEM, US Coast Guard (Mount Pleasant, South Carolina)

### Join IAEM to Celebrate the Award Recipients

IAEM's deserving award recipients will be honored by their peers at the President's Banquet. Tickets for the event are still available and can be purchased on the [website](#). The event is included for conference attendees who selected the full conference rate package. ♦



# Fighting with FEMA

## A Practical Regulations Handbook



Michael Martinet



“This comprehensive guide demystifies FEMA’s Public Assistance program, offering local government agencies a practical roadmap for disaster recovery. From financial planning to project close-outs, the author provides clear insights, real-life case studies, and essential tips. An indispensable resource for maximizing FEMA funding while avoiding common pitfalls in emergency management and disaster recovery.”

Ellis M. Stanley, Sr. Managing Partner, Ellis Stanley Partners LLC,  
Former General Manager of City of Los Angeles Emergency Management Department



**Special Focus Articles Part 1:** Due to the volume of submissions on this special focus topic, it is necessary to present the content in two parts. Part 2 will be available in the [Nov. edition of the IAEM Bulletin](#).

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### Submit an Article for the IAEM Bulletin

The IAEM Editorial Committee is currently accepting submissions for future editions of the IAEM Bulletin.

The primary focus of the IAEM Bulletin is local. We are looking for articles that provide information and insights useful to other practitioners, in government and private sectors, who are educated and trained professionals.

Refer to the [Author Guidelines](#) for tips and techniques for successfully submitting your article for publication.

### Thank you to the IAEM Editorial Committee

IAEM extends a warm thank you to the IAEM Editorial Committee for their assistance in compiling, editing, and publishing the monthly *IAEM Bulletin*.

**Interested in joining the IAEM Editorial Committee? Contact IAEM Bulletin Editor [John Osborne](#) and tell him how you can contribute to or learn from this committee's important work.**

# Bridging the Gap: School Districts and Local Emergency Management

By Scott Hudson, CEM, Immediate Past Chair K-12 Education Caucus  
IAEM-USA Region 6 Vice President  
Director of Emergency Management, Cypress-Fairbanks ISD Police Department

The author will be speaking as part of the IAEM 72nd Annual Conference on  
Nov. 18 from 9:45 a.m.-10:45 a.m.

As the 72nd annual IAEM conference convenes in Colorado Springs under the theme Emergency Management Ascending, emergency management professionals from around the world gather to reflect on how the field is evolving to meet today's challenges. Over the past few years, we have faced increasingly unpredictable and unprecedented events—from natural disasters and public health emergencies to community-wide security threats. In this new era, the need for greater collaboration between school districts and local emergency management agencies is clear. The breakout session Bridging the Gap: School Districts and Local Emergency Management is dedicated to exploring how these vital partnerships can better protect students, staff, and their communities in times of crisis.

## Addressing Today's Challenges Together

This year's conference theme, Emergency Management Ascending, focuses on how the field is adapting and innovating in response to a rapidly changing world. In this context, school districts must be considered critical partners in community emergency preparedness, response, and recovery efforts. Schools often serve as both shelters and coordination hubs during crises, making them integral to the overall resilience of the community. The need for robust, well-communicated emergency plans between school districts and

local agencies has never been more urgent.

The Bridging the Gap session will focus on how school districts and local emergency managers can ascend together, adapting to meet today's unique challenges. The session will address key questions:

- **Updating and expanding emergency plans:** As emergencies grow more complex, school districts must continually update their response plans to account for new types of threats, from active shooter situations to pandemics. This session will explore how schools are evolving their emergency strategies to ensure they are prepared for today's challenges.

- **Training and exercises:** Practical, hands-on training is essential for both school staff and students. The session will focus on how innovative training programs can be designed and implemented in partnership with local emergency agencies. These trainings can include everything from full-scale drills to tabletop exercises, ensuring that schools are fully prepared to act quickly and effectively in an emergency.

- **Planning for Recovery:** Recovery efforts following a crisis often present the most significant long-term challenges. With new funding streams becoming available, this session will explore how school districts can play an active role in community recovery efforts, ensuring that schools not only rebuild but do so in ways that improve their resilience for future emergencies.

By addressing these ques-

tions, participants will learn how to strengthen partnerships between schools and emergency management agencies to ensure a comprehensive, coordinated response to future crises.

## The Diverse Nature of Emergency Management: Schools as Inclusive Community Hubs

Emergency management is, by its nature, diverse, requiring an understanding of various needs across different communities. Schools reflect this diversity, serving as safe spaces for students from all walks of life, including those with disabilities, students from non-English-speaking families, and those from disadvantaged socio-economic backgrounds.

The Bridging the Gap session will focus on how schools and emergency managers can ensure that their emergency plans are inclusive and accessible to all. Schools serve as the heart of their communities and must be equipped to address the specific needs of vulnerable populations during a crisis. This includes ensuring that emergency communication is multilingual, evacuation plans accommodate individuals with disabilities, and resources are equitably distributed during recovery efforts.

Participants will gain insights from real-world examples of schools that have successfully integrated diversity into their emergency plans

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## Bridging the Gap

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and learn how to create plans that reflect the unique needs of their communities.

### A Profession of Collaboration, Coordination, Communication, and Cooperation

The success of emergency management often hinges on the strength of partnerships. Schools are essential partners in community emergency preparedness, and the Bridging the Gap session will explore how to foster greater collaboration, coordination, communication, and cooperation between school districts and local emergency agencies.

■ **Maximizing limited resources:** Schools often operate with constrained budgets and resources. This session will explore how partnerships with local emergency agencies can help schools leverage limited resources to develop more comprehensive emergency plans.

■ **Public-private partnerships:** Private industry plays a crucial role in community emergency preparedness, and schools can benefit greatly from building partnerships with local businesses and organizations. This session will examine how schools can form partnerships to enhance their emergency preparedness, from securing supplies during a crisis to implementing advanced communication systems.

■ **Collaborative training and public education campaigns:** Emergency management is most effective when schools and local agencies work together to prepare both students and the broader community. This session will discuss how joint training exercises, community-wide preparedness drills, and public education campaigns can enhance

overall community resilience.

By highlighting successful partnerships and innovative ideas, the Bridging the Gap session will provide attendees with actionable strategies to implement in their own communities, ensuring a more coordinated and effective response to future emergencies.

### Rocky Mountain High: Protecting Our Communities and Supporting Our Emergency Professionals

The past decade has tested the resilience of emergency management professionals in unprecedented ways. From natural disasters to civil unrest, the challenges facing our communities have increased in both frequency and intensity. The mental and emotional toll on those responsible for managing emergencies is significant, and school administrators and teachers are no exception. They are often tasked with not only ensuring the physical safety of students but also caring for their emotional well-being during and after a crisis.

In the Bridging the Gap session, participants will discuss how school districts and local emergency managers can work together to support the mental health and well-being of their staff. Ensuring that teachers, school administrators, and first responders are emotionally resilient is just as important as ensuring they are physically prepared for emergencies. This session will highlight best practices for providing mental health support to staff and students, creating a more holistic approach to emergency preparedness and recovery.

### Key Takeaways

The Bridging the Gap: School Districts and Local Emergency Management breakout session offers invaluable insights for anyone involved in emergency management, education,

or community leadership. As emergency management continues to ascend in response to today's challenges, building stronger partnerships between schools and local agencies is crucial to ensuring the safety of our students and communities.

■ **Learn best practices for collaboration:** The session will offer practical examples of how school districts and local emergency agencies can work together more effectively, from updating emergency plans to conducting joint training exercises.

■ **Address the needs of diverse populations:** Schools serve diverse communities, and their emergency plans must reflect this. The session will explore how schools can create more inclusive, equitable emergency plans that address the specific needs of vulnerable populations.

■ **Explore innovative solutions:** In a rapidly changing world, thinking outside the box is essential. This session will showcase innovative approaches to emergency preparedness and response, including public-private partnerships and new technologies.

■ **Support the well-being of emergency professionals:** Emergency preparedness is not just about planning for the next disaster—it's about ensuring that the people tasked with responding to these crises are supported, both physically and emotionally.

■ **Delivery of a whole community approach to readiness:** According to A Whole Community Approach to Emergency Management: Principles, Themes, and Pathways for Action (FEMA, 2011), "Whole Community is a means by which residents, emergency management practitioners, organizational and community leaders, and government officials can collectively understand and assess the needs of their respective communities and determine the best ways to organize and strengthen

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## NOAA/NWS and IAEM

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we asked for your input as we refine our requirements for RadarNext. We are also moving our forecaster “operating” system - AWIPS - into the cloud environment, allowing mobility and flexibility to be right there alongside you! Our incident meteorologists deployed to wildfire incident command centers already have this capability, and we will bring this technology to the entire workforce. The nation increasingly depends on us to predict, preposition, and provide for the safety and well-being of the communities we collectively serve. Our new technology and operations model will enable us to meet those evolving needs and responsibilities. We need to work together to ensure our transformation meets your needs.

The emergency management community is vital to the NWS. As I said before, the NWS comes to IAEM to listen to the firsthand experiences of emergency managers across the country who have worked in myriad situations. Those accounts help the entire NWS and me better understand your perspectives and needs—before, during, and after a disaster—which tells us how to serve you better and work together.

This year, the NWS is hosting a full-day workshop and exercise on Sunday, Nov. 17, incorporating aspects of our transformation journey. This will allow IAEM attendees to participate side by side with NWS meteorologists and hydrologists as we walk through a detailed response to a realistic fire-weather-related scenario, testing out new products and tools, all while walking through the decision-making process. This combined Integrated Warning Team (IWT) exercise, simulation, and tabletop concept is new, but hopefully repeatable at future

conferences, providing a platform to bring together all NWS partners—emergency managers, broadcast and print media, amateur radio network controllers, local, regional, territorial, and tribal officials as well as NWS staff—to interact and explore best communication and decision-making practices during significant weather, water, and climate events.

We must work together to forge the future of NWS decision support services for the emergency management community. We are in this together—before, during, and after the IAEM Annual Meeting, and in more close-knit and high-pressure environments during emergency responses in EOCs. On behalf of the entire NWS, thank you for your steadfast support, and I commit to you that we will always do our best to provide you with the information you need, when you need it, and how you need it to inform your critical decisions.

The rest of the NWS attendees and I look forward to being with you in Colorado Springs in November!



## Bridging the Gap

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their assets, capacities, and interests.” Bridging the Gap will discuss the need for ensuring an active and ongoing collaborative dialogue between local emergency managers and their constituent school systems, thereby delivering on the successes of implementing a whole community approach to emergency readiness.

As we gather at the 72nd IAEM conference, the Bridging the Gap session is a call to action for school administrators, emergency management professionals, and community leaders to come together and build stronger, more resilient communities. Schools play a vital role in disaster preparedness and response, and by working together, we can ensure that our students, staff, and communities are protected in times of crisis.

Join us at the Bridging the Gap session to learn, share, and collaborate in shaping the future of emergency management in schools. Together, we can ascend to meet the challenges of today and build a safer tomorrow. ◆

**IAEM 72ND ANNUAL  
CONFERENCE & EMEX**

**VOLUNTEER TO WORK OFF  
YOUR REGISTRATION**

**COLORADO SPRINGS, COLORADO  
NOVEMBER 15-21, 2024**

## Join Up: The Power of Trust

By Christy Ciccotelli, EM Public Outreach and Volunteer Coordinator, City of Henderson, Nevada

The author will be speaking as part of the IAEM 72nd Annual Conference on Nov. 19 from 9:15 a.m.-10:15 a.m.

I was raised by a rodeo queen from a rodeo family. We love horses. Reminiscing on all the happy times with my mom out on the farm and hearing all her stories, I wanted to offer my kids the same opportunity, however, living in Las Vegas, Nevada, “the Wild West” is more about a casino than cowboys! Thankfully, every year the National Finals Rodeo brings with it a sea of cowboy hats and the smells of the ranch. The rest of the year, we watch the Canadian Series, “Heartland” together. In this show, one of the techniques used to train horses is called the “join-up.” This takes time, cooperation, and a lot of patience, but the outcome is a horse you can trust, one that trusts you, and a horse that is able and willing to communicate with you.

The Australian document *Community-Based Emergency Management* states, “building safer and more resilient communities is often discussed but not well understood. Influencing the emergency management sector to use community-based approaches through ‘joined-up’ processes may require realignment of resources and priorities, together with a shift away from traditional top-down attitudes, behaviors, and organizational culture.”<sup>1</sup>

Providing goods and services is not the only answer to protect our communities. There are simple ways that every responding agency can contribute to a community-centric approach to disasters. Building trust, respect, and understanding with each other and those who are being served takes time. Using this same ‘join-up’ strategy, we can move

toward an outcome of trust, support, and communication, but this also takes a lot of time, cooperation, and patience.

Preparedness and resilience are not just about actions, but also about feeling safe. What safety feels like is different for everyone and cannot always be achieved by making a checklist and creating a go bag. Though these actions are incredibly important, there is also great value in building our resilience through our belief that we can safely cope with a situation.

If we don’t take opportunities to learn from and grow from stressful situations, we can see the consequences of communities that lack individual power. According to the [American Psychological Association](#), ‘learned helplessness’ occurs when someone repeatedly faces uncontrollable, stressful situations, and then does not exercise control when it becomes available.<sup>2</sup> This can make individuals, households, and communities more vulnerable and less confident.

Challenges and disruptions can strengthen our resilience if we allow them to do so. Kathryn Connor and Jonathan Davidson developed a resilience scale that revealed five distinct aspects of emotional resilience<sup>3</sup>:

- 1) a sense of personal competence and tenacity,
- 2) tolerance of negative effects and acceptance of the strengthening effects of stress,
- 3) acceptance of change and cultivating secure relationships,
- 4) a sense of control, and
- 5) spiritual influences.

While we can help with the education of physical preparedness, unless you are in a position that allows you to work closely with individuals on a frequent and personal basis, we do not have the capacity to significantly strengthen emotional preparedness. Who better to help citizens with the emotional aspect of preparedness than the people they live with, work with, pray with, and trust?

Knowing and understanding these attributes, we can help our force-multiplying organizations determine what is best for their groups by combining information about preparedness actions and the emotional needs of the people they are with every day. The best inspiration comes from the best information. If we want people to be inspired to act, they must have the appropriate information to inspire them.

During times of disaster or even times of stress, people generally go to places they know and places they feel safe. Among these places are community buildings, workplaces, and religious establishments. Using these organizations and facilities we can develop programs and initiatives that enhance the capability of our cities. Using homeowners associations and property management companies, we can work with leaders and neighborhood representatives to support and encourage them to create plans and provide information to their residents, specific to their location and their resources. We can make sure that continuity of opera-

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## Disaster Preparedness for Farmworkers: Four Strategies for Emergency Managers

By Emily Jane Freed, MS, Supply Chain Director, Second Harvest Food Bank Santa Cruz County

The author will be speaking as part of the IAEM 72nd Annual Conference on Nov. 18 from 2:15 p.m-3:15 p.m.

Planning and preparedness are essential elements of readiness and resilience for vulnerable communities before, during, and after a disaster. Farmworkers constitute a vulnerable population encountering challenges preparing for disasters. Compounding vulnerabilities face farmworkers including low socioeconomic status, ethnicity, limited English language skills, a lack of formal education, and exposure to extreme environmental conditions. The vast majority of farmworkers in California are Latino. Despite notable progress in translating disaster preparedness materials into Spanish and other languages, accessing emergency information and communication tools during disasters remains a significant challenge for this population. Furthermore, disaster preparedness training is not a required training for employers to provide to their agricultural workers (or workers in general). Therefore, it is of critical importance for emergency managers to enhance preparedness efforts, provide resources for farmworkers, and encourage this population to bolster their resilience to improve their safety in the face of disasters and unplanned events.

Farmworkers are identified as agricultural workers who perform physical and manual labor on farms, ranches, vineyards, and orchards, and are critical to the infrastructure of food production. Farmworkers earn their income through permanent or seasonal agricultural labor and are primarily paid in two ways, either by piece rate (the number

of units turned out) or by the hour, often only making minimum wage. Additionally, many farmworkers must work two to three jobs to afford the basic necessities, such as food and rent—many may live in substandard housing due to their low-income levels.

When a disaster strikes and farmworkers are unable to access emergency communication in their native language, they and their families face additional vulnerabilities due to the above-described challenges facing this population. In turn, the vulnerabilities affecting farmworkers may negatively impact the critical functions of food production during a disaster. When farmworkers are unable to work due to severe weather, droughts, and ongoing power outages, their absence contributes to supply chain issues, destabilizing regional food production systems, and lowering the resilience of a community. With ongoing climate change and the resulting increased risk of wildfires, floods, and hurricanes, these problems become even more pressing. Thus, emergency managers need to be proactive and address the aforementioned challenges that farmworkers face to fill the gaps in their levels of preparedness and resilience before, during, and after disasters.

### Four Strategies

Four strategies are offered to help guide and support emergency managers in promoting disaster preparedness with their local

farmworker communities: bilingual interpreters, outreach, partnerships, and collaboration. The importance of the first strategy, having bilingual staff members or bilingual interpreters on-call to communicate emergency information to farmworkers during disasters and large-scale emergencies, has been demonstrated by recent events. The City of San Diego and Santa Barbara County, both of which have large populations of Spanish-speaking farmworkers, did not have bilingual translators on staff during major wildfires, resulting in delays in evacuation and distribution of emergency services for Spanish-speaking populations (City of San Diego, 2007; Mendez et al., 2020). Emergency management departments can apply the lessons learned from these two Southern California wildfires, and mitigate this issue in future disasters by having bilingual translators on-call during disasters to help Spanish speakers and populations who speak other languages, such as farmworkers, feel informed and protected. Bilingual interpreters become trusted messengers within jurisdictions and may assist emergency managers in delivering critical information to farmworker communities during disasters and large-scale emergencies.

The second strategy is for emergency managers to develop outreach strategies and establish an ongoing presence at local events that may be frequented by farmworkers, such as food distributions that are hosted

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## Disaster Preparedness for Farmworkers

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by food banks, free health care and dental clinics, and family-friendly events like “Trunk or Treat” Halloween candy giveaways. Outreach at local events create the opportunity for emergency managers to build rapport and establish trust with farmworkers and their families. Additionally, tabling at events provides a space for emergency managers to connect one-on-one with farmworkers, promote themselves as a trusted source for emergency communication information, and hand out items such as flashlights, emergency blankets, and notebooks that can be used in go bags. Creating opportunities for targeted outreach and tabling at events that farmworkers may frequent can only improve farmworkers’ and their communities’ readiness and resilience to disasters.

The third strategy is to create partnerships with community-based organizations (CBOs) that serve farmworkers and are frequented by farmworker families. Since disasters start and end locally (Center for Disaster Philanthropy, 2024), farmworkers are more willing to go to CBOs during a large-scale emergency since they know the location of the organization, recognize the staff, and are familiar with the services offered. One suggestion is for emergency management offices to host a quarterly in-person or virtual happy hour for CBOs to come together, get to know one another, and share resources to serve farmworker communities during disasters. Providing an ongoing forum between emergency managers and local CBOs that serve farmworkers fosters relationship building and partnerships for community organizations to work together on projects, such as developing pocket mental health guides, designing bilingual emergency plans

and contact list templates, and creating bilingual door hangers that list important phone numbers to contact during a disaster.

The final strategy for emergency managers is to collaborate with the local Community Emergency Response Team (CERT) community to offer no-cost basic training and train-the-trainer courses in Spanish. The CERT program educates volunteers about emergency readiness and preparedness and trains community members to supplement fire, law, and medical resources in case of disaster. Offering CERT basic training and train-the-trainer in Spanish and other languages provides a free opportunity for farmworkers to train in disaster response skills, prepare for medical emergencies, and learn the supplies to have on hand; and how to protect themselves, their families, and their communities during an emergency. To increase the likelihood of farmworkers attending the CERT course, the location of the course should be familiar and accessible; it can even be held in a packhouse or storage barn. Another option used in some communities is to offer small stipends to CERT participants since it can be challenging for farmworkers to take time away from their jobs or families in the evenings or on the weekends. When local agencies and the CERT community can collaborate to offer no-cost basic training classes courses in Spanish and other languages and at a familiar location that is accessible to farmworkers, it can foster a sense of community ownership, engagement, and involvement.

### Personal Reflections

As a farm manager, with over twelve years of experience working for a binational company and the largest grower of organic culinary herbs and edible flowers in the United States, it is evident from my work on the California Central Coast that

farmworkers are some of the most resilient people I know. As demonstrated throughout COVID-19, farmworkers continued to serve critical functions and were deemed essential workers throughout the pandemic by working in-person and in the fields and packhouses, even as emergency management staff worked remotely, and logged on to meetings through virtual emergency operations centers. In my recent work as a consultant for grant recipients of the USDA Farm Labor Stabilization and Protection Pilot Program (FLSP) to improve working conditions for farmworkers and H-2A workers, I have witnessed farmworkers demonstrating their willingness to learn about emergency management concepts including creating family evacuation plans, developing an emergency contact list, and perfecting the art of packing a culturally-appropriate to-go bag.

Agriculture is an essential industry. It is simply not possible (yet) to harvest Brussels sprouts by Zoom or pick strawberries via a Teams meeting (Freed, 2023). When emergency managers take an active role in building networks and strengthening partnerships with farmworkers and CBOs before disasters, their collective and collaborative approach will ensure farmworker safety and mitigate injuries until local, state, and national responders can support their communities during a disaster.

### Next Steps

As disasters increase due to extreme environmental circumstances and farmworkers continue to play an integral role in food production, the collective approach to preparedness must be fostered between emergency managers and farmworkers. Until disaster preparedness training is required by employers, emergency managers need to work in tandem

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## Join Up: The Power of Trust *continued from page 12*

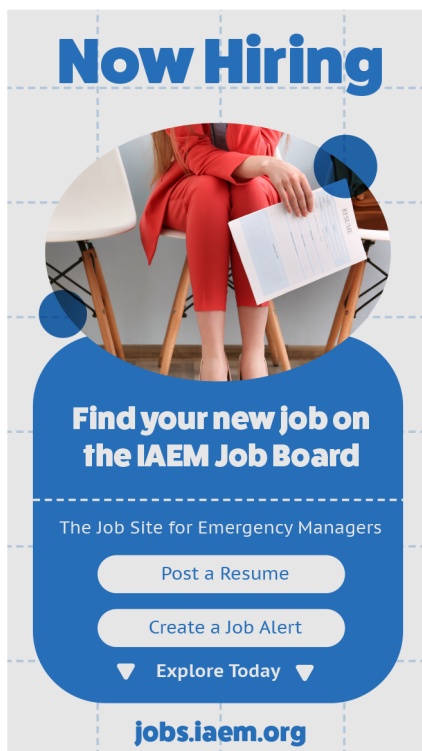
tions and preparedness information is available to businesses that can be used at their discretion to prepare their organization as well as their staff. Faith-based groups are also an incredible asset. They know their congregations and the people who worship there. Many of them are set up to provide for vulnerable populations and are doing community work already. Using the community structures that are already in place allows citizens to learn from each other and become more connected. Individuals with strong social connections fare better in disasters than those who do not. For example, research found that during the Chicago heat wave of July 1995, the Latino community, which made up 25 percent of the city's population, represented only two percent of the fatalities. It was found that the Latino community has a culture of connection. This culture promoted greater social and family ties meaning fewer people were forgotten.<sup>4</sup> Faith-based and neighborhood organizations provide a sense of inclusion for many people as they meet the basic needs of people continually.

We have seen positive results in our community as we have created relationships with leaders of Faith-based Groups, HOAs, businesses, and schools to empower the leaders and citizens to not only be the first, first responders but also the ones who lead out in preparedness.

It can sometimes take years to train a horse. Patience precedes cooperation and trust. Our best ideas and most impressive initiatives won't work if we don't 'join-up' with the people we want to serve. ◆

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- 4: Heat Wave; A Social Autopsy of Disaster in Chicago. Eric Klinenberg



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## Disaster Preparedness for Farmworkers

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with farmworker communities to ensure their safety in the face of disasters and unexpected emergencies. Having bilingual interpreters, integrating outreach at community events, building partnerships with CBOs, and highlighting collaboration will promote readiness and resilience, which will benefit farmworkers, their families, and farmworker communities before, during, and after disasters. ◆

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## Help Make Kids Stronger than Any Storm with Key Resources

By Brittany Perkins Castillo, Chief Executive Officer, AshBritt

The author will be speaking as part of the IAEM 72nd Annual Conference on Nov. 18 from 4:30 p.m-5:00 p.m.

Did you know that according to the organization [Save the Children](#), less than half of American families have a disaster emergency plan? This is despite two-thirds of parents stating they are “at least somewhat concerned” about the risk their child faces at the prospect of a natural disaster. Parents, community leaders, and emergency management officials can fix this by revisiting their emergency preparedness plans now to ensure they consider and include one of our most vulnerable populations—children.

Even when natural disasters don’t harm children physically, the impact can affect children mentally and emotionally for years beyond the actual event. For example, after Hurricane Ian made landfall in 2022, schools were forced to shutter indefinitely in parts of Florida, worsening the hurricane’s disruption of students’ lives. Since then, studies have consistently shown that students can fall behind for as many as two years following hurricanes, which affects critical math and reading skills.

I have personally seen the effects of natural disasters on children through my work as CEO of AshBritt, a national rapid-response emergency management, turn-key logistics, and disaster response company. While supporting the recovery efforts following hurricanes, wildfires, or historic flooding in a multitude of states around the United States, I have witnessed children grapple with their communities being torn apart. Disasters are disorienting for adults and can be particularly traumatic for children who might not have the

necessary skills to cope.

This is why I founded [Stronger than the Storm](#), a nonprofit organization with the mission to provide kid-friendly resources that develop resilience and help children recover and reconnect during tough times. These resources consider a child’s physical health, mental health, and learning development in the planning, response, and recovery stages of a storm or disaster. Through books, activities, conferences, web-based educational materials, and community engagements, the organization aims to support families and communities in fostering a safe and nurturing environment for children during and after crises.

Unfortunately, storms are not the only crises that adversely affect children’s health. Extreme heat has become a huge threat in recent years. The average number of heat-related deaths each year in the United States has nearly doubled over the last decade, according to the U.S. Centers for Disease Control and Prevention. Alarming, by 2050, heat waves will affect more than 3.5 billion people worldwide. For children, extreme heat is more dire because their bodies are [less able to adapt to heat](#) than adults.

Luckily, we are responding. In early September, Stronger than the Storm launched a national “Beat the Heat” initiative to help protect children from heat-related illnesses. Our goal is to drive awareness and prevention through educating kids, parents, and communities on how to prepare for extreme heat and

mitigate its effects. The new “Beat the Heat” initiative joins the Stronger than the Storm platform’s natural disaster-related educational materials.

Since launching, we’ve seen tremendous engagement with Stronger than the Storm materials, with many families and educators finding the free family emergency preparedness downloads and coloring pages to be an easy, engaging tool for daily conversations on important safety topics. Like its predecessor, the “Beat the Heat” program is designed as a simple, play-based platform for schools, physical education teachers, local youth sports teams, and coaches to tackle heat-related physical illnesses and mental health challenges in children grades K-12.

Emergency management professionals can similarly take important actions to ensure they are considering children in their planning process. Connect with child welfare experts in your community. Invite them into the process. Review your shelter plans. Ask the questions: Do you have child-friendly resources and spaces? Do your plans include kids of all physical and developmental abilities? Have you trained team members in physiological first-aid?

We welcome you to join us in our efforts to help make children resilient in any disaster or emergency event. The “Beat the Heat” campaign, and other Stronger than the Storm Family Emergency Preparedness initiatives, are web-based and encompass a

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## From Simulations to Solutions: Implementing Lessons from Annual Disaster Exercises

By Alexandra Lahm, Senior Emergency Management Specialist, Emergency Management + Enterprise Resilience, NYU Langone Health

The author will be speaking as part of the IAEM 72nd Annual Conference on Nov. 20 from 2:45 p.m-3:45 p.m.

Disaster preparedness is an integral part of any organization's risk management strategy. By preparing for disasters, organizations are better situated to protect lives, maintain essential services, and recover swiftly from unforeseen events. In the aftermath of Superstorm Sandy, NYU Langone Health recognized the need to increase the organization's resilience and response capabilities. As a central part of this effort, the Emergency Management + Enterprise Resilience (EM+ER) department created our flagship Coastal Storm Program. Through this program, the enterprise engages in a large-scale functional exercise annually. The program, while primarily focused on the threat of coastal storms, serves a broader purpose as well: to ensure that we can effectively manage large-scale disasters while safeguarding the enterprise's trifold mission to care, to teach, and to discover.

Engaging the enterprise in hurricane simulations is a major component of the Coastal Storm program, and since 2017 the EM+ER team has coordinated seven progressively larger functional exercises. These exercises provide a controlled environment in which stakeholders can review response plans and identify gaps before an actual incident occurs. By simulating a hurricane scenario, participants can practice their roles, test procedures, and uncover weaknesses in a no-fault environment.

The core objectives of the exercises are as follows.

■ **Validate stakeholder roles:**

To ensure a coordinated effort in the event of an emergency, the enterprise must clearly define and communicate each stakeholder's roles, responsibilities, tasks, and required actions. By simulating a real incident, stakeholders have a chance to practice their roles. This process facilitates an additional goal as well: determining orders of succession. Doing all of this before a real incident helps to increase preparedness and allow for an effective response.

■ **Verify plans and procedures:**

It is essential to regularly review and verify that plans and procedures exist, are adequate, and are responsive to the relevant threats. This involves practice and validation through simulated exercises.

■ **Identify opportunities for improvement:** No response is perfect.

Identifying and addressing shortcomings in the response structure is a continuous process. Each exercise provides valuable insights that allow organizations to make necessary adjustments and improvements to be better prepared for threats in the future. These improvements can include plan creation, training developments, or infrastructure solutions.

NYU Langone Health has 47,000-plus staff, five hospitals, 300-plus offsite locations, 1000-plus research faculty, and two medical schools. During our annual exercises, we aim to engage all areas of the enterprise and have continually expanded our

exercise scope year after year with this in mind. The format of our annual exercises model the NYU Langone Health Incident Command System (NICS) process that our enterprise uses during real-world incidents. The exercise is conducted in two parts and is held simultaneously in multiple locations. The enterprise NICS Brief starts off the exercise by setting a battle rhythm and includes reports from senior leadership from all mission areas. Participants will then separate into various operational groups that represent the different geographic regions and mission areas. In the 2024 iteration of the exercise, there were seven operational groups. The NICS Brief gives senior leadership a platform to recap operational status and surface issues, while the operational groups allow the relevant stakeholders to dive deeper into an issue and start developing solutions to the scenario and injects that are provided.

Using the annual hurricane functional exercise as a case study, we have identified best practices for exercise design that have not only helped refine the program but have enhanced our enterprise's emergency response capabilities.

■ **Involve stakeholders early:** Involving stakeholders in the planning process allows EM+ER to customize the objectives of the exercise to fit the needs of the enterprise and

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## From Simulations to Solutions

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validate the exercise scenario. During 2024 EM+ER conducted a series of 17 Coastal Storm Readiness Workshops before the start of hurricane season. In these meetings, stakeholders were given an overview of the Coastal Storm Program and reviewed exercise AAR findings from the previous year, validated their departments' responsibilities and expected actions, identified areas of concern, and were asked to provide areas of focus they would like to see addressed during the exercise. When developing the scenario, we were able to apply the feedback we received to ensure that the exercise addressed real areas of concern and enabled us to develop relevant injects for each participating department or mission area to work through. During the planning process, as we refined the scenario, we made sure to connect with subject matter experts to make certain that we were adequately considering the organization's operations and infrastructure.

■ **Engage staff at multiple levels:** Exercises tend to engage senior leadership, with a focus on their roles and responsibilities during disasters. However, it is vitally important that all staff understand their roles and responsibilities during incidents, and that organizations provide a way for them to learn and test those roles. This means involving staff at different levels of the organization in exercises. The level and format of engagement need not and should not be the same for senior leadership and frontline staff. Instead, staff engagement should be attuned to the role that different levels of staff will play in real emergency situations. For example, our senior leadership were participants in the room during the functional exercise, while our frontline staff were engaged through

mini drills facilitated by their managers. Finding ways to include a diverse range of participants can make sure that different perspectives are considered, and that the response plan is comprehensive and inclusive.

■ **Vary focus of exercise:** In the real world, an emergency consists of the lead-up to an event, the immediate response, and then the long-term recovery. When exercising, it is important to mirror this and vary the focus of the exercise to test different phases of the response cycle. Our hurricane functional exercise series started by testing how the organization prepared for the onset of a hurricane, varying the lead-up time and intensity of the storm. More recently, however, EM+ER has adjusted the exercise to address different parts of the enterprise's response. In 2023, for instance, we tested the organization's response in the immediate 48 hours following landfall. In addition to varying focus on preparedness, response, and recovery, it is important to vary the functional components of the exercise. For example, while one year the exercise may focus on how to discharge and safely decant patients ahead of a storm, in another it may be prudent to focus on safely housing staff who remain onsite for the duration of the storm.

The Coastal Storm Program at NYU Langone Health exemplifies proactive disaster preparedness and continuous exercise improvement. The functional hurricane exercises test readiness for a coastal storm by validating roles, plans, and procedures, and they provide insights for necessary adjustments to ensure that the institution is well-prepared. By socializing and practicing the core incident management process, we prepare our stakeholders to respond to and manage a range of threats, so that we can protect lives, maintain essential services, and recover swiftly from unforeseen events. (For example, our 2024 exercise was particularly timely, as it allowed us to practice

our NICS process just two days before it was implemented in the real world for the CrowdStrike incident.)

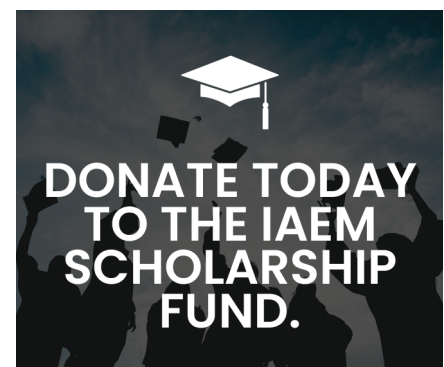
As we continue to face an increasingly uncertain and volatile world, the best practices learned from the Coastal Storm Program serve as a valuable blueprint for other institutions seeking to enhance their disaster preparedness and response programs. By involving stakeholders early in the planning process, engaging staff at multiple levels, and varying the focus of exercises, organizations can ensure that their exercises validate stakeholder roles, verify plans and procedures, and identify opportunities for improvement. The importance of disaster preparedness cannot be overstated, and the Coastal Storm Program exemplifies the power of simulation-based exercises in transforming lessons into actionable solutions. ◆

## Help Make Kids Stronger

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range of free downloadable educational graphics designed for kids, parents, teachers, and those in the public and government that plan for disaster events. The graphics are ideal for social media campaigns and can be customized at no cost with an organization's logo.

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## Growing Resilience in Your Community: The Role of Emergency Managers

By Chad Payeur, Director, Resilience Doctrine and Strategy, Office of Resilience, FEMA; Dr. Rosemarie Bradley, Chief, Resilience Planning and Analysis Branch, Office of Resilience, FEMA; Catherine Welker, Emergency Management Specialist, Planning and Analysis Branch, Office of Resilience, FEMA; and Jocelyn Lewandowski, Emergency Management Systems Analysis Lead, Argonne National Laboratory

The authors will be speaking as part of the IAEM 72nd Annual Conference on Nov. 20 from 11:00 a.m-12:00 p.m.

Communities across the nation face an increasingly complex set of risks and challenges. Disruptions from acute incidents (also called shocks), such as natural disasters and infrastructure failures, are becoming more frequent and intense. At the same time, long-term strains (also called stressors), such as environmental degradation, lack of affordable housing, and persistent poverty, are negatively impacting our quality of life and well-being, worsening the impacts of shocks, and undermining our ability to thrive. In 2023 alone, there were 28 separate weather and climate disasters in the United States costing at least 1 billion dollars each—the highest number of billion-dollar disasters in a calendar year—and causing at least 492 direct or indirect fatalities—the eighth most disaster-related fatalities for the contiguous United States since 1980.<sup>1</sup> With these increasing impacts, it is critical that communities put renewed focus on building resilience so they can lessen the impacts of shocks and stressors and be better positioned to effectively respond and recover.

To help build resilience in communities across the nation, FEMA recently published the [National Resilience Guidance \(NRG\)](#). The NRG defines resilience as the ability to prepare for threats and hazards, adapt to changing conditions, and withstand and recover rapidly from adverse conditions and disruptions.

Developed in coordination with more than 1,200 individuals from across the whole community, the NRG:

- Promotes a common understanding of resilience.
- Emphasizes the critical relationship between chronic community stressors and acute shocks.
- Addresses the resilience roles of individuals, organizations, and all levels of government.
- Provides an actionable approach to resilience planning and implementation.
- Incorporates a community resilience maturity model that walks through concrete steps to build resilience.

While strengthening resilience requires a collective effort, emergency managers play a central and critical role in this important mission. Emergency managers' core focus is to help communities reduce vulnerability to hazards and cope with disasters. They coordinate resources before, during, and after disasters, identify and analyze the potential impacts of threats and hazards that threaten the community, plan and coordinate with partners, lead response and recovery efforts, and much more. All of these activities are essential to strengthening resilience, and doing each of these activities with resilience in mind puts the community in a better position to deal with future risks and challenges. Strengthening resilience doesn't require that emergency managers do different things—rather,

it requires that they do things differently.

Two small but important shifts that can help emergency managers strengthen resilience include examining both shocks and stressors, as well as considering how those shocks and stressors may differ in the future. While threats and hazards are often thought of in terms of shocks, such as natural disasters, pandemics, and cyber and physical attacks, they also include stressors, such as persistent poverty, homelessness, and deteriorating infrastructure. Stressors are often overlooked when considering risks. However, emergency managers must consider stressors as they can have significant impacts and far-reaching consequences and use a systems-thinking approach that considers the risks caused by both acute shocks and chronic community stressors as well as the interconnectedness and interdependencies among community systems. When examining shocks and stressors, emergency managers should also consider how shocks and stressors may differ from what has been experienced to date. Strengthening resilience requires that we anticipate and prepare for future conditions, such as climate impacts, shifts in community demographics, changes in land use, and technology advancements so that we can adapt, lessen impacts,

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## Growing Resilience in Your Community

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and be well-positioned to respond and recover quickly.

The NRG presents seven principles that set the foundation for creating a more resilient nation. By incorporating these principles into existing activities, emergency managers can improve the resilience of their communities.

- **Threats and hazards:** Identify, reduce risk of, prepare for, resist, and respond to shocks and stressors, prioritizing those that represent the greatest risks.

- **Human-centered:** Position the well-being of individuals, families, communities, and society at the center of resilience goals, taking into consideration the needs of all community members.

- **Equitable and just:** Pursue solutions that address, and do not exacerbate, disparities between and within communities. Ensure strategies respond to the needs of underserved and marginalized communities that have historically borne the disproportionate burden of impacts and costs incurred through decisions made by both public and private actors.

- **Adaptive:** Maintain awareness of and a willingness to apply and implement innovative thinking, tools, and methods to quickly realign or take advantage of evolving circumstances.

- **Collaborative:** Seek input that engages and empowers the public, private, academic, and non-profit sectors and all community members; reflects a commitment to collective deliberation; and utilizes transparent processes, metrics, and goals for data-driven decision-making.

- **Sustainable and durable:** Implement solutions that serve current and future needs by considering the

entire life cycle of solutions. Seek to ensure that there is continuity of technical expertise and leadership as needed.

- **Interdependent:** Apply risk-informed approaches and integrated processes that account for the complexity and interdependencies of systems, prioritizing solutions and investments for the threats and hazards that pose the greatest risk and that can result in multiple benefits and enhance resilience over the long term.

As we move towards the next evolution in emergency management, we must push boundaries, think creatively, and look for approaches and opportunities to build new partnerships, or renew and enhance existing ones, to engage all members of our communities, to change the familiar conversation to a deeper one that focuses on system change, and to utilize the tools available to us to envision and build resilient communities.

Join us as we talk about how to move from disconnected planning with single-purpose solutions to an integrated resilience program where efforts are proactive and highly collaborative. Through participant interaction, we will highlight emergency managers' resilience work, recognize where communities are in their resilience journey, and facilitate discussion to help emergency managers take the next steps to build more resilient communities. ◆

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# Pracademic Outsider/Insider Theory of Change Management

By Michael Prasad, CEM, Senior Research Analyst,  
Emergency Management Training and Consulting, Barton Dunant

The author will be speaking as part of the IAEM 72nd Annual Conference on Oct. 22 from 12:00 p.m.-1:00 p.m. as part of the Early Edition Speaker Series

I am in the middle of a long-term national emergency management project, which started when a disaster researcher came to the IAEM-USA Children and Disaster Caucus and gave her doctoral dissertation pitch. The project is to fix the way we (emergency managers) support families in disasters—during the Response phase—with their choice for feeding their infants and toddlers. This is a major change, needed across the nation, through professional collaboration, coordination, communication, and cooperation.

Meanwhile, I am also in the middle of—well at the time, I was approved for—[FEMA's Planning Practitioner Program](#) (PPP), a multi-course offering a lot like the Master Exercise Practitioner series. That program has a capstone of a deliberative planning project to complete—one where you gather folks together who do not work for you—and maybe not even normally with you, and you solve a problem through a deliberative planning process, using the 4 C's.

I combined both. I am using my pro bono advocacy work on solving this problem, as my capstone project for the PPP series. And even more shocking (well it was shocking to me), is the way I am going about it is all wrong. Well, maybe not wrong, but certainly novel. The PPP courseware is aligned with existing change management theories, and I could not specifically reconcile the work needed to be done on this project/problem statement to only one or two theories. So, I am inventing a new change management theory.

If any of you folks are academics or practitioners/academics – “pracademics,” like me who specialize in change management theory, I would love to co-author a journal article to make this ‘official.’

Let me break my novel concept for change management down by its title. **Pracademic**, as I noted before, means someone who is both a practitioner and an academic. This is not limited to emergency management as a profession and as a field of study. For example, archeology professors who are also archeologists themselves are pracademics. From the movies, it's *Indiana Jones*, as well as Alan Grant and Ellie Sattler from *Jurassic Park*. I call myself a pracademic emergency manager, because I still practice emergency management, and I still write academically (as well as professionally) about emergency management. **Outsider/Insider** is the duality of being either a single individual who is both outside of the organization that needs to change and inside that same organization. Or it can be a team approach: one or more on the outside and others on the inside. An example of someone who is singularly an outsider, and an insider is a leadership volunteer with an organization. They may be able to influence and sway the real decision-makers (most likely paid executives who will enact the changes), through [meta-leadership](#). Another example of an outsider/insider is a trusted partner. This was the case for me when in 2013, I helped influence FEMA to change its Donated Resources Policy ([RP9525.2](#)) to eliminate

the clause that excluded donations “through activities which are part of the organization's mission”. This change now allows states, territories, and Tribal Nations to claim credit for donated time and material from the American Red Cross and other NGOs, credited against any public assistance project on declared emergencies or disasters. Back then, I was representing a trusted partner, the American Red Cross, to FEMA when I did my advocacy efforts for change management. I could talk to the federal coordinating officer on this, same for the state coordinating officer. I was able to meet with public assistance folks at FEMA headquarters, to champion this idea at a national VOAD conference (the home of the 4 C's, by the way).

The key part to the Outsider/Insider concept is that you have to know the right players in the game to call upon. In some cases, you will need to network from person A to person B to person C, to find the right one who is the decision-maker. Hey, it's just a theory, right?

You can see the combination of both the PPP series academic aspects and the actual problem statement project backstory and timeline in a free online book, which came out in late August, 2024. The irony of having FEMA sponsor a book where at least one chapter is focused on fixing a problem at FEMA did not surprise me in the least. Please check

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# Emergency Management of Tomorrow: Exploring Technology and Concepts for the Future

By Daniel M. Cotter, Executive Director of the Office of Science and Engineering (OSE) in the Science and Technology Directorate (S&T), U.S. Department of Homeland Security

The author will be speaking as part of the IAEM 72nd Annual Conference on Nov. 20 from 1:30 p.m-2:30 p.m.

The threat landscape is constantly changing as disruptive technologies, natural disasters, and other threats collide. Concurrently, capabilities like artificial intelligence (AI) pose both promise and peril for transforming emergency management (EM) operations. For emergency managers and first responders to ascend in this age of technological evolution, innovative research and development (R&D), and user-informed approaches are needed to identify, vet, and integrate capabilities fit for EM. Recognizing this need, the Department of Homeland Security’s Science and Technology Directorate launched the [Emergency Management of Tomorrow Research \(EMOTR\) effort](#) with Pacific Northwest National Laboratory (PNNL).

## Building a Vision and Concepts for the Future

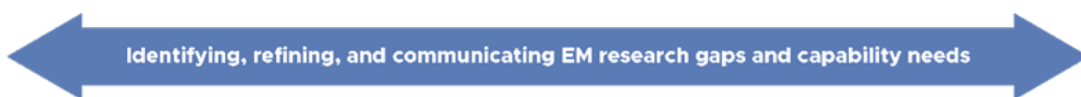
EMOTR was founded with a forward-looking vision: to harness interdisciplinary research, community engagement, and technology visioning to create an actionable R&D agenda to enable the Emergency Operations Center of the Future. PNNL researchers, analysts, and systems engineers set out to explore the AI and EM frontier, connecting with EM stakeholders nationwide to identify areas of synergy and opportunity between these two domains. The goal is to equip emergency managers with tools and strategies that are not only reactive but also significantly proactive and predictive.

Through R&D and technology landscape assessments, stakeholder feedback, and hands-on exercises exploring real-world use cases, EMOTR

is reshaping how technology can help anticipate, respond to, and recover from emergencies. This approach defined and refined EM R&D and capability needs through iterative tasks designed to:

- Assess the [EM research landscape](#).
- Assess the [AI research landscape](#).
- Elicit [capability needs from EM stakeholders](#).
- Conduct [validation exercises](#).
- Identify where technology, such as AI, may benefit the [future of Emergency Operation Centers](#).

Together, these efforts are navigating the complexities of EM and AI to identify emerging trends, potential challenges, and strategic pathways to guide future opportunities and investments. The results of each task, including EM-applicable AI concepts and considerations, are available to the public at <https://www.dhs.gov/science-and-technology/em>.



*The EMOTR program uses a structured approach to garner insights and recommendations to improve effectiveness, enable efficiencies, foster innovation, and enhance collaboration to bolster the future of EM and EOCs.*

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## Technology and Concepts for the Future

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### Assessing AI for EM

Powerful AI tools have proliferated the industry and are transforming the workplace. It can feel like a scramble to understand how to leverage these tools to support the rapidly changing concerns of EM, like attacks on infrastructure and extreme climate events. While EMOTR is exploring a wide range of R&D and emerging technological capabilities, a focus on AI has allowed researchers to take a deep dive into what these tools are (and aren't), how EM practitioners can use them, and what the future might hold for AI tools and EM. Now a year into its research, EMOTR has:

- Scoured the EM R&D and AI research landscape. Researchers sorted from 36,000 peer-reviewed publications to just 300+ in a user-friendly annotated bibliography and curated a list of 13 technologies and AI concepts that have a high probability of enhancing EM in the next decade.

- Connected with the EM stakeholder community through interviews, community roundtables, focus groups, and a survey to identify recurring research gaps and capability needs. End-user feedback, from both EM practitioners and researchers alike, is informing every step of the way.

- Conducted university hackathon-style events and tabletop exercises across the nation to evaluate EM functions and identify synergies, opportunities, and implications for AI. The leading technologies of potential interest were diverse, ranging from text-based tools that may improve the everyday life of emergency managers and other stakeholders to tools that may minimize cost and

life loss in disasters, to technologies that may be foundational to the next stage of AI in EM toward the end of the next decade.



*The EMOTR Program combines combined several inputs—landscape assessments, stakeholder feedback, task analyses, and validation exercises—to curate a comprehensive set of recommendations to inform future EM R&D and technology investments.*

### Whole-Community Approach to Adoption

As with any technological transformation, overcoming barriers to implementation requires a whole-community approach. Just like every novel technology before it, AI and advancements like wearable sensors and data analytics present EM-specific policy, privacy, and jurisdictional barriers to adoption. Through participation in conferences like the International Association of Emergency Managers (IAEM), as well as roundtables and other outreach opportunities, EMOTR is inviting feedback from EM practitioners, researchers, and others in the community to underpin findings with input from those in the field and on the front lines. The full potential of these advancements rests in their seamless integration with existing systems and capabilities, often bound by policy, procedure, privacy, and funding barriers. By aligning R&D and technology solutions with the specific needs of the EM community, collaboratively developed solutions can better address critical gaps and fortify operational resilience. ◆

### Pracademic Outsider/Insider Theory

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out [Chapter 11](#): Issues for Infant and Toddler Feeding at Disaster Mass Care Sites: Paradigm Shifts for Strategic and Operational Planning, in Part 3 of [Current and Emerging Trends in the Management of International Disasters](#). Yes, it's like 40 pages long, but there are pictures of PowerPoint slides and a lot of footnotes. At least read the timeline table at the end—that's where all the magic tricks are revealed. ◆



## Hurricane Relief Resources

#IAEMstrong

# The Future of Special Pathogen Response

By Shelly Schwedhelm, MSN, RN, NEA-BC, Executive Director, NSPS Associate Director, Global Center for Health Security, University of Nebraska Medical Center; and Darrell Ruby, CEM, Regional Coordinator, Providence Sacred Heart Medical Center and Children’s Hospital—Region 10 Emerging Special Pathogen Treatment Center (RESPTC)

The authors will be speaking as part of the IAEM 72nd Annual Conference on Oct. 20 from 2:45 p.m-3:45 p.m.

Recent healthcare crises like the COVID-19 pandemic, the international Marburg and Sudan Ebola Virus Disease outbreaks, and H5N1 (avian influenza) demonstrate the unpredictable nature of special pathogen outbreaks and underscore the need for an agile and robust system for preparedness and response.

Emergency management personnel are critical to any preparedness strategy: coordinating resources and personnel in a crisis and preparing health care workers and facilities before an emergency. When healthcare workers are ready to respond to a special pathogen event, they can provide safe and effective patient care, minimize the risk of disease transmission, and support the advancement of national health security.

However, maintaining consistent healthcare readiness is a challenge amid the strain on workforces already depleted in the wake of COVID-19, the burden of developing capacity for special pathogens care, and a lack of coordination between health systems.

The [National Special Pathogen System \(NSPS\)](#) offers a remedy: a national strategy for approaching preparedness and response to special pathogens to save lives and protect communities and the healthcare workforce.

## The NSPS Response to Special Pathogens

In 2020, the COVID-19 pandemic exposed significant gaps in the United States' ability to manage special pathogens.

To address these vulnerabilities, the Department of Health and Human Services (HHS) Administration for Strategic Preparedness and Response (ASPR) directed the National Emerging Special Pathogens Training and Education Center (NETEC) to develop a National Special Pathogen System (NSPS) Strategy.

Currently, in implementation, the NSPS’s mission is to develop a coordinated network of high-quality special pathogen care dedicated to protecting patients, communities, and the healthcare workforce in the United States. In 2022, the U.S. Congress designated NETEC as the NSPS Coordinating Body to implement the NSPS Strategy nationwide.

The NSPS approach to special pathogen preparedness was inspired by other systems of care such as the trauma, stroke, and burn systems, which rely on facilities at different levels with increasing capabilities to care for patients.

The NSPS System is a tiered,

national, coordinated system of facilities with increasing capabilities to safely and quickly care for suspected or confirmed patients with a special pathogen. As the Coordinating Body, NETEC is responsible for developing the minimum capabilities for facilities at Levels 1-4 and providing core services to support activities across the system.

By engaging healthcare entities, regional healthcare coalitions, public health, and frontline responders across the spectrum of capability, the NSPS optimizes readiness for large-scale outbreaks and enhances the nation's health security. The system is designed not only to manage the current landscape but also to prepare for the next set of challenges.

## Preparedness Through Partnerships, Collaboration, and Coordination

The increasing complexity of emergency management requires



Figure 1: System of Care levels.

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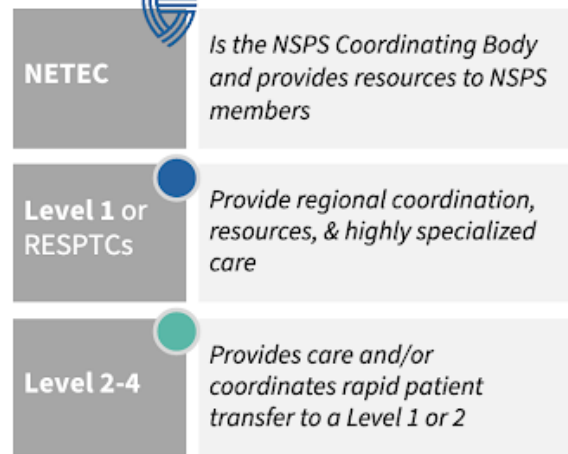
### Future of Special Pathogen Response

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strong collaboration, coordination, communication, and cooperation between multiple entities.

**Strategic Partnerships:** One of the earliest achievements of the NSPS was enhancing the depth and breadth of its partnerships to leverage the efficient and effective operation of the System of Care. NETEC engaged over a dozen professional organizations, government agencies, and more than 100 leading experts representing professional societies, public health, EMS agencies, frontline health care workers, and beyond as partners in special pathogen readiness and response. These partnerships across public and private sectors strengthen the NSPS's ability to provide care for patients and communities and handle large-scale outbreaks at the local, regional, and national levels. Building stronger partnerships help to define clear roles for partners in preparedness, response, and recovery.

**Hub-and-Spoke Model:** In the last year, the NSPS has engaged key partners across the healthcare ecosystem to identify the minimum or essential capabilities within the



EMS connects facilities throughout the NSPS.

Figure 2: NETEC-NSPS hub-and-spoke model.

System of Care and test those capabilities through pilot workshops. Healthcare facilities at each tier of the System of Care are assigned a level based on their ability to meet minimum care capabilities. At the highest tier, Level 1 Facilities are Regional Emerging Special Pathogen Treatment Centers (RESPTCs) that serve as regional hubs. Using a hub-and-spoke model, the System of Care can optimize the delivery of services and support from the Level 1 "hubs" to the Level 2-4 "spokes" and enhance regional coordination.

**Coordination and Guidance:** Healthcare workers are critical to

preparedness, and NETEC, as the coordinating body of the NSPS, supports special pathogen preparedness of the NSPS by:

- Developing and disseminating recommendations and guidance for various pathogens.
- Enhancing communication and coordination.
- Expanding workforce capacity through developing education and training.
- Strengthening research infrastructure to advance innovation and improve understanding and treatment of pathogens.
- Creating consistent monitoring and evaluation tools.
- Exploring funding mechanisms for financial sustainability.
- Boosting national preparedness through global partnerships, facilitating the exchange of knowledge, resources, and best practices to improve readiness and response on an international scale.

### Overview of NSPS Strategic Initiatives



The following activities reflect the high-level priorities for NSPS development.

#### Funding / Costs

- Define and validate the cost of readiness for facilities
- Explore alternative revenue models for NSPS
- Explore alternative funding models for facilities
- Explore incentives for participating facilities

#### Minimum Capabilities

- Develop support materials for capabilities
- Revise SPORSA to align with minimum capabilities
- Socialize the capabilities
- Pursue Intellectual Property for capabilities

#### System of Care Expansion

- Define facility onboarding processes
- Develop tools to verify facility capabilities
- Reflect NSPS expansion in updated NSPS map(s)
- Identify how the NSPS fits into the RMDCC framework via RDHRS

#### Management & Oversight

- Maintain oversight and management of a growing system

#### EMS

- Discuss ways to integrate EMS into the NSPS

#### Activation

- Develop an activation system
- Conduct an NSPS exercise

Figure 3: NSPS strategic initiatives.

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# Improving Crisis Response Simulations with AI and Machine Learning

By Philippe Borremans, Emergency Risk and Crisis Communication Consultant, RiskComms

The author will be speaking as part of the IAEM 72nd Annual Conference on Nov. 7 from 12:00 p.m.-1:00 p.m. as part of the Early Edition Speaker Series

Emergency managers are constantly looking for methods to improve preparedness and response. One interesting option is the inclusion of artificial intelligence (AI) and machine learning in crisis simulation exercises. This article examines how these technologies can improve training efficiency and prepare teams for real-world disasters.

## Making Simulations More Realistic

Conventional crisis simulations are often based on pre-planned events that follow a set schedule. However, real emergencies are always unpredictable. AI-powered simulations can represent complicated interactions between various components, resulting in more realistic scenarios.

For example, an AI simulation could generate a cyberattack scenario that changes depending on the trainees' reactions. As the response team fends off the attack, the simulated threat changes its methods. This back-and-forth simulates real-world network defense scenarios and better trains the teams for the uncertainties they would experience in actual crises.

## Improved Insights Through AI Evaluation

Another major benefit of AI in simulations is the ability to provide detailed, data-driven feedback. While

traditional debriefings often focus on key events and personal observations, AI can record hundreds of details at once.

Take an earthquake simulation. An AI system could evaluate how effectively teams prioritize and deploy resources such as search and rescue, medical care and infrastructure maintenance. By analyzing these decisions and their likely impact, the system can highlight opportunities for improvement that may be overlooked by traditional assessments.

## Strategies for Using AI in your Organization

While the benefits are obvious, using AI in crisis scenarios requires careful planning. Here are some strategies for agencies looking to apply this technology:

■ **Start small:** Start by applying AI to specific difficulties in your current simulation process. This could include using machine learning to develop scenarios faster or automate certain aspects of performance review.

■ **Invest in adaptable technology:** When upgrading your simulation systems, choose designs that can easily integrate additional AI capabilities. Cloud-based solutions provide the flexibility to expand and adapt to future requirements.

■ **Develop your team's skills:** Although many AI solutions are ready to use out of the box, it's important that your team members understand

the technology. Invest in employee training in areas such as data analysis and AI model management.

■ **Test before you expand:** Start with simple tests of increasingly advanced AI applications. Learn from these experiences before launching larger programs.

## Real-World Use: Advanced Behavior Modeling for Emergency Evacuations

A recent study on emergency evacuation scenarios shows how artificial intelligence is used in crisis simulations.

The researchers have developed an automated system that simulates how people react during evacuations. This system, known as a multi-agent system (MAS), integrates psychological insights and machine learning to better predict people's behavior.

The Conscious Movement Model (CMM) serves as the basis for this system. The technology changes the movements of the simulated people ("agents") depending on how the situation develops. It is supplemented by a function called Conscious Movement Memory-Attention (CMMA), which enables the model to learn from real data.

Dr. Emily Chen, the lead author of the study, explains: "By incorporating CMM and CMMA into our simulation, we have developed a powerful tool for modeling crowd behavior

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## AI and Machine Learning

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during emergency evacuations. This level of realism is crucial for developing successful evacuation plans."

The system not only models behavior, but also recommends strategies based on predefined rules. This tool provides emergency managers with practical options for dealing with various evacuation scenarios.

The research team tested the technology by simulating a theater evacuation. The results showed significant improvements over conventional models.

"Our simulations reduced the overall evacuation time by 25% when we used AI-optimized strategies," says Dr. Chen. "Just as importantly, the system identified potential bottlenecks and danger zones that were not apparent in the standard evacuation plans."

This discovery represents a significant advance in crisis simulation technology. By combining advanced behavioral modeling, machine learning and strategy recommendations, emergency response agencies can now train and organize evacuations more successfully than ever before.

(1) More information about the study can be found in *A Prescriptive Simulation Framework with Realistic Behavioral Modelling for Emergency Evacuations* | ACM Transactions on Modeling and Computer Simulation. (2024). ACM Transactions on Modeling and Computer Simulation. <https://dl.acm.org/doi/10.1145/3633330>

## Conclusion

AI and machine learning have the ability to revolutionize crisis simulations by providing unparalleled realism and insight. While the use of these technologies requires careful preparation and expenditure, the

benefits of improved preparedness can be significant.

As emergency management specialists, we must constantly adapt our training approaches to meet the demands of an increasingly complicated world. By using these tools, we can better prepare our employees to protect our communities in the event of a disaster.

## A Note on Transparency

I believe that transparency is important in all areas of emergency management and communication, including the development of educational materials. Since English is not my first language, this paper was written and modified with the help of AI to ensure clarity and adherence to the IAEM Bulletin criteria. This partnership shows that AI can be a useful tool not only in crisis simulations, but also in promoting clear communication in our field. ♦

## Future of Special Pathogen Response

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## The Future of the NSPS

In the year ahead, NSPS aims to further enhance its national readiness and response capability for special pathogen events through continued build-out of and onboarding to the tiered system, in collaboration with the RESPTCs serving as the hubs as well as regional EMS agencies and public health to create a comprehensive system.

Success will depend on several activities in the coming year, including exploring funding strategies for the NSPS and facilities in the system; delivering resources to facilities to support alignment with minimum capabilities; expanding the number of facilities in the System of Care; maintaining oversight and management of a growing system; integrating EMS into the NSPS; and developing an alert activation system.

At its core, the NSPS is about increasing the capability of the country to respond effectively to the unknown threats of tomorrow. By building a standardized, scalable network of healthcare facilities, the NSPS is leading the charge to improve special pathogen patient outcomes, access to care, and protecting communities and the workforce across the nation.

For more information about NETEC, visit [netec.org](https://netec.org), and for more information about NSPS, visit [nsps.org](https://nsps.org). ♦



# EM Calendar

Oct. 17	<a href="#">Heightened Global Conflict: Implications for U.S. Preparedness and Homeland Security Webinar</a>
Oct. 20	<a href="#">IAEM Annual Conference Early Bird Registration Deadline Extension</a>
Oct. 22	CDRZ Lunch-and-Learn with FEMA
Oct. 24	<a href="#">Beyond the Headlines: The Practices and Policies to Improve the Use of GIS for Pandemic Response and Public Health</a>
Nov. 15-21	<a href="#">IAEM Annual Conference</a> Colorado Springs, Colorado
Nov. 30	NJ EM Preparedness Conference —Call for Papers Deadline
April 21	National Radiological Emergency Preparedness Conference



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