

WHAT TO EXPECT (WHEN YOU'RE EXPECTING A DISASTER)

A Guidebook for Emergency Managers



Mary Senger, Burleigh County Emergency Manger at a tabletop exercise, Bismarck, ND (7/17/2019)

Photo credit: ND Response

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About this Report

This report is one of seven reports produced as part of a semester-long, innovative problem solving engagement between FEMA Region 8 and North Dakota State University's Emergency Management Academic Program. Each report in this series addresses a specific problem statement presented by FEMA Region 8 problem sponsors. These problem statements represent challenges that have been identified across the emergency management practice spectrum.



NDSU offered the model interdisciplinary course focused on innovative problem solving for FEMA in partnership with Daniel Green, Resilience Analyst in National Preparedness from FEMA Region 8. The goal was to bring the perspectives and insights of next generation leaders to current challenges facing emergency management practice from a federal perspective. Student teams worked with their problem sponsors and subject matter experts to understand and contextualize the problems. The data collected from interviews, coupled with an understanding of the existing literature, allowed the teams to develop and test solutions within a systems thinking framework, and offer specific insights and recommendations.


The teams approached problem solving from a research and development approach, similar to the approach used by the Pentagon's Defense Advanced Research Projects Agency (DARPA). Using a Pasteur's Quadrant perspective (a use-inspired basic research approach) allowed the teams to seek a fundamental understanding of the problems they were addressing with a focus on dynamic solutions. This approach required a grounded understanding of the problem, and the context and systems within which it exists. The solutions offered often pushed beyond existing programs and workflows.

NDSU's evaluation of this model course's development and delivery is supported, in part, by a research award from FEMA's Higher Education Program. NDSU faculty, Drs. Carol Cwiak and Caroline Hackerott, will supply the entirety of the materials used in the model course as part of the evaluation to encourage other emergency management higher education institutions to engage in similar partnerships. It is envisioned that this model course can be used with partners at all government levels and across a variety of sectors to bring new perspectives to enduring challenges.

NDSU would like to thank the FEMA Region 8 problem sponsors, as well as all the emergency management and partner agency subject matter experts who graciously shared their time, energy, expertise, and guidance. In particular, the team thanks Daniel Green, who brought this opportunity to NDSU and fueled the faculty, students, and problem sponsors with a level of vision, commitment, and enthusiasm that set the tone for the entirety of the experience.




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Executive Summary



The What to Expect (When You're Expecting a Disaster) problem statement sought a unified approach for local, state, tribal and federal emergency management partners in FEMA Region 8 during disasters. The NDSU team conducted interviews with subject matter experts and consulted with problem sponsors to understand the scope of the problem. Several issues were identified, with the most pressing issue being a lack of capacity and capability at the local level of emergency management in rural areas.

This focusing agenda for potential solutions was understanding a way in which capability development can be supported within the limited capacity of local emergency managers in rural areas. To meet this challenge, the NDSU team developed a guidebook that supports capability development in both disaster and non-disaster periods. It is noted that the guidebook is a stop-gap measure that is necessary because local emergency managers in rural areas are not sufficiently supported to meet all the responsibilities of their position due to an endemic lack of funding to rural areas.

Problem Statement

EMGT 491/690
INNOVATIVE PROBLEM SOLVING FOR FEMA

WHAT TO EXPECT (WHEN YOU'RE EXPECTING A DISASTER)

CHALLENGE

FEMA Region 8 needs to develop a unified approach for local, state, tribal and federal emergency managers to jointly utilize during disasters in order to effectively and efficiently provide disaster assistance to affected areas and persons.

BACKGROUND

Emergency managers on the local, state, tribal, and federal levels have varying degrees of experience with managing incidents which can lead to wide variance in overseeing and delivering disaster assistance. Counterintuitive to many other fields, being “lucky” can be detrimental. The fewer disasters an area experiences, the less capable and skilled a local emergency manager is likely to be. There is a strong need for a unified understanding among all actors for the sequence of delivery to ensure disaster assistance is delivered effectively and efficiently.

STRATEGIES FOR RESILIENCE



Problem Sponsor: Matthew Burns, Continuous Improvement Specialist
Senior Leader: Michelle Dolinar, Continuous Improvement Team Lead

Introduction

The What to Expect (When You're Expecting a Disaster) problem statement sought a unified approach for local, state, tribal and federal emergency management partners in FEMA Region 8 during disasters. Region 8 is a primarily rural region comprised of six states and 29 federally recognized tribes. As such, this problem statement was specifically focused on providing support to local emergency managers in rural areas who are new to the field or experience disasters infrequently. In this effort, the term "local" is intended to encompass county and tribal level practice and "rural" is intended to encompass all nonmetro areas as defined by the Office of Management and Budget (Center on Rural Innovation, 2022).

The NDSU team consulted with problem sponsors and conducted interviews with subject matter experts to understand the scope of the problem from their perspective. From these interviews the team learned about the varying degrees of experience among emergency managers across different levels of government. The FEMA Integration Team (FIT) Leads interviewed provided insight from their respective states on the intermediary role they play between local and federal emergency management to facilitate the processes within disaster response and recovery.

Several issues were identified early in the interview process, with the most pressing being a lack of capacity and capability at the local level of emergency management in rural areas. This deficit results in both a lack of dedicated personnel, equipment and resources (capacity), and gaps in the knowledge and skill needed to address the spectrum of practice at the local level (capability) (Cwiak & Butterfass, 2024). This creates a significant challenge in managing day-to-day activities, let alone a disaster.

FEMA has dedicated a considerable amount of time and effort to "creating emergency management frameworks, guidance, and training to develop capability and support improved outcomes at all levels of government" (Cwiak & Butterfass). FEMA's efforts to advance effective collaboration between state, local, tribal, and territorial (SLTT) partners has increased in the face of more severe and more frequent disasters (Cwiak & Butterfass, 2024).

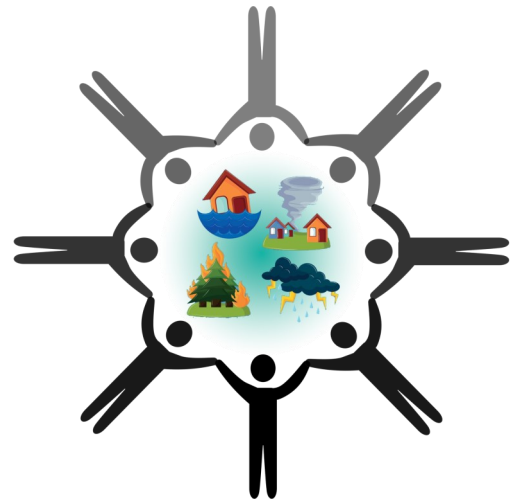
The problem statement at hand is another such effort. The challenge to the NDSU team is understanding a way in which capability development can be supported within the limited capacity of local emergency managers in rural areas. This was the focusing agenda for potential solutions.

Understanding and Contextualizing the Problem

Disaster policies, changes in practice, and major emergency management funding initiatives are typically focused on the realities and needs of large metropolitan and coastal areas. Rural areas seem to be perpetually disadvantaged by the urban center emergency management practice construct. This is despite the fact that 97% of the land mass in the United States is considered rural (U.S. Census Bureau, 2017). Yet, only about 14% of the U.S. population lives in rural areas (Cwiak & Butterfass, 2024). The remaining U.S. population (86%) lives in urban centers on the remaining 3% of U.S. land mass (U.S. Census Bureau, 2017).

Large metropolitan areas typically have significantly greater access to resources and more skilled and knowledgeable personnel, therefore possessing a higher capacity and capability compared to severely understaffed and under-practiced rural areas. This discrepancy highlights a fundamental imbalance in disaster response capabilities across different geographic areas. This imbalance exacerbates existing vulnerabilities in rural areas.

Rural areas have fundamental differences from urban centers and these differences impact emergency management practice. Factors such as, the geographic distribution of residents, resources, and government and community services, coupled with the demographic characteristics of rural areas that increase vulnerability, challenge the use of traditional emergency management strategies. To exacerbate the situation, the lack of financial resources in rural areas limits the depth of government positions (to include emergency management). It is not uncommon for local emergency managers in rural areas to be in a one person office. In fact, many emergency managers are tasked with other non-emergency management work duties to fill out a full-time position. In these areas, the time assigned to the position cannot adequately meet the level of responsibilities associated with the position, even if the emergency manager in the role has decades of experience. The more typical scenario in rural areas is the emergency manager has no emergency management education, advanced training, or years of experience to guide them in the majority of the emergency management tasks they are responsible for. This lack of capability makes these emergency managers particularly ill-prepared to manage a disaster response and recovery. It also makes connecting and collaborating with other emergency management partners difficult.



Based on interviews and the contextualization of the problem in a rural emergency management practice construct, the NDSU team focused on capability enhancement as a possible solution for the challenge facing local emergency managers in rural areas. In the exploration of this approach, the team examined the development of regional communication platforms, the standardization of disaster response training, and resource sharing mechanisms.

Interviewees suggested the development of shared digital environments (i.e., a shared drive) accessible by local, state, tribal, and federal entities would help improve communication between levels of emergency management. This type of platform would facilitate real-time information exchange and resource tracking, reducing miscommunication and ensuring all parties can access the same data. These types of environments are easy to establish, but the team noted that the time investment would be challenging for local emergency managers in rural areas due to lack of capacity.

Also considered, was the standardization of disaster response training across Region 8. This idea focused on the implementation of comprehensive training programs that incorporate the diverse experiences of local emergency managers in rural areas and the unique challenges they face. While this training would build stronger regional networks, the challenge encountered is the time investment involved when emergency management capacity is already low.

A third idea regarded an effort to leverage existing networks like the Emergency Management Assistance Compact (EMAC) more liberally and explore new resource-sharing avenues including personnel, equipment, and information. This was considered to overcome the limitations faced by less experienced or resource-constrained emergency managers. This idea was not without merit, but it was not as specifically focused on the individual emergency manager's capability development as it was on the delivery of capabilities to meet the needs of an event.

Ultimately, the above ideas were not pursued as the team did not feel they met the challenge presented. Therefore, the team decided that the most effective route to address capability deficits was to create a simple guidebook that could walk inexperienced emergency managers through the basic processes of response and recovery without overwhelming them. This option was viewed as a way to support capability development with a recognition of the limited capacity of local emergency managers in rural areas.

Discussion and Recommendations

Due to the general identity of rural communities, and their lack of capacity and capability during disasters, there is a dire need for a unified disaster assistance approach to strengthen the communication between local, state, and federal governments during disaster response and recovery. Rural communities also need to continually improve their state of knowledge on new hazards to reduce their risk and vulnerability (Smolka, 2006). The guidebook is designed to support local emergency managers in rural areas enhance their capability at a pace that works for them, and in the process, helps create a unified approach.

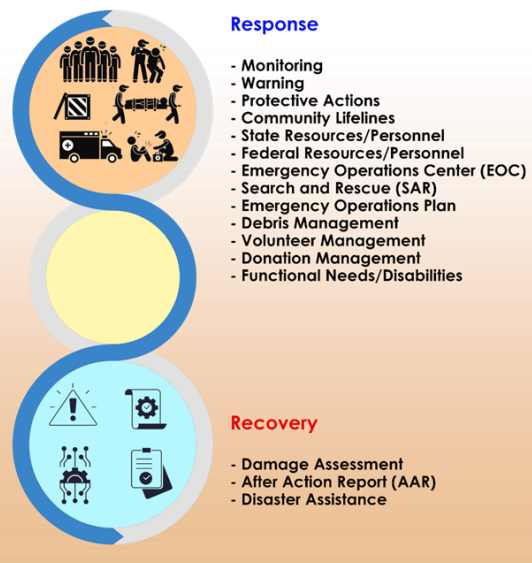
From the guidebook:


“The guidebook is intended to provide a roadmap for emergency managers who are new or infrequently deal with disasters in their jurisdiction. The guidebook is structured with three focused columns that are intersected by common activities that are undertaken in a disaster. These columns are pre-impact (to be undertaken before an event occurs), impact (to address as the event is occurring), and capability expansion (to be undertaken if seeking additional capability in an area). Common language is used in this guidebook, but as terms come up that are commonly reduced to acronyms in the emergency

management practitioner community, they are noted. Caution was taken to present enough information to prompt thought or action, without overwhelming the user. Not all information will apply to every community or jurisdiction.

It is not the intent of this guidebook to supplant existing emergency management training or education. This guidebook also does not represent that it covers every nuance of an effective response and recovery; rather, it is intended to be inclusive of major activity areas that emergency managers should be thinking about as they are engaging in these efforts. This guidebook was developed in an editable format so jurisdictions can modify it to meet their specific needs. The items in the capability expansion column are hyperlinked. The appendices include additional information that may be helpful.”

The guidebook was informed by subject matter experts, existing emergency management guidance and tools, and an understanding of the emergency management academic literature. Some of the sections listed in the guidebook, such as EOC






activation and selection of a Public Information Officer (PIO), are the result of interviewees identifying subject areas that rural communities need more knowledge in and access to during a disaster. The guidebook was designed to serve as a resource that can be utilized in both disaster and non-disaster periods. Capability-building practices using resources listed in the guidebook can be focused on as the emergency manager has time available.

The guidebook, as created by the NDSU team, is not intended to be anything more than a beginning template that can be built upon by others in the emergency management community. The point of the guidebook is to illustrate a way in which a deficit in capability and experience can be addressed when capacity is low. It is not intended to supplant the call for increased emergency management capacity and capability development in rural areas (Cwiak & Butterfass, 2024).



Summary




The importance of developing capability within the context of low capacity focused the NDSU team's efforts. The guidebook serves as an illustration of one way in which capability development can be supported both disaster and non-disaster periods. The guidebook concept can be modified and used for other essential capability development initiatives where capacity is low.

The guidebook in its entirety is included with this report, but also exists independently as an editable Word document. The NDSU team hopes that this effort will help FEMA Region 8 achieve greater unity of effort that supports more effective and efficient emergency management practice. It is also hoped that readers of this report clearly understand that the guidebook, while helpful, is a stop-gap measure that is necessary because local emergency managers in rural areas are not sufficiently supported to meet all the responsibilities of their position. At its core, this is a funding matter that requires additional attention and dedicated investment from federal, state, and local government.



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