

Emergency Management for Public Safety

Modernizing Emergency Management for Public Safety

Jason Malloy, MS, ENP, RPL
Operations Domain Leader
Mission Critical Partners

Introduction to Modernizing Emergency Management Response

Emergency management agencies (EMAs) throughout the United States face opportunities to strengthen partner relationships, expand social-media use, adopt drones for faster assessments, improve training and exercises, and modernize procurement for quicker disaster and emergency response. They also face major challenges, including staffing shortages, inadequate facilities and technology, rising disaster frequency, and shrinking federal grant opportunities, as well as state and local funding. Trends highlight growing emphasis on collaboration, real-time public communication, drone-enabled situational awareness, and routine exercises to validate plans and enhance readiness.

How Emergency Management Agencies Operate

Emergency management agencies (EMAs) across the nation at the state and local level operate in an increasingly complex environment shaped by rising disaster frequency, expanding responsibilities, and widening resource gaps. Consequently, stronger collaboration, modernized tools, and sustainable investments to enhance preparedness and response capabilities are sorely needed.

A major opportunity lies in strengthening relationships with fire/rescue, law enforcement, emergency medical, emergency communications centers, public works, and other stakeholders. Proactive engagement — through regular meetings, joint planning, and coordinated exercises — builds trust, clarifies roles, and improves interoperability before disasters occur. These relationships become

essential during high-pressure incidents, enabling smoother communication and more efficient resource sharing.

The growing importance of social media, as both a communication channel and situational awareness tool, is a key trend. When used strategically, social-media platforms provide EMAs with rapid, low-cost ways to issue alerts, counter misinformation, monitor citizen reports, and identify emerging needs when traditional systems are overwhelmed.

Technology, particularly drones, represents another significant opportunity. Drones enable faster, safer post-disaster assessments; enhance search and rescue through live video feeds and thermal imaging; and deliver critical supplies to isolated areas. For many resource-constrained jurisdictions, drones offer a cost-effective way to expand operational capabilities without placing responders unnecessarily in unsafe or untenable situations.

Meanwhile, significant challenges exist. Staffing shortages, inadequate facilities, aging technology, and shrinking federal grant opportunities — as well as state and local funding — strain agencies' ability to meet growing demands. Further, many EMAs lack the specialized skills, personnel, or financial resources needed to sustain advanced capabilities or keep pace with operational expectations.

What are the Key Opportunities in Emergency Management Agencies?

How Can Agencies Strengthen Stakeholder Integration in Emergency

Management? – A major opportunity lies in proactively building and maintaining strong relationships with fire/rescue, law enforcement, emergency medical, public works, and other. These relationships should be solidified with partners before disasters occur to aid in disaster recovery. Specific tasks include:

- Establishing regular engagement with fire/rescue, emergency medical, law enforcement, 911 centers, and public works.
- Conducting joint emergency planning and exercises to improve coordination and communication between local and state governments and federal agencies.
- Sharing capabilities and resources, especially in small or understaffed jurisdictions.
- Strengthening trust and communication channels to enable faster, more effective response during emergencies.
- Establishing and executing hazard mitigation plans.

What are the Opportunities for Using Social Media in Emergency Management? –

Leveraging social media offers fast, low-cost public communication (e.g., boil-water notices), crowdsourced situational awareness (e.g., reports of blocked roads or downed power lines), and real-time monitoring of citizen reports during disasters. Doing so also:

- Helps identify urgent needs when 911 is overwhelmed.
- Supports damage assessment, as well as tracking damage patterns and emerging hotspots.

How are Drones Being Leveraged in Emergency Management? – Drones, or an unmanned aerial vehicle (UAV), offer EMAs faster, safer damage assessment, improved situational awareness, and enhanced search and rescue (SAR) through live video aerial feeds, mapping data, and thermal imaging, drastically reducing response times. They also can deliver critical supplies to isolated areas. Though adoption varies, drones provide a cost-effective way to expand capabilities for resource-constrained jurisdictions and are becoming an increasingly valuable emergency-management tool.

- Drones as first responders (DFR) after storms, floods, wildfires, or tornadoes, enable emergency managers to understand the scale and severity of damage far faster than traditional ground-based assessments.
- Responders can use drones to locate individuals trapped under debris, stranded in flood waters, or lost in remote areas—often without placing personnel in hazardous conditions. Drones can deliver critical supplies — such as medical materials, food, or communication devices — to areas cut off by flooding or debris.

Why is Enhanced Training a Priority for Emergency Management Agencies? –

Training and exercises vary widely across jurisdictions, with many lacking staff, funding, or time to conduct them consistently. Yet even simple drills improve coordination, clarify roles, and reveal capability gaps. Effective after-action reviews and HSEEP-based¹ planning strengthen preparedness, making routine exercises a critical opportunity for enhancing emergency management readiness.

- Exercises, even simple tabletop sessions, are among the most effective tools for improving coordination, validating and improving plans, and identifying capability gaps before real-world incidents expose them.
- Exercises provide opportunities to practice disaster assessment, evacuation procedures, shelter operations, and continuity of operations — tasks that cannot be mastered without hands-on experience.

What are the Key Challenges Facing Emergency Management Agencies?

Widespread Staffing and Workforce Shortages – EMAs across the country face persistent and widespread staffing difficulties, many of which mirror the challenges seen throughout the public-safety sector but are compounded by the unique nature of emergency-management work.

- Many EMAs are underfunded, understaffed, or staffed by personnel performing multiple roles.
- Emergency management requires unique skills, making the candidate pool smaller.
- Even when someone can be retrained into the role, the required competencies — coordination, logistics, planning, disaster operations — are highly specialized and thus limit recruitment.

Facility and Technology Constraints – EMAs nationwide face significant limitations in their physical spaces and supporting technology, many of which hinder their ability to coordinate effectively during disasters. Such constraints reduce efficiency, slow decision-making, and weaken an agency’s ability to maintain situational awareness during emergencies.

- Many emergency operations centers (EOCs) are not purpose-built; they often

are crammed into repurposed spaces such as police department basements, fire department training rooms, or conference/training rooms.

- In many jurisdictions, the EOC and emergency communications center (ECC) are in different buildings or separated by floors within the same building, which prevents or severely limits constant, high-intensity communication and coordination during disasters.
- The use of social media during disasters continues to be affected by limitations, including misinformation, unequal access (i.e., the digital divide), and the lack of analytics capabilities.
- The use of drones can create regulatory issues (e.g., compliance with FAA rules), public privacy concerns, and training and data-management burdens, which can be barriers to adoption, especially in small EMAs.

Increasing Disaster Frequency and Operational Demands – EMAs are experiencing growing operational pressure as disasters become more frequent, more severe, and more complex. This trend affects jurisdictions of all sizes, from large metropolitan areas to small rural counties, and it compounds other longstanding resourcing and capability challenges.

- The surge in disaster activity places substantial strain on EMAs that are already understaffed and underfunded.
- As the number of incidents grows, EMAs spend larger portions of their time in some stage of recovery, reducing their ability to conduct planning, exercises, and training.

Persistent Funding and Grant Challenges – EMAs are experiencing significant and growing challenges related to funding, grants, and long-term financial sustainability. These issues affect nearly every aspect of operations, from strategic planning and facilities to staffing and technology.

- Many jurisdictions perceive a decline in available grant dollars and face intensified competition for remaining funds, creating a de facto funding cliff for capabilities initially built using grant funds.
- Many EMAs lack dedicated grant writers; financial analysts; staff trained in federal procurement, grant management, or reporting; time to prepare quality applications.

Emerging Trends with EMAs

Strengthening relationships and stakeholder integration – Joint planning, shared resources, and regular engagement are becoming foundational to improving disaster readiness and collaborative operations.

Better use of social media – The platform continues to grow as a critical tool for real-time communication, crowdsourced reporting, rumor control, and rapid distribution of alerts.

Increased leveraging of drones – They are transforming emergency management and represent a significant technological trend reshaping response operations.

Enhanced training and exercises – More jurisdictions are recognizing the value of consistent, scalable training and exercises—even simple tabletop drills—to strengthen coordination, validate plans, and identify capability gaps.