2013-03

Ready for the future: assessing the collaborative capacity of state emergency management agencies

Schaal, Jennifer

Monterey, California. Naval Postgraduate School

NAVAL POSTGRADUATE SCHOOL

MONTEREY, CALIFORNIA

THESIS

READY FOR THE FUTURE: ASSESSING THE COLLABORATIVE CAPACITY OF STATE EMERGENCY MANAGEMENT AGENCIES

by

Jennifer Schaal

March 2013

Thesis Advisor:	Susan Hocevar
Second Reader:	Ellen Gordon

Approved for public release; distribution is unlimited

THIS PAGE INTENTIONALLY LEFT BLANK

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.			
1. AGENCY USE ONLY ***(Leave blank)***	**2. REPORT DATE** March 2013	**3. REPORT TYPE AND DATES COVERED** Master's Thesis	
4. TITLE AND SUBTITLE READY FOR THE FUTURE: ASSESSING THE COLLABORATIVE CAPACITY OF STATE EMERGENCY MANAGEMENT AGENCIES		**5. FUNDING NUMBERS**	
6. AUTHOR(S) Jennifer Schaal			
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey, CA 93943-5000		**8. PERFORMING ORGANIZATION REPORT NUMBER**	
9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES) N/A		**10. SPONSORING/MONITORING AGENCY REPORT NUMBER**	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government. IRB Protocol number NPS.2012.0057-IR-EP7-A.			
12a. DISTRIBUTION / AVAILABILITY STATEMENT Approved for public release; distribution is unlimited		**12b. DISTRIBUTION CODE** A	

13. ABSTRACT (maximum 200 words)

Emerging needs of the emergency management discipline are outlined in recent presidential directives, national strategies and federal emergency management strategic initiative documents. Meeting these needs requires collaboration as a core capability. Collaboration with diverse communities, volunteers and the private sector are essential, as are strategic and operational actions for collaboration, building social capital, and using social media for collaboration. The future of our nation's resilience to disasters depends on a collaborative network of partners that reaches from the Federal Emergency Management Agency to individual citizens and the communities they inhabit. State emergency management agencies are the hub of this network and must lead the effort to effectively collaborate at all levels. The research findings of this thesis show that state emergency management organizations have not yet fully developed the collaborative capacities necessary to meet emerging needs. In addition, data shows that organizational structures of state emergency management organizations are impacting collaborative capacity development. In particular, military-based organizations lag behind their civilian-based counterparts in every area of collaborative capacity building. Reasons for these differences, and research into more effective structural models, should be explored.

14. SUBJECT TERMS Collaboration, Collaborative Capacity, State Government, Emergency Management, Homeland Security, Preparedness, Prevention, Social Capital, Whole Community, Social Media			**15. NUMBER OF PAGES** 147
			16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	**18. SECURITY CLASSIFICATION OF THIS PAGE** Unclassified	**19. SECURITY CLASSIFICATION OF ABSTRACT** Unclassified	**20. LIMITATION OF ABSTRACT** UU

NSN 7540-01-280-5500 Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std. Z39.18

THIS PAGE INTENTIONALLY LEFT BLANK

Approved for public release; distribution is unlimited

READY FOR THE FUTURE: ASSESSING THE COLLABORATIVE CAPACITY OF STATE EMERGENCY MANAGEMENT AGENCIES

Jennifer Schaal
State Preparedness Assessment Program Manager
Washington State Emergency Management Division
B.A. City University of Seattle, 1993

Submitted in partial fulfillment of the
requirements for the degree of

**MASTER OF ARTS IN SECURITY STUDIES
(HOMELAND SECURITY AND DEFENSE)**

from the

**NAVAL POSTGRADUATE SCHOOL
March 2013**

Author: Jennifer Schaal

Approved by: Susan Hocevar
Thesis Advisor

Ellen Gordon
Second Reader

Daniel Moran
Chair, Department of National Security Affairs

THIS PAGE INTENTIONALLY LEFT BLANK

ABSTRACT

Emerging needs of the emergency management discipline are outlined in recent presidential directives, national strategies and federal emergency management strategic initiative documents. Meeting these needs requires collaboration as a core capability. Collaboration with diverse communities, volunteers and the private sector are essential, as are strategic and operational actions for collaboration, building social capital, and using social media for collaboration. The future of our nation's resilience to disasters depends on a collaborative network of partners that reaches from the Federal Emergency Management Agency to individual citizens and the communities they inhabit. State emergency management agencies are the hub of this network and must lead the effort to effectively collaborate at all levels. The research findings of this thesis show that state emergency management organizations have not yet fully developed the collaborative capacities necessary to meet emerging needs. In addition, data shows that organizational structures of state emergency management organizations are impacting collaborative capacity development. In particular, military-based organizations lag behind their civilian-based counterparts in every area of collaborative capacity building. Reasons for these differences, and research into more effective structural models, should be explored.

THIS PAGE INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

LIST OF FIGURES

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF TABLES

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF ACRONYMS AND ABBREVIATIONS

CPG	Comprehensive Preparedness Guide
DHS	Department of Homeland Security
EDAT	Economic Development Assessment Team
EMA	Emergency Management Agency
EMAC	Emergency Management Assistance Compact
EMI	Emergency Management Institute
EOC	Emergency Operations Center
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FFY	Federal Fiscal Year
FOA	Funding Opportunity Announcement
HSGP	Homeland Security Grant Program
ICS	Incident Command System
IOP	Interagency Operational Plan
JTTF	Joint Terrorism Task Force
NAPA	National Association of Public Administration
NDRF	National Disaster Recovery Framework
NEMA	National Emergency Management Association
NIMS	National Incident Management System
NPG	National Preparedness Goal
NRF	National Response Framework
PPD-8	Presidential Policy Directive 8 (National Preparedness)
SEOC	State Emergency Operations Center

SFI	Strategic Foresight Initiative
SPSS	Statistical Package for the Social Sciences
UASI	Urban Area Security Initiative

ACKNOWLEDGMENTS

I would like to thank Paul McNeil for encouraging me to apply for the Naval Postgraduate School Center for Homeland Defense masters program and for his interest and support throughout. I would like to thank Sheryl Jardine, my first teacher of all things homeland security, for lighting up the path I had to walk to get to this point. I would like to thank Don MacSparran for being unfailingly positive and supportive, giving me the confidence to think I might actually be able to tackle something like this. I would like to thank Washington Emergency Management Division Director Jim Mullen for the long conversations and his candid and thoughtful views on state emergency management, and Terry Egan for checking in with me regularly on my progress and listening without judgment. I would like to thank Russ Sonmore and Blessing Guillermo for accomplishing the impossible at work for the long periods I was away at school. I would like to thank Chris Bellavita from pulling me back from the brink when things got rough, Susan Hocevar for her expert and steady guidance throughout this project, and Ellen Gordon her perspective on the national state of emergency management. I would like to thank my friends and family for all the support, encouragement and patience with my mental and physical absences during the program.

Lastly, I would like to thank the staff members of state emergency management agencies across the nation who answered the call to my survey, without whose participation this project would not have been possible. This thesis is for them.

THIS PAGE INTENTIONALLY LEFT BLANK

1.0 INTRODUCTION

One crucial characteristic of the successful emergency manager is the necessity of collaboration and leadership outside their own organization. Emergency management entities rarely own the resources and influences needed to mitigate, prevent, protect, respond or recover from the threats and hazards they face. Emergency managers lead communities of effort, or networks of participants. The leadership skills required for emergency managers are not the traditional ones expected for more hierarchical professions. Emergency managers are leaders, facilitators, coordinators, and collaborators all at the same time.

National Emergency Management Association website accessed April 21, 2012

Things can fall apart, or threaten to, for many reasons, and then there's got to be a leap of faith. Ultimately, when you're at the edge, you have to go forward or backward; if you go forward, you have to jump together.

Yo-Yo Ma

Emergency management, and its half-brother homeland security, is an increasingly complex enterprise. Bigger and more frequent climatic and geologic disasters have increased the size, scope and partners involved in disaster management planning. Reaction to the events of 9/11 has created new homeland security missions for federal, state and local governments, and a resulting new wave of organizations at every level. Large amounts of federal grant funding have been pumped into planning and response networks across the public sector, expanding the amount of equipment, training programs and exercises, along with program management, legal, financial and administrative staff to manage it all. Global corporations transcend political borders and possess emergency communications, traveler tracking, worldwide news networks and incident response capabilities that often make the public sector envious. Volunteer networks, encompassing all manner of faith-based, nonprofit and

community-based organizations, have formalized emergency management training programs and are now an essential element of disaster response and recovery. There is recognition that the number and variety of stakeholders in the homeland security enterprise includes partners from all walks of life.

The Federal Emergency Management Agency (FEMA) has come to call these partners “the Whole Community.” FEMA defines the Whole Community as a concept that organizations and individual communities use to communicate their needs, strengths, and capacities in order to collectively build resilience through increasing social capital. (FEMA Whole Community Approach, 2011) FEMA guidance and recent presidential directives such as the National Preparedness Goal recognize that resilience to disasters can be achieved only when all partners work together.

FEMA conducted a study over 2010 and 2011, to look at the emerging needs of the emergency management discipline and to define the core capabilities to meet those needs. The Strategic Foresight Initiative (SFI) resulted in a vision document called *Crisis Response and Disaster Resilience 2030: Forging Strategic Action in an Age of Uncertainty.* This document described the complex threats we face in the coming decades and the collaboration skills emergency managers must develop to build resilient organizations and communities.

Emergency management agencies cannot do it alone. This is especially true at the state emergency management level. States are the hub through which all protection and preparedness activities must pass. Yet many state emergency management agencies seem to be organized and managed as though they can indeed do it alone: a scan of state emergency management agency websites across the fifty states reveals precious little in the way of connection to volunteers, communities, or any entities outside of local emergency management contacts, if indeed those are included in the website at all. An agency’s website may not be the best indicator of services offered, but it is the most publicly available source of information about an organization, and in most instances the

only source of information that can be found. Even social media connections such as Facebook and Twitter, which have transcended the private sector and become ubiquitous on other government websites, are not often found on state emergency management agency sites.

Some state emergency management agencies do seem to stand out as leaders in partnering capabilities. Some have listed extensive volunteer resources on websites. Some have developed public awareness readiness campaigns that incorporate elements of social media. A few demonstrate partnerships with local businesses and powerful private sector organizations such as McDonald's and Walmart.

What makes one state emergency management agency better at partnering than another? No two state emergency management agencies are alike, just as no two state governments are alike. But some broad structural patterns emerge. According to the most recent information collected from states every two years by the National Emergency Management Association (NEMA), nineteen state emergency management agencies are organized within military departments, twelve within public safety departments, nine within governors' offices, nine within homeland security or state law enforcement departments, and two that do not fit any of these structural categories. [1] In these structural patterns, no geographic, historical or other commonalities are readily apparent; for example, the three states that include emergency management agencies within their state police departments are Michigan, New Jersey and Texas…three states with seemingly nothing in common. No data can be found to explain why thirty six percent of states include their emergency management functions within

[1] NEMA Biennial Report survey data are available only to NEMA members. However, state and territorial EMAs charted by broad organizational structure category can be viewed on the NEMA website at:
http://www.nemaweb.org/index.php?option=com_content&view=article&id=209&Itemid=377.
Accessed July 17, 2011. The current NEMA 2012 Biennial Report highlights can be viewed at:
http://www.nemaweb.org/index.php?option=com_content&view=article&id=474&Itemid=442.
Accessed November 10, 2012.

military-based organizations while the remaining states maintain emergency management functions within civilian-based organizations.

Do these various organizational structures of state emergency management make a difference in their ability to collaborate? Can the broad organizational patterns be used to study collaborative capacities of each?

These are relevant questions. Collaborative capacity of state emergency management agencies matters. No other public sector level of emergency management demands the ability to partner with so many different communities, organizations and governments. Federal entities work primarily with states; locals work with states…and states work with everyone. States must truly understand and embrace the meaning of "whole community" more than any other entity in the emergency management system.

1.1 PROBLEM STATEMENT

Recent literature in the form of presidential policy directives, FEMA and state testimonies before congress, and countless blogs, professional forums and industry publications show that the emergency management discipline has many new demands. The increasing size and scope of natural disasters has raised the cost of response and recovery at the same time economic woes have shrunk response and recovery resources. The widespread adoption of handheld smartphones and social networking media in all levels of society has changed the way citizens respond to emergencies, and in turn, the way emergency management agencies must plan for response. There is recognition that disaster resilience, as well as the ability to counter the radicalization that often leads to terrorism, depends on relationships at the community level and increases the demand for collaboration among diverse groups. Added to these new demands, The President, Congress and the Department of Homeland Security have stepped up efforts, through new doctrine such as the National Preparedness Goal (2011), to strengthen national preparedness capabilities in the five core mission areas of prevention, protection, mitigation, response, and recovery.

Though we have learned a great deal from the disaster events of the past two decades, neither the discipline of homeland security nor the discipline of emergency management is close to maturation. It is well recognized (e.g., FEMA Whole Community Approach (2011); Reale (2011), that we cannot be effective as a nation in protecting ourselves if the government agencies charged with protection responsibilities do not work with each other, other agencies, the private sector and the communities and individuals they serve. Working together in coordination and creating networks of relationships are called for, but these alone will not suffice. (Kaiser, 2011, 6) Emergency management agencies will need to build and strengthen collaborative capacity to meet current and future demands of the discipline.

Nowhere in government is this need more readily apparent than at the state level. States are unique within the emergency management hierarchy in the number of organizations and individuals they must interface with, and build relationships with, in order to meet their prevention, protection, mitigation, response and recovery missions. Each state has its unique issues, budgets and political realities that can influence how its public safety and homeland security needs are met. This results in a national patchwork of state emergency management organizations with no two organizational structures alike. Additionally, some states organize their emergency management agencies within military departments, a structure not seen in any other level of government. Are there significant differences in how military-based versus civilian-based structures collaborate with other organizations and communities? What impact might these structures have on the ability of state emergency management agencies to build collaborative capacity? These questions are as yet unstudied.

Research for this thesis defines emerging needs of the emergency management discipline; explores the collaborative capacities needed to meet these needs and the impact on state emergency management agencies; and presents data to determine whether organizational structures of state emergency management agencies have an effect on capacity to build and utilize

collaborative skills. The audience for this research includes state governors, prospective state governors, leaders in the state emergency management and homeland security community, and students of these disciplines.

1.1.1 Emergent Needs for Emergency Management

In developed nations, an expectation most citizens have is that their governments protect them as much as possible from the effects of disasters. They also expect assistance in recovery from disasters and the resumption of the normal activities of their lives. In the U.S., this expectation has shifted over the past several decades from a focus on nuclear war during the Cold War era to the current focus on “all hazards,” including the increase in major impact weather events and terrorism. The establishment in 2002 of the U.S. Department of Homeland Security (DHS), FEMA’s incorporation into that organization, and the millions of federal dollars dedicated by Congress to homeland security and emergency preparedness and response, is evidence that disaster response and recovery has stepped to the forefront of Americans’ expectation of government responsibilities.

Recent presidential directives have reinforced this expectation. In March 2011, Presidential Policy Directive Eight (PPD-8) set forth the need for a national preparedness goal, and a system that will allow the Nation to “prevent, protect against, mitigate the effects of, respond to and recover from those threats that pose the greatest risk to the security of the Nation.” This Directive and the national preparedness framework it engenders emphasize a national approach to preparedness, replacing the more disparate objectives of prior national homeland security strategies. However, as evidenced by statements the DHS Strategic Plan 2012-2016 (p16), increased attention to preparedness at the national level demonstrates the recognition that these systems must work closely together, and resources must be shared collaboratively across the country if we are to become resilient as a whole. As the DHS document notes, the robust response needed for national resilience to disasters requires the engagement and integration of the

private sector, government and nongovernmental organizations, other community organizations and individual citizens. (DHS Strategic Plan 2012-2016, 16)

Parallel to the creation of PPD-8, two important FEMA documents tie the intent of the national preparedness goal to emerging threats and the capabilities needed to confront those threats. The "Strategic Foresight Initiative" (SFI) comprised a panel of subject matter experts meeting over the course of 2010 and 2011, to evaluate drivers of threats on the horizon. The panel then used scenario-based planning methodology to derive essential capabilities to meet multiple possible threats, rather than traditional planning methods that focused only on the threat deemed to be most likely to occur. The panel found nine factors to be the select drivers of change in the threat landscape. (FEMA SFI Summary, 2011, 2–3) Examining the implications common among the nine factors, the panel identified these select emerging needs of the emergency management discipline:

- *Envisioned changes in emergency and disaster management roles and responsibilities will require multi-sector collaboration to meet future demands;*
- *Trust—between the public and government—must be strengthened;*
- *Individuals, families, neighborhoods, communities and the private sector will play an increasingly active role in meeting emergency management needs;*
- *New and evolving at-risk populations must be considered in all phases of emergency and disaster management;*
- *Promoting a global mindset will help emergency managers evolve.* (FEMA SFI Summary, 2011, 4)

Further, the FEMA SFI 2011 Summary Briefing presentation material notes that the advent of technological advances such as smartphones and tablets broadens access to information, which empowers individuals and promotes a "sharing rather than hierarchical information environment." (FEMA

SFI 2011 Summary Briefing, 4) Each of these emergent needs highlights a particular aspect of collaborative capacity that, taken together, describe the new complexities facing emergency managers in developing preparedness skills. Following the SFI, FEMA's "*Crisis Response and Disaster Resilience 2030: Forging Strategic Action in an Age of Uncertainty*" vision document presented the analysis of the Initiative and laid out emergent needs of the emergency management system. Key elements of future needs are omni-directional information sharing across disparate communities and organizations, using current technologies and networks; diverse multi-lingual and multi-cultural communications capabilities; leveraging volunteers; and building a shared vision of future challenges and a shared culture that looks beyond the latest crisis.

These documents present an emergency management world that in less than two decades will look very different from the one two decades past. Emergency managers could once feel confident in their preparedness skills if they had trained themselves to respond quickly to a crisis, knew the steps to take to begin recovery, and created "comprehensive emergency management plans" to outline each step they would take in managing a disaster. The lessons of 9/11 added the need to share intelligence information among public agencies to deter terrorist threats, and the need for public safety responders to work together interoperably during a catastrophic event. A decade hence, we understand that our populations are increasingly diverse and have diverse needs in crisis situations; we cannot use a one-size-fits-all approach to evacuation, medical surge, sheltering or recovery operations. We also now understand how limited our public sector resources really are in disasters, and that the resources available in the private sector and volunteer communities are needed to strengthen the effectiveness of preparedness and response.

The SFI findings prescribe the next lesson we must learn to meet the evolving demands of the emergency management discipline: that collaboration is an essential skill that crosses the core capabilities, as defined in PPD-8, to "prevent, protect against, mitigate the effects of, respond to and recover from

those threats that pose the greatest risk to the security of the Nation." In order to effectively meet future needs, emergency managers must learn to communicate, coordinate and cooperate with each other in such a fashion as to move forward jointly 'from the edge…jumping together' as Yo Yo Ma might describe.

1.1.2 Need for Collaborative Capacity

Cooperation, coordination and communication are skills that served emergency managers well in the past, when quick response and recovery actions were all that were needed of them. It is collaboration, however, that makes partners of stakeholders, and collaboration that makes the network of partners move forward together toward prevention of human-caused disasters, and resilience of the whole community. Stakeholders need to learn to collaborate with each other. Collaboration involves developing deeper relationships based on mutual respect and trust. Collaboration involves partnering in such a fashion that stakeholders develop a shared vision of the future, and mutually agreeing on collective strategies to meet that vision.

State emergency management agencies need to lead the collaboration effort. FEMA and presidential directives provide guidance in desired outcomes from a national homeland security perspective, but local emergency managers look to states to interpret that guidance and customize it according to each state's priorities and unique set of threats, vulnerabilities and strengths. It is state level government that is responsible to find the most effective organizational model for leading and managing successful collaborative efforts.

State emergency management agencies (EMAs) are the hub of a network through which all significant emergency preparedness, response and recovery actions pass. As can be seen in Figure 1, state EMAs interface with government, nongovernment, private sector and community organizations of multiple types and levels. For this network to achieve its mission of preparedness and resilience to disasters, collaborative capacity is needed for the partners in the network to

work effectively together. Since state EMAs are the hub of the network, it could be said that those agencies are among those most in need of developing collaborative capacities.

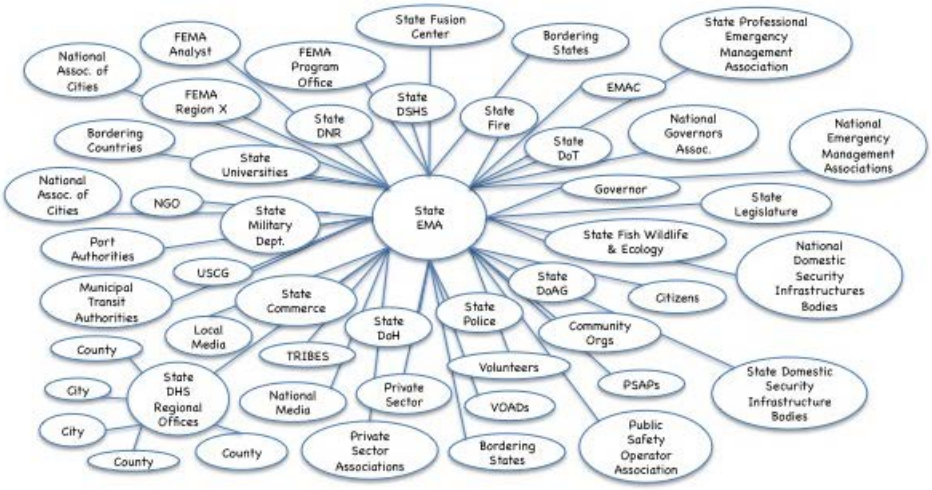

Figure 1. State Emergency Management Agencies are the Hub

Note: This figure demonstrates the multitude of government, nongovernment, private sector and community organizations of all types and levels with which state emergency management agencies must interface and collaborate.

1.1.3 Collaborative Capacity of Organizations

The degree to which an organization can collaborate with other entities is constrained by the level of collaboration mechanisms it has developed. These mechanisms can be broadly organized into five general factors: strategy and purpose; people; lateral mechanisms; rewards and incentives; and structure. (Hocevar, Thomas, Jansen 2006).

The expressed strategy and purpose for collaboration will have a direct bearing on whether staff perceive a “felt” need to collaborate (Hocevar et al. 2006) in order to accomplish an organization’s mission. Starting with strategic agreement about the purpose and value of collaboration, organizations demonstrate the value placed on collaboration by devoting resources (time and money) and taking operational actions that result in collaboration. For example, managers plan and schedule meetings with other organizations specifically to develop collaboration between the organizations. Another example would be the development of mutually agreed protocols for sharing resources in disasters. In these examples, organizations demonstrate their strategic agreement about the purpose and value of collaboration by seeking mutually beneficial solutions to problems, showing respect for different points of view, and collaborating even when there are no financial incentives to do so.

The value placed on individual collaboration skills during the hiring process will greatly influence how people in the organization collaborate, and how the organization collaborates as a whole. The emergent requirements of emergency management agencies demand that all levels of an agency be capable of collaborating effectively with partner organizations and communities. The more value an organization places on collaboration skills in recruiting and selecting staff, the higher the level of individual collaboration competency in the organization.

A third factor is the lateral mechanisms an organization develops for training together and for information sharing, for building relationships internally across the organization and externally with other stakeholders to create social capital. “As relationships develop, social capital accumulates in the form of increased respect, trust, information exchange, and mutual understanding, all of which contribute to increased success in collaboration and an increase in what we call collaborative capacity.” (Hocevar et al. 2006). Use of social media and other common technologies serves as a good example of a lateral mechanism to increase information sharing among organizations and build social capital.

A fourth factor is incentives and rewards for collaboration, which can come from within or outside an organization. For example, value placed on collaboration skills during promotions can be perceived as an internal reward system for staff desiring promotions to higher levels of responsibility or authority. Another example of an internal incentive would be the training offered to staff in partnering skills or the use of social media tools and technologies. The Urban Area Security Initiative (UASI) federal grant program requirement of regional collaboration across urban area partners provides an example of an external incentive.

Finally, structure can be a factor in collaborative capacity. A formalized structure for collaboration may be in place, by itself or as part of an expressed strategy for collaboration. Institutionalized policies and procedures for collaboration may be in place. Among the five factors, a structure for collaboration may be the most difficult to discern without an in-depth study of an organization. It also may be closely tied to an organization's overall structure.

1.2 RESEARCH QUESTIONS

This thesis addresses two questions. First, how well are state-level emergency management agencies meeting the emerging collaborative demands of the discipline? Taking the FEMA SFI and vision documents as a guide to emerging needs of the emergency management discipline, this research looks across the broad organizational categories of state emergency management requirements and uses state EMA staff input to provide a self-assessment of their organizations' progress in meeting the emerging needs.

The second research question asks whether the military-based vs. civilian-based organizational structure of the state EMA affects how well agencies are meeting the emerging requirements for collaboration.

1.3 SIGNIFICANCE OF RESEARCH

During the 2012 devastating fires that consumed the Colorado Springs area, it was reported[2] that thousands of evacuation phone calls to endangered citizens were not completed or were not answered. As the Waldo Canyon Fire moved closer to Colorado Springs, a reverse notification system that initially had 13,000 registered users jumped to 52,000, but more than 20,000 calls—two thirds of the impacted population—were never delivered.

> **Thousands of wildfire warnings undelivered in Colo.** More than 20,000 evacuation calls were never delivered to residents in the path of a wildfire that destroyed about 350 homes around Colorado Springs, Colorado in June, records show, according to the Associated Press, July 10. It was the second time in 5 months that Colorado residents said they did not get calls to pack up and run as flames raced toward their homes. Officials in El Paso and Teller counties were trying to determine why two-thirds of the 32,000 impacted residents did not receive calls during the Waldo Canyon fire that began June 23. Nearly 10,000 attempts to reach residents in Colorado Springs were abandoned after the calls were not completed, and more than 11,000 calls were not answered, according to records obtained by KMGH 7 Denver. Cassidian Communications, the reverse notification provider, said some calls were not completed because of heavy volume. Phone company officials said their phones were working fine at the time. A spokesman for the El Paso/Teller County E911 said his agency will hold meetings to discuss the problem. The system had 13,000 people registered in its cellphone database before the wildfire, officials said. That jumped to 52,000 as homes were burned, and at one point, 1,000 residents per hour were registering their mobile numbers, the Denver Post reported. About 12 percent of the people authorities intended to notify didn't get a warning, a sheriff's spokesman said. The company that handles that system, Baton Rouge, Louisiana-based FirstCall Network, Inc., said the process worked exactly as it should have.

It would be difficult to find a more compelling example of the need for collaboration than this problematic evacuation notice in Colorado Springs. In the

[2] Thousands of wildfire warnings undelivered in Colo. Source: http://columbustelegram.com/news/national/thousands-of-wildfire-warnings-undelivered-in-colo/article_bfcdd02f-8b92-56fc-b5d6-51bfd1dd9543.html.

aftermath of the incident, the cause of which was undetermined, the news brief mentioned these stakeholders: Colorado residents (this was the second time that residents of the state had failed to receive fire evacuation notifications); the City of Colorado Springs; El Paso and Teller Counties; reverse notification provider Cassdian Communications; El Paso/Teller County E911; phone company officials; a county sheriff's office; and First Call Network, Inc., the apparent provider of reverse notification registration services. In all, six separate public sector offices and three private sector companies were involved in this single communications incident, not to mention the thousands of uninformed citizens themselves. Recognizing this failure, the City of Colorado Springs in its initial after action report described an "immediate need" to study the capacity of its current public warning notification system.[3]

The preceding example is offered to illustrate the need for collaboration among emergency management stakeholders. In the stakeholder network, states are ultimately the entities that citizens, and local and federal governments, look to as being responsible for all parts of the system working together. States must navigate decreasing tax revenues; reduced federal funding support; increasing populations; businesses that want tax breaks in order to keep the jobs they sustain within the state; more frequent and more costly disasters; and local emergency management agencies that have more resources at their disposal than the state does. To do this effectively, state emergency management agencies must be able leverage all of the resources at their disposal, and to do that, they must possess collaborative capacity.

No two state governments are alike. States have many options for organizing and structuring their core functions. When it comes to options for organizing public safety, emergency management and homeland security functions, very little is understood about smart practices for these functions

[3] City of Colorado Springs Waldo Canyon Fire Initial After Action Report. October 23, 2012.

specifically at the state level. Much has been written about the requirements of the emergency management discipline, but not at the individual state level. When homeland security became a recognized discipline after 9/11, some research was done regarding how homeland security functions could and should be incorporated into, or coordinated with, state emergency management functions. (e.g., Woodbury, 2004) However, the number and variety of state emergency management and homeland security organizational models that now exist suggest that no apparent best practice models have emerged.

The research for this thesis investigates current level of collaborative capacity at the state EMA level. It is hoped that the audience for this research—state governors, state legislators, and state homeland security and emergency management practitioners—will benefit from the findings. It is also hoped that future students of the homeland security enterprise will build on this research to determine the factors that encourage and inhibit collaborative capacity growth at the state EMA level; to find demonstrable best practices for state EMA collaborations with the communities they serve, and to understand the role that organizational structure plays in collaborative capacity growth. Lastly, it is hoped that federal partners may use this research to accelerate our movement toward a prepared, resilient nation.

1.4 STRUCTURE OF THIS THESIS

Chapter 2.0 presents a review of the federal strategic and visioning documents that define emerging needs of the emergency management discipline. Collaborative capacity is shown to be the common requirement across all of the emerging needs. Collaborative capacity is explained and related to organizations, to homeland security, and to state-level emergency management. This review of the literature surrounding emerging needs, collaborative capacity, and the role of state-level emergency management informs the general questions of the

research and the specific questions of the survey instrument used for the research. Chapter 2.0 also presents an overview of existing state EMA organizational structures.

Chapter 3.0 presents the design and conduct of the research. State emergency management staff in all fifty states were contacted directly by email and offered an opportunity to participate in an anonymous web-based survey. The survey was designed to differentiate state EMAs by organizational type, pulse staff for opinions on how they felt their state EMAs were faring in the activities of meeting emerging needs of the emergency management discipline, and to allow a comparison of the results by the reporting structure of the office (governor, public safety, military, etc.).

Survey questions were based on emerging needs of the emergency management discipline as defined in national documents such as the FEMA SFI and vision statements. Questions were clustered under the topics of: strategic actions for collaboration; operational actions for collaboration; collaborating with local/diverse communities; collaborating with volunteers; collaborating with the private sector; building social capital; and using social media for collaboration. Questions were posed as positive statements with a 6-point Likert scale of response between “Strongly Agree” and “Strongly Disagree.” Three open-ended questions offered the opportunity for elaboration or comment.

Chapter 4.0, Data and Analysis, explains the survey results and analysis of the findings. Staff in the emergency management agencies of all fifty states were contacted and provided the opportunity to participate. A response rate of thirty percent was achieved. Self-report ratings were used to generate an overall picture of the collaborative capacities in the seven different domains of collaboration described above. The different organizational structures of state EMAs were well represented in the responses, offering confidence in the analysis that organizational structure makes a difference in state EMA collaborative capacity.

Chapter 5.0, Conclusions and Recommendations, summarizes the survey results, draws overall conclusions, and provides recommendations based on findings along with indicators of the need for further research.

THIS PAGE INTENTIONALLY LEFT BLANK

2.0 LITERATURE REVIEW

This chapter examines the literature exploring current and future needs of the emergency management discipline, collaboration as a core capability required by current and future needs of the discipline, the evolving role of emergency management at the state level, and current state emergency management agency organizational structures.

Emerging needs of the emergency management discipline are outlined through an examination of recent presidential preparedness directives and DHS and FEMA forward-looking initiatives. This literature review pulls common themes from the federal documents and highlights those that require collaborative capacity to meets the emerging needs. Federal documents are intended to provide guidance that applies across the federal, state, local and tribal levels of the emergency management network. Few documents can be found that address emerging needs specifically at the state level. Thus, the Researcher makes the assumption that federal documents provide the greatest source emergency management visioning in the United States, for application at any level in the network.

There is extensive literature to be found on collaboration, collaborative capacity, and the need for collaboration in government at all levels. This literature review narrows the focus on collaboration to organizational collaborative capacity determination as modeled by Hocevar, Thomas and Jansen (2006). This determination model was chosen for its prior use in military/defense-based organizations. Other samples of collaboration literature from the Naval Postgraduate School Center for Homeland Defense master's curriculum were chosen to augment the research of Jansen et al.

States play a critical role in emergency preparedness. Since there is little literature addressing the evolving role of emergency management specifically at the state level, this section of the literature reviews draws from overall sources

describing the civil defense history of the emergency management discipline in the U.S., assumptions existing in the discipline that can be traced to that history, and emerging needs of the discipline that highlight those assumptions and compel re-examination of the assumptions. Although the assumptions can be found embedded throughout the emergency management discipline at all levels, they are particularly worth examining at the state level because states are the only level of emergency management that still organize their emergency management agencies within military/defense organizations. Finally, existing state EMA organizational structures are examined through very limited sources of available data.

2.1 PPD-8: NATIONAL PREPAREDNESS

President Barack Obama issued Presidential Policy Directive/PPD-8: National Preparedness on March 30, 2011, to outline the need for a single national preparedness goal, system, and measurement mechanism to ensure disaster resilience from a national perspective. The resulting *National Preparedness Goal* (2011) reshaped the core capabilities needed for national preparedness, calling for a reinvigorated approach to terrorism prevention activities that requires "extensive collaboration with government and nongovernmental entities, international partners and the private sector."

Following the *National Preparedness Goal* (2011), a *National Preparedness System* (2011) is being developed to "enable a collaborative, whole community approach to national preparedness that engages individuals, families, communities, private and nonprofit sectors, faith-based organizations and all levels of government." The mechanism for building this system is a set of National Planning Frameworks for prevention, protection, mitigation, response and recovery to be developed collaboratively. These frameworks have been drafted and made open for public review and comment, but the final versions have not yet been released. Here are samples of language from each of the five draft frameworks, citing the need for collaboration:

- **The [Working Draft] National Prevention Framework** "…provides guidance to intelligence and law enforcement professionals on how existing structures, such as the Federal Bureau of Investigation's (FBI's) Join Terrorism Task Forces (JTTFs), state and major area fusion centers, state and local counterterrorism and intelligence units, can collaborate and prioritize their efforts to support the delivery of Protection core capabilities." (4)

- **The [Working Draft] National Protection Framework** includes "…coordinating and collaborating with international partners and organizations to promote risk-based principles and coordinated protective efforts" and "implement risk-informed guidelines, regulations and standards to ensure the security, reliability, integrity and availability of critical information, records, and communication systems and services through collaborative cyber security initiatives and efforts." (17)

- **The [Working Draft] National Mitigation Framework** defines collaboration as "a broad engagement and on-going dialogue about threats and vulnerabilities and meaningful, sustained participation in community planning and decision making." (5) The Framework states that "opportunities for mitigation draw together stakeholders with varied interests and backgrounds and depend on a commitment to collaboration." (16) It further asserts that for this Framework, "community resilience involves multiple capabilities, with communication, collaboration and decentralized civic engagement down to the individual level." (15)

- **The [Working Draft] National Response Framework**, as revised from its 2008 publication, defines roles for emergency managers, at every level of the response system. It also calls out the specific responsibilities of federal, state, tribal, local, nongovernmental (NGO), private sector and volunteer organizations in collaborating with "mutual transparency" during disaster response.

- **The [Initial Draft] National Disaster Recovery Framework (NDRF) Interagency Operational Plan (IOP)** states that the NDRF establishes the coordinating structure to "enhance recovery collaboration and coordination in support of disaster-impacted communities" (10) providing a flexible structure that "enables disaster recovery managers to operate in a unified and collaborative manner" (40) in identifying opportunities for interagency collaboration. The document reinforces the call for "mutually transparent" and collaborative operations between federal and state entities. It also explains that recovery forums (e.g., Economic Development Assessment Team (EDAT)) are "interagency engagements that provide community or regional collaboration with local stakeholders to discuss, explore and strategize solutions to economic recovery issues." (22)

Each of these frameworks, and the system they comprise, usher in a stronger emphasis on collaboration, and a more comprehensive focus on the whole community, than ever before.

2.1.1 Whole Community Approach

We're going to succeed as a team, or we're going to fail as a team: even if FEMA does everything right, we can't succeed without the team.

W. Craig Fugate, FEMA Administrator

In *A Whole Community Approach to Emergency Management: Principles, Themes and Pathways for Action* (FEMA, 2011), FEMA Administrator Craig Fugate explained that we can no longer rely on a government-centric approach to disaster response, and that we must fully engage the capacities of our entire society. Doing so will require emergency managers to understand the daily life complexities of communities in order to collaborate with communities and properly serve their needs.

This is no small task for state emergency managers who may typically depend on local EMAs to develop relationships at the community level. The strategic prescription in *A Whole Community Approach* is for emergency managers to:

- Understand community complexity;
- Recognize community capabilities and needs;
- Foster relationships with community leaders;
- Build and maintain partnerships;
- Empower local action; and
- Leverage and strengthen social infrastructure, networks and assets. (FEMA, 2011, 5)

To do this, state EMAs need to enter a world quite different from simply managing state emergency operations centers (EOCs) during disasters, listing hazardous chemical sites and writing program-required plans. New skills for collaboration must be developed in state EMA organizations, and those skills must be clearly valued in the hiring and promotion process. Resources—time and money—must be applied to learning these new skills.

Chia (2010) offers practical advice for community outreach, suggesting that emergency managers work to identify community newcomers and immigrants. Chia asserts that community leadership can be strengthened and made more resilient if emergency managers learn to communicate with

immigrant communities within their cultural and language contexts. State emergency managers should work in concert with local emergency management, law enforcement and community representatives to find ways of reinforcing cultural norms while bridging the common goal of building resilience.

State agencies involved in strengthening the health, social and economic well-being of local communities already understand many of the values, complexities and nuances of daily community life. State EMAs need to develop deeper partnerships with their state agency partners to draw upon rich resources for building new collaboration skills. For example, state EMA leadership can make a priority of regular meetings specifically for the purpose of interagency collaboration; doing so would increase the social capital of all state agencies as well as intensify the resources directed at community resilience.

The benefits of a whole community approach for states are great, not just in more efficient use of resources but also for slimming budgets in hard economic times. As *A Whole Community Approach* notes, ”the pooling of efforts and resources across the whole community is a way to compensate for budgetary pressures, not only for government agencies but also for many private and nonprofit sector organizations.” (FEMA, 2011, p4)

2.1.2 Regional Resource Sharing

Presidential Policy Directive/PPD-8 mentions the need for interagency coordination for rapid integration and sharing of personnel in disasters. It does not mention the sharing of other types of resources. However, FEMA has expanded on the concept of shared resources by requiring states to list regionally and nationally deployable assets. In the federal fiscal year (FFY) 2012 Homeland Security Grant Program (HSGP) Funding Opportunity Announcement (FOA), FEMA states that any proposed projects developing new capabilities will have to identify how new assets will be shared outside their immediate areas and support national needs. The phrase “nationally deployable resources” has been used

many times in recent national teleconferences and presentations by FEMA Grants Program Directorate Assistant Administrator Elizabeth Harman.

Without further definition of what the phrase “nationally deployable” constitutes, it remains to be seen how this requirement will play out in the FFY 2012 HSGP. Nevertheless, this language is pointing in the direction of further collaboration among state EMAs, and collaboration between state and federal emergency management. State and territorial EMAs, who have through the past many years created disaster mutual aid agreements under EMAC (Emergency Management Assistance Compact) are now *required* to participate in EMAC in order to receive federal grant funding. FEMA is attempting to institutionalize collaboration in the administration of homeland security grant programs.

2.1.3 Social Capital, Networks and Media

Sociologist Russell Dynes (2005) asserts that the social networks already in place before a disaster and are even more robust during a crisis and provide the basis for community resilience. Dynes (2005) believes that emergency managers must recognize that individuals are not helpless in disasters and that communities do not need to be commanded and controlled.

Dynes (2005) found that, of all the forms of capital considered in emergency management, social capital is stronger than all other forms of capital in disasters, and thus provides a primary basis of community resilience. Dynes (2005) noted that in daily life, citizens do not experience many duties and obligations of citizenship, but in disasters they are challenged to help each other in their times of need. Crises provide opportunities for citizens to strengthen their ties with their communities and to demonstrate citizenship, providing for community growth and strengthening.

Thoughts expressed in the *FEMA Strategic Plan 2011-2014* support Dynes’ assertions. “Communities will organize themselves to deal with crises in much the same way as they organize to deal with daily challenges. By working together with new partners and focusing on strengthening what works well in

communities on a daily basis, we can advance creative solutions that build collective Whole Community disaster management capabilities and help strengthen the nation's resilience." Norris, Stevens, Pfefferbaum, Wyche and Pfefferbaum (2007) also support Dynes' views that "pre-existing organizational networks and relationships are the key to rapidly mobilizing emergency and on-going support services for disaster survivors," noting that collaboration is essential for collective action and decision making.

Dynes (2005) dispels the popular notion that individuals have conflicting roles in disasters; that they are always forced to choose between work roles and family roles. Dynes describes a general assumption in the disaster management literature that persons would abandon their work roles, especially those roles within emergency management organizations. However, he purports that research proves this assumption inaccurate and that individuals adapt both work and family roles in crisis situations. Dynes (2005) argues that the obligations and expectations of individual work and family roles within community units are in and of themselves a form of social capital and a basis for adaption. Adaption of roles during disasters is evidence of resilience, and should be studied closely by state emergency managers in order to exploit the use of individuals within their communities in leading response activities.

Bach, Doran, Gibb, Kaufman and Settle (2010) agree that a centralized authority approach to disasters, with an over-reliance on government over personal responsibility, prevents the flexibility needed to confront today's complex incidents. However, their findings in studies of resilient community response to disasters in the U.S. and U.K. would challenge Dynes' assumption of community resilience. Bach, et al. (2010) believes governments need to understand the complexities and fragmentation that often exist in their communities. Such fragmentation makes it difficult to build the trust across groups and institutions that communities need to build social capital for effective resilience in emergencies. (Bach, et al. 2010)

Bach, et al. (2010) purport that a shift is needed in state-civil society relations. They argue that public participation should lead in identifying priorities, organizing support, implementing programs and evaluating outcomes. This shift is supported by recent examples of disaster response utilizing social media, such as Japanese citizens finding rescue and medical help through Twitter.

In fact, the wide acceptance and use of new social media technologies such as Twitter and Facebook provide a ready-made avenue for state EMAs to tap the resources of empowered citizens 'leading, not following.' "We need to move away from the mindset that Federal and State governments are always in the lead," says FEMA Administrator Fugate, "and build upon the strengths of our local communities, and more importantly, our citizens." (Fugate, FEMA 2011, 10) Social media such as Twitter and Facebook allow citizens to push instant disaster information to the whole community. State EMAs have thus far done little to tap this resource, preferring instead to gather information by traditional means, and then pronounce it only when multiple layers of authority have signed off on it. (Hartman 2012)

A key desired outcome identified in the *FEMA Strategic Plan 2011-2014* is to "successfully seed innovative grassroots resilience-building activities in communities across the country." An idea for such an activity would be the co-development of "apps" for smartphones that would be useful for public alerts, or for sharing information during the chaotic aftermath of a disaster. State EMAs could partner with other state agencies to work with communities to better understand their needs, especially for public alerts and warnings, in crisis situations. (Gusty 2011) Based on this information, they could then partner with colleges and private software developers to create apps, including collaboration with local arts organizations and her community groups not traditionally involved in emergency preparedness collaborations. (FEMA 2011)

2.2 TERRORISM PREVENTION: MOVING "LEFT OF BOOM"

"Preventing, avoiding or stopping a threatened or…actual act of terrorism" is the prevention mission area defined in the National Preparedness Goal (2011). Graphically illustrated by Lawrenson Smith LLC in Figure 2, the intent of the homeland security enterprise is to focus activity and resources "left of boom" by preventing, protecting against, or limiting the impact of terrorist acts.

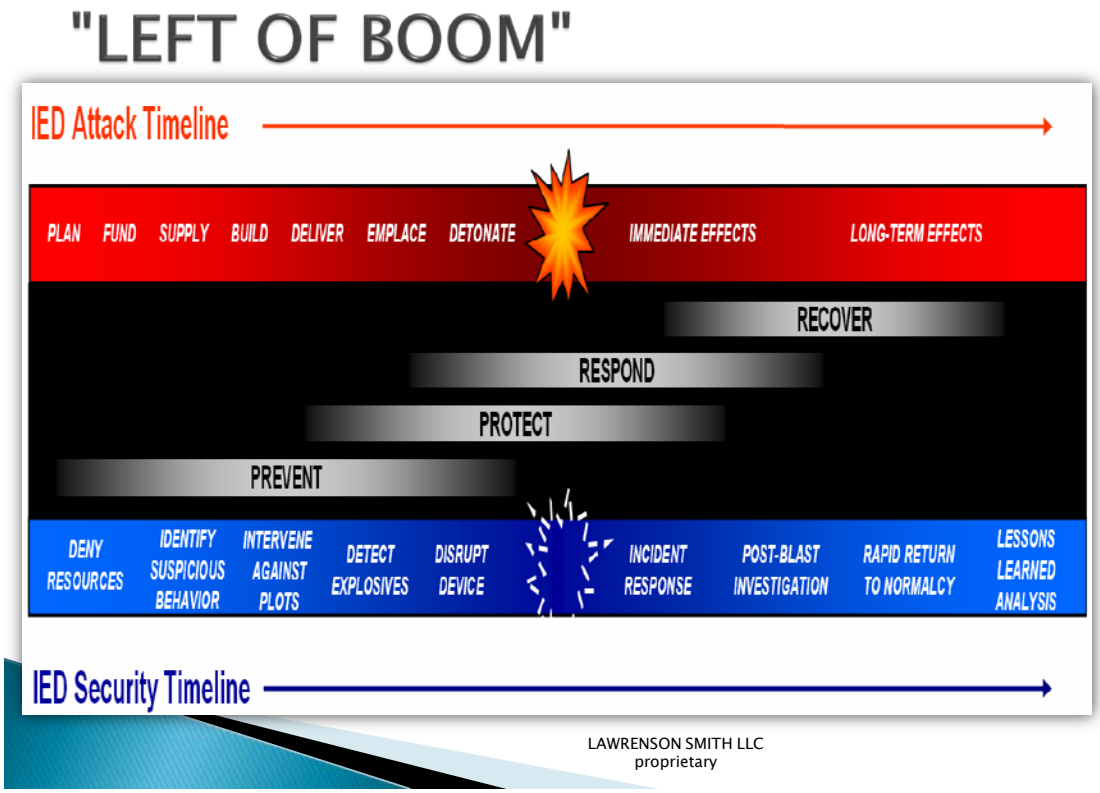

Figure 2. Left of Boom

Used with permission of Paul Smith, Lawrenson Smith LLC.

Note: This figure demonstrates four phases of countering and reacting to an Improvised Explosive Device (IED), with emphasis on the steps taken by terrorists to plan extreme violent acts and the corresponding steps which must be taken by law enforcement, emergency management and other homeland security practitioners.

Figure 1 dramatically illustrates the steps required to prevent the extreme violent attacks often used by terrorists. Each of these steps, from the denial of resources for creating improvised explosive devices, to the disruption of a device before it is deployed, requires the collaboration of law enforcement, other government partners, private sector and individual citizens in spotting suspicious behaviors, confirming intent to harm and in preventing the actors from carrying out their intent. (Executive Office of the President 2011) Recent DHS literature on countering violent extremism such as the 2011 DHS "Approach to Countering Violent Extremism" emphasizes the ability of law enforcement and government agencies to work with local communities to spot behaviors that indicate potential extremist activity.

As outlined in the NPG, the core capabilities required to achieve the prevention mission area are planning; public information and warning; forensics and attribution; intelligence and information sharing; interdiction and disruption; and screening, search and detection. Although these core capabilities may seem law enforcement-centric, the NPG makes clear that core capabilities are the province of the whole community, and not the responsibility of any one function of government or public safety. "Ensuring the security of the homeland requires the execution of terrorism prevention through extensive collaboration with government and nongovernmental entities, international partners and the private sector." (NPG 2011)

To prevent radicalization of youth that often leads to extreme violent acts, law enforcement agencies are challenged by increasingly diverse local communities to learn the skills needed to build communities of trust. Building trust requires development of language skills and expression of respect for privacy and civil rights and liberties. As Wasserman (2010) states, "meaningful dialogue and collaboration with communities needs to occur in a manner that increases the legitimacy of the agency in the eyes of that community." (p3) Correspondingly, state fusion centers must learn, by working with diverse local communities, "the difference between behavior that is indicative of…terrorist

activity and that which is constitutionally protected to prevent improper or inaccurate assumptions." (Wasserman 2010)

2.3 FEMA STRATEGIC FORESIGHT INITIATIVE

The FEMA SFI, conducted within the broader public and private sector emergency management community during 2010-11, resulted in the publication of *Crisis Response and Disaster Resilience 2030: Forging Strategic Action in an Age of Uncertainty*. This document presents the essential capabilities emergency managers and homeland security practitioners need, regardless of how global economic, environmental and other issues play out over the next two decades. The new, augmented or different emergency management capabilities identified in this report are summarized below:

(1) "Dynamic and unprecedented shifts in local and regional population characteristics and migratory flows" (FEMA 2012, 13) will require building multi-lingual proficiencies and understanding risks associated with heavily populated coastal areas and urban centers, and more remote locations where new population centers are forming. Building this capability requires close dialogue with community leaders to better understand local needs, and will mean involving traditionally underrepresented populations in planning and service delivery.

(2) Omni-directional information sharing is a necessity. (13) Information created and distributed by government must remain relevant to the public. This will involve utilizing complex information and media environments, and staying abreast of rapidly evolving social networks and knowing how to leverage their power and influence.

(3) Partnering with individuals and community organizations is essential to build capacity for self-reliance and individual initiative. (14) Individuals must be empowered to assume more responsibility as government resources continue to dwindle. Core to this effort is partnering with local communities to shape K-12

curricula for building self-reliance skills in children and families. This will involve developing collaborative relationships with communities and individuals at a grass roots level.

(4) Fostering a culture that embraces forward thinking and "futures" knowledge. (14) Operational and leadership training must support this culture by including the skills and tools to build a shared vision for the emergency management community of the future. Anticipation of emerging challenges must be engrained in organizations to develop appropriate plans and contingencies. This will require collaboration skills in building shared vision.

(5) Creatively incorporating technology to inform and organize volunteers is needed to leverage volunteer capabilities across all emergency management phases. (15) This involves understanding the limitations and risks of utilizing volunteers and how to mitigate them, as well as understanding and adopting appropriate technologies.

(6) Proactively engaging business in all emergency management phases, and soliciting its contribution to policy development, is essential to protect private sector critical infrastructures and ensure their resilience. (15) Policy collaboration will require skills beyond the building of public-private agreements for emergency response; it will require partnerships built on strong relationships and mutual trust.

The six capabilities highlighted here have a common theme: developing them requires improving collaborative capacities in emergency management. This necessity is reinforced by other sources in the literature. The NPG released by DHS in 2011 reshaped the core capabilities needed for national preparedness, calling for a reinvigorated approach to terrorism prevention activities that requires "extensive collaboration with government and nongovernmental entities, international partners and the private sector." (DHS 2011) In the *FEMA Whole Community Approach* (2011), Administrator Craig Fugate explained that we can no longer rely on a government-centric approach to disaster response and so we must "engage our entire societal capacity." (FEMA 2011) Doing so will require

emergency managers to understand the daily life complexities of communities in order to collaborate with communities to serve their needs.

To meet the vision of the SFI, the new core capabilities will require "…creative and collaborative thinking and action" of emergency management planners that are "motivated and empowered to look beyond short-term concerns and narrow stovepipes and recognize opportunities for collaboration around shared interest." (FEMA 2012) Emergency managers must sharpen collaboration skills to meet these needs, and look for ways to institutionalize collaboration throughout their organizations.

2.4 COLLABORATION AS A CORE CAPABILITY

The common theme throughout PPD-8 documents, the FEMA SFI and resulting future vision statements demonstrates that collaboration is a core capability essential for every partner in the national preparedness network.

Kaiser (2011) indicated that reasons for the "current upsurge [in interagency collaboration] are the growth in government responsibilities, cross-cutting programs, and their complexity; certain crises which showed severe limitations of existing structures; and heightened pressure to reduce the size of federal programs and expenditures." These reasons support the view that improved collaboration is called for not only for emergency preparedness needs but also due to shrinking government budgets.

A National Association of Public Administration (NAPA) panel has defined measures need to assure better performance of federal grant-funded state homeland security and emergency preparedness projects. (NAPA 2011) The Panel stresses that the very success of the National Preparedness System relies on collaboration among the partners but also recognizes that this collaboration presents the "greatest weakness" in terms of being able to measure effective collaboration. Panel recommendations call for FEMA to assess the collaborative practices in coordination with state, local, regional and urban areas, and to "use the results to develop scoring systems for future quantitative or qualitative

performance measures on collaboration and to assist program participants to strengthen their performance on this critical issue." Also noted is the opportunity to evaluate whether collaboration activities have continued to occur in UASIs that have been dropped from FEMA funding in the past two years, and the recommendation that FEMA study this closely since institutionalizing of collaboration was and is an expected outcome of the UASI grant program. (NAPA 2011)

2.4.1 Collaborative Capacity Defined

Collaboration is, as Merriam Webster explains, working with other agencies or instrumentalities to which one is not immediately connected, "especially in an intellectual endeavor." Carrasco (2009) defines individual collaborative capacity as the "knowledge, skills and attitude required to achieve collaborative outcomes" and organizational collaborative capacity as the "culture and processes required to support collaboration."

Hocevar, Fann, and Thomas (2006) define collaborative capacity as "the ability of organizations to enter into, develop and sustain inter-organizational systems in pursuit of collective outcomes." (Jansen et al. 2008) further describe that "inter-organizational collaboration comprises a system of processes by which organizations work together to accomplish common or complementary goals and objectives or a common mission" and that "collaboration is often used synonymously with partnering and is manifest when organizations form alliances."

These collective definitions serve to illustrate that collaborative capacity has definable or measurable outcomes; requires "attitude" or perceived value of collaboration; and requires skills, presumably gained through both training and experience. The definitions also imply that collaborative capacity is something not inherent in organizations and must be learned. Collaboration can be confused with coordination, but they are not the same thing. Coordination means working together, and centers on communication between coordinating

individuals or organizations. Collaboration includes coordination, but adds the element of a definable or measurable outcome that would not have been achievable without the collaboration between the individuals or organizations.

2.4.2 Collaborative Capacity of Organizations

Kuznar (2009) explored collaboration in various structural forms from an anthropological point of view, and explained that, for successful collaboration to occur, benefits or incentives for collaboration must be sustained in each of the various organizations with a purpose to collaborate. Kuznar looked at the concept of sodalities, or "collaborative societies" based on kinship or nonkin criteria, and explained that "maintaining collaboration within or between sodalities requires sustenance of benefits to the various organizations, and of rewards to the individuals who ultimately need to perform actions that serve an organizational purpose." (Kuznar 2009) This indicates that organizations and individuals within those organizations need incentives and rewards as motivators for collaboration, and that there must be perceived benefits or value of collaboration in order for it to occur.

The need for perceived benefit in order for collaboration to occur in organizations is echoed in the framework for assessing collaborative capacity by Jansen, Hocevar, Rendon, and Thomas (2008). A perception of the value of collaboration, or a "felt need" resulting in such benefits as shared resources or the achievement of common goals, creates organizational purpose for collaboration and must be in place for effective collaboration to occur. Other factors must also be in place: incentives and rewards to reinforce the value of collaboration; trust, competency, commitment and respect for others' views among the people in the organization; lateral mechanisms that foster regular communication and relationship building between organizations; and a formal structure that allows sufficient authority for participation and leadership of collaborative efforts. (Jansen, Hocevar, Rendon, and Thomas 2008)

2.4.3 Collaborative Capacity in Homeland Security

Jardine (2010) noted that collaboration has been a growing theme in Homeland Security Grant Program (HSGP) guidance since 2003. Donahue, Cunnion, Balaban and Sochats (2012) claim emergency managers must base response planning on community needs rather than threats, adding that needs must be defined by local communities and not the responders. “Public perception of needs satisfaction is critical” say Donahue et al., “because it drives public opinion, trust and confidence in response capabilities.” (Donahue et al. 2012, 3) Kasapoglu, Mileti and Deflem (2008) researched the impact on disaster response of inter-organizational and intra-organizational structures and cultures in the broader emergency management community, attempting to find a model or models that would serve as a predictor for effective response to attacks such as those on 9/11.

Pelfrey (2005) asserts that collaboration is the “most essential element” in the prevention phase of the Cycle of Preparedness framework for preparing for terrorist attacks. Pelfrey states that “those who would attack this nation are likely to seek unusual vulnerabilities, surprise, and use novel methods,” the effects of which can be prevented through regular and methodic collaboration among the organizations in the preparedness network.

Even the military recognizes the need for increasing collaboration. Harm and Hunt (2009) indicate the military understands the need to change its view of collaboration and expand it beyond just collaboration between branches of the service. “New and expanded horizontal collaboration” within modern culture “is forcing the military to revaluate the impacts and implementation within their traditional hierarchical system.” (Harm and Hunt 2009)

2.5 EVOLVING ROLE OF STATE EMERGENCY MANAGEMENT

There is scant literature that focuses specifically on the role of emergency management at the state level. Therefore, the emergency management literature

selected for this research was chosen for its relevance to emerging needs of the discipline, and applied where possible to the functioning of state EMAs.

At a 2003 Emergency Manager of the Future roundtable, University of Denver sociology professor Thomas Drabek noted that changes in population diversity, environmental issues and technology development will challenge the emergency managers of the future to "grasp the big picture but not be controlled by it." (Hite 2003) Nine years hence, from a review of presidential directives, national preparedness objectives and FEMA strategic vision documents, it appears that as a nation we are finally grasping the big picture. At the state level, however, it is difficult to say whether EMAs may be headed in the direction of controlling or being controlled by the big picture. Little research can be found that shows state EMAs recognize the need for collaborative capacity for building core capabilities for the future. By the same token, no literature can be found that says state EMAs *don't* recognize the need. Lack of research literature in this area points to a gaping need for academic research.

There are potential legal implications to states of failing to evolve. Preparedness and response planning has always been a key function of emergency managers and is often a codified state public safety requirement. Nicholson (2007) explains that the size and scope of plans is different for each locale but that "minimum standards are steadily becoming more stringent." Homeland Security Grant Program (HSGP) guidance documents (for programs in federal fiscal years 2011 and 2012) now require state and UASI strategic plans be updated every two years at a minimum. Plans must reflect lessons learned from incidents and exercises, or may subject an agency to claims of negligence if citizens or property are harmed in future incidents as a result of the agency's failure to plan. (Brill 2011)

The 2006 DHS National Plan Review evaluated and criticized state performance of their emergency management duties. Nicholson (2007) claims these criticisms constitute legal notice to states of their liabilities with regard to emergency management. In governmental emergency management agencies,

claims of negligence typically result from failure to fully perform generally accepted agency duties and expectations. This includes failure to plan, and failure to continually review and revise plans to meet changing needs and situations. (Nicholson 2007) In fact, the number two defect found in emergency management plans documented by the National Plan Review was that “state and urban areas are not conducting adequate collaborative planning as a part of ‘steady state’ preparedness.” (DHS National Plan Review 2006, 62) This literature points to clear ramifications for state EMAs failing to uphold their duties to plan, to prepare, and to collaborate with stakeholders in these activities.

In addition to the National Plan review, DHS has adopted the Lessons Learned Information Sharing (LLIS) website to aggregate the lessons learned and observed in exercises and in actual incidents. Lessons describing the need for better collaboration, management of volunteers and donations, working more closely with the private sector, and use of social media for all phases of emergency management abound on the LLIS website and in every emergency management blog, professional association website and industry publication. There is no shortage of information available to state EMAs updating comprehensive plans according to clear mandates for capabilities improvement.

As an example, the following excerpt from a recent Rapid City Journal article reflects on state EMA lessons learned from the 2011 Missouri River flood response in South Dakota, a year after the flood occurred.

> **Emergency a tough test**
>
> The flood tested South Dakota's emergency response capability. A year later, the state has a good idea what it did right — and what needs to be improved, said Kristi Turman, the state's emergency management director.
>
> ‘We did it, but it wasn't pretty,’ Turman said. "We've streamlined the process. We've actually tested it, and it seems to work the way we want it to."

> In a future disaster, state officials will try to make better use of websites and social media to get out information, Turman said.
>
> State officials also came to realize that volunteer agencies can play a vital part in recovery. Those organizations bring donated manpower, money and materials.
>
> During the flood, though, ‘we didn't have anyone on staff devoted full time to coordinating with those entities, finding out what they have to offer and how to get it here,’ Turman said. "We have shifted staff around and added that position."
>
> Another challenge arose when state officials tried to reach out to the informal homeowners associations in unincorporated housing developments such as Riv-R-Land.
>
> ‘They didn't have a structure we could go to formally to give them information,’ Turman said. ‘That lack of government structure down there made it more difficult. It was a challenge we honestly hadn't dealt with before.’ (Woster 2012)

This excerpt is offered as an example of after-action report comments all too common in modern disasters: coordination with multiple stakeholders to move vast amounts of resources to those in need; use of websites and social media for crisis communications; volunteer management; and attempting connections with local communities during disasters when no pre’disaster connections had been established.

One reason for lack of collaborative planning in state EMAs may be incorrect beliefs or skewed histories about the need to control the public when crises occur. Dynes (1994) asserts that emergency planning is universally based on false assumptions that disasters generate social chaos, and must be managed through command and control actions. This dominant planning model assumes weakness in individuals and social structures that must be “returned to normalcy” through control of the people and situation in order for the disaster to be over. (Dynes 1994) Dynes (2005) explained that the roles individuals play within their communities during a disaster are stronger versions of the same roles they play normally. He argues that typical emergency management command-and-control response plans call for creating a new response network for each

disaster, but that this is actually the opposite of what should be done since the social networks that provide resilience to disasters are already in place before a disaster, and in fact are even more robust during a crisis. (Dynes 2005)

Horwitz (2008) asserts that even in disaster response, command and control may not be the most desired capability; instead it may be the agility that organizations can achieve from decentralization such as that found in the private sector and in the U.S. Coast Guard. “Disaster researchers have accused FEMA and other government agencies of being overly conservative and ‘rule-bound’ in the face of a disaster that required not just discipline, but agility.” (Horwitz 2008) Horwitz and Dynes come from different points of view but agree that a certain amount of discipline is needed in disaster response, but much more urgent is the need for empowerment of citizens. Removing the fixation on control of chaos, and replacing it with collaboration, can give both emergency managers and citizens the flexibility they need to respond to disastrous situations.

It is worth noting that, although the command-and control response model is pervasive throughout the National Incident Management System (NIMS) and its national Incident Command System (ICS) component, nowhere is it quite so tangible as military-based state EMAs; no other military organizations are in command of disaster response at the federal or local levels.

McLoughlin (1985) asserted that state level organizations have additional responsibilities [to those at the local emergency management-level] in that they must assess the emergency management needs of, and provide leadership and guidance for, their political subdivisions. The example of the failed tsunami debris planning effort cited above supports this assertion. In that case, the planning effort required the involvement of seven counties, multiple municipalities and several tribes, as well as many volunteer and private sector organizations. Only state-level planning can assure that all relevant stakeholders are taken into account and only collaboration with those stakeholders can assure that every voice is heard in creating workable and effective plans.

Dennis Wenger (2003) expressed concern about the “goodness of fit” between emergency management effectiveness and current command-and-control-based models. He notes that the command-and-control approach illustrated by the nationally-promulgated Incident Command System (ICS), contrasts with the environment that emergency managers typical work in, which requires both flexibility and mutually agreeable outcomes. (Wenger 2003) Dynes (1994) detailed how the culture of military and civil defense has deeply embedded erroneous, battle-metaphor, command-and-control assumptions into the way we think about “emergencies” and emergency management. Dynes (1994) asserts that the growth of the military-based emergency management models was based on the false assumption that citizens did not possess the capabilities needed to help themselves or each other in disasters. The premises of these two authors are supported by recent work, such as the 2007 FEMA Emergency Management Institute *Principles of Emergency Management*, defining essential responsibilities of emergency management functions and organizations. Coordination, cooperation, collaboration, and continuity are the mutually-agreed thematic bases for how functions should be structured and managed. (FEMA EMI 2007) Additionally, the first step in preparedness planning at any level is the creation of a collaborative planning team that involves relevant stakeholders. (FEMA CPG 101 v2.0, 2010)

Quarantelli (2008) agrees with Dynes (1994) and Wenger (2003) that the command and control model which has been dominant in American society is a model mismatched to the needs of citizens and the requirements of emergency management organizations. (Quarantelli 2008) The work of other sociologists, most notably Mileti (2012), concurs with this view. Mileti’s studies on citizen behavior in disasters—particularly how citizens react to public disaster warnings and alerts—supports the view that citizens do not need to be “controlled” before, during or after disasters. (Mileti 2012)

This body of work supports the concept of resilience to disasters. “Resilience” has replaced “resistant” in the emergency management lingo in

recognition that citizens cannot “resist” a disaster, since disasters occur regardless of citizen capabilities or preparedness, but they can take steps to be more “resilient” in returning to a level of normalcy faster/easier/better after disasters occur. This is meaningful to note because emergency managers at all governance levels are grappling with how to measure resilience, and more specifically how to measure the increase in resilience intended by the spending of tax dollars devoted to this purpose. Federal funding of projects to increase community resilience cuts to the heart of emergency management organization and staffing.

Dyne (2000) perceives a shifting trend from emergency management’s historical preoccupation with providing external assistance toward an increased appreciation of the value of developing the capacities of families. This reflects his belief that recognizing the capabilities of, and supporting, existing social units—families, community organizations and related social structures—should be the primary focus of emergency management planning rather than command and control. Remarkably, his words are echoed in the “Whole Community Approach” described in the recently issued FEMA Strategic Plan 2011-2014, a document promulgated by President Obama’s May 2010 National Security Strategy. FEMA now recognizes that “…it takes all aspects of a community (volunteer, faith and community-based organizations, the private sector, and the public, including the survivors themselves)—not just the government—to effectively prepare for, protection against, respond to, recover from and mitigate against any disaster.” (p8) But FEMA goes further than Dynes to say that emergency management is a “continuum” that includes not just the essential functions of managing the impacts of disasters but also “activities that focus on the development, health and long-term success of those communities.” (8) This long-coming shift in acknowledging where emergency managers should focus their efforts, and shape their functions accordingly, should have a groundbreaking effect on state and local emergency management organizations.

Kasapoglu, Mileti and Deflem (2008) researched the impact of inter-organizational and intra-organizational structures and cultures on response to disasters, attempting to find a model or models that would serve as a predictor for response to the 9/11 attacks. This work is cited here for its usefulness to the research question—not for common agreement in a body of similar work, because no other relevant research work can be found on this specific topic.

2.6 STATE EMERGENCY MANAGEMENT AGENCY STRUCTURES

Bolman and Deal (2008) assert that there is no perfect structural model for an organization, and that the structure must enable the organization to meet its mission and goals. They looked at organizational effectiveness in terms of frameworks for structure (organization of groups and teams); human resources (building effective individual and group dynamics); political (managing internal and external power and conflict; and symbolic (shaping a culture to give meaning to an organization's work). Bolman and Deal argue that an organization can be looked at through each of these angles for insights into how to improve the effectiveness of the organization to meet its mission and goals. Structure is only one framework from which to view an organization. From the state EMA perspective, it is a framework that has been largely unexplored in research literature.

Hillyard (2000) examined inter-organizational networks of crisis response organizations and concluded that state EMAs following FEMA's recommended emergency management model worked well within the response network but offered no further perspective on state EMA organizational structure. Schumacher (2008) noted that [state] emergency management organizations do not command or control response and recovery operations; they merely support the response and recovery efforts of municipal authorities. Schumacher (2008) claimed that weak [state] emergency management structures increase vulnerability to disasters, and that vulnerability analyses should be conducted of emergency management organizations to prioritize hazards.

Woodbury (2004) claimed that how states organize and deploy their homeland security resources would determine “national and even international victory” in the war in terror. (49) Smith (2007) examined five different models of combined homeland security and emergency management functions at the state level, concluding that a state EMA should be part of an overall homeland security agency reporting to the governor.

2.6.1 Overview of Existing Structures

Due to wide differences in state organizational and political structures, a scan of state emergency management websites does not reveal much about how state EMAs go about their business. Even a review of state comprehensive planning documents, when they can be located, assists little in understanding what state EMA organizations have in common. The National Emergency Management Agency (NEMA) website (2012) may be the best source of such information, but since that site’s purpose is a resource for state EMA directors, the information available for research is limited.

State EMAs are organized generally around a set of core functions: comprehensive emergency management planning; training and exercise program management; public education and warning; hazard mitigation; maintenance of an emergency operations coordination center; and disaster response and recovery. Many of these functions are dictated by the requirements of the federal grants that fund the activities needed to perform the functions. The extent to which a state EMA devotes resources to a function is not dictated by federal funding; states are entirely free to decide how much of their budgets will be devoted to emergency management activities. Depending on how the agency mission is defined, grants program management, volunteer programs and counterterrorism activities may also be in the mix.

State EMAs fall into broad organizational categories. States self-identify their EMA organizational structures in a survey collected every two years by NEMA, and the published results of the survey on NEMA's website are the only known source of this data.

Nineteen states, or 38% of state EMAs, organize their functions within state military departments, while the remaining state EMAs are organized within civilian-based public safety, homeland security, state police or governor's offices. Based on a review of the NEMA data as well as a scan of the fifty states' individual websites, no commonality can be discerned among the geography, history, commerce, population make-up, natural hazards risk or international borders contained within any of the individual groupings to explain why state EMAs are structured within military or civilian departments.

2.6.2 Military-Based Structures

Nineteen state EMAs (38%) fall within their military (National Guard) departments under the direction of an adjutant general. This military-based organizational structure of emergency management functions, representing the largest grouping of state EMA structures, does not occur at any other level of government. The nineteen states that currently organize their EMAs within military departments are: Alaska, Arizona, Hawaii, Idaho, Iowa, Kansas, Kentucky, Maine, Maryland, Montana, Nebraska, North Dakota, Oregon, Rhode Island, South Carolina, Tennessee, Washington, Wyoming *(not part of NEMA 2012 self-identification survey)*, Wisconsin. (NEMA 2012)

2.6.3 Civilian-Based Structures

The remaining state EMAs are organized within civilian agencies. (NEMA, 2012) Twelve EMAs (24%) are within public safety departments: Massachusetts, Minnesota, Missouri, Nevada, New Hampshire, North Carolina, Ohio, South Dakota, Utah, Virginia, Vermont and West Virginia. Nine EMAs (18%) are within combined homeland security or state law enforcement departments: California, Connecticut, Delaware *(not part of NEMA 2012 self-identification survey; data*

gleaned from Delaware EMA website), Indiana, Michigan, New Jersey, New Mexico, New York and Texas. Eight EMAs (16%) are within governors' offices: Arkansas, Florida, Georgia, Illinois, Louisiana, Mississippi, Oklahoma and Pennsylvania. Two EMAs (4%) do not fit any of these other structural categories: Alabama, Colorado.

2.7 LITERATURE REVIEW SUMMARY

Presidential Policy Directive/PPD-8: National Preparedness ushered in a new focus on emergency management and homeland security core capabilities from a national perspective. Individual strategies aimed at pieces of our homeland security infrastructure and "target" capabilities are now outdated and superseded. Cohesive national frameworks for prevention, protection, mitigation, response and recovery, along with a core capabilities inventory for each of the five phases, support a National Preparedness Goal and comprise a National Preparedness System that focuses on the needs—and the resources—of the whole community. The need for collaboration crosses all core capabilities and requires that each partner in the emergency management network assess its collaborative capacity.

Increased understanding of the activities needed for prevention of terrorist acts places new emphasis on outcomes "Left of Boom." (See Figure 2) Prevention entails not just the sharing of information between relevant stakeholders, it means working with communities to understand and defuse the radicalization that often leads to extreme violent acts. Collaboration built on mutual respect and trust is an absolute requirement for prevention core capabilities.

Federal future visioning projects such as the FEMA SFI demonstrate collaboration among national emergency management stakeholders in agreeing on a shared vision of the future. The FEMA SFI also lights the path to where the emergency management discipline is heading, and the collective outcomes and

emerging skills needed to create those outcomes. The SFI is in itself an example of the collaboration skills we need to develop as a nation.

The National Preparedness Goal, National Preparedness System and FEMA SFI call for collaboration among the whole community of stakeholders in securing and protecting our nation from harm. In particular, collaborating to understand the needs and the strengths of the private sector, diverse communities and volunteers will be essential. Understanding and exploring the power of social capital and social media will be integral to meeting each of the national core capabilities.

The key to meeting core capabilities is collaboration. Collaborative capacity in organizations must be defined, fostered, nurtured, trained, valued and measured. A framework for assessing collaborative capacity in organizations was developed by Hocevar, Fann, Thomas and Jansen (2006). This framework has been successful in determining collaborative capacity in national defense organizations.

State EMAs must take a leadership role in collaboration among stakeholders. State EMA functions are structured differently from state to state, not only from one to another, but also from one broad structural category to another. A major difference in structural organization is state EMAs within military departments versus civilian departments. Disparate structures in state EMA functions may impact state EMA collaborative capability by enabling or disabling strategic and operational actions for collaboration, use of new technologies and social media, building social capital and public-private partnerships, and effective use of volunteers in emergency management.

This research, then, focuses on those five areas of emerging needs: strategic and operational actions for collaboration; use of new technologies and social media; building social capital and public-private partnerships; and effective

use of volunteers in emergency management. The next chapter describes the methodology used to develop and implement a survey to assess actions taken by state EMA organizations to build collaborative capacity in these areas.

THIS PAGE INTENTIONALLY LEFT BLANK

3.0 RESEARCH METHODOLOGY

This chapter describes how the research was designed, how the research instrument was developed, and how the study participants were selected. It also describes how the study was conducted and how the data were analyzed.

3.1 OVERVIEW OF METHODOLOGY

To attempt an answer to the research questions, state EMAs were surveyed using an instrument derived from the literature defining the emerging needs of the emergency management discipline, and the specific collaboration actions needed to meet those needs. The survey questions were also informed by an instrument for assessing collaborative capacity developed in 2006 by Hocevar, Thomas and Jansen. This instrument was chosen for its successful use in prior research and its relevance to government organizations with missions similar to state EMAs.

The survey was web-based and anonymous to allow for maximum freedom of expression in response. This methodology was selected primarily for its facility in reaching a maximum number of participants. The target audience for this study was professional emergency management staff working in the defined state EMA of each of the fifty states in the U.S. The survey was designed to identify only the broad organizational structure of each respondent's state emergency management agency. Respondent identities and home states were specifically not requested in order for the participants to feel comfortable and free in responding to questions that might otherwise cause discomfort for potentially expressing negative opinions about their employing organization. Only three of the fifty questions asked were open-ended questions, and any specific agency identifiers offered in those responses were redacted before the results were downloaded and analyzed. No demographic or personal characteristics questions were collected.

The anonymous survey methodology was selected for this study for several reasons. First, an almost complete lack of previous research in the area of state emergency management agency collaborative capacity presented no opportunities for analyzing previously collected data. Second, it was thought that interviewing subjects on their opinions as to how their individual agencies were faring in meeting the identified emerging needs of the discipline, might generate unreliable data. Third, by using a survey rather than interviews, a broader sample could be reached thus increasing the generalizability of the findings. Fourth, the sheer range of different organizational state emergency management and homeland security models in existence meant that case studies or comparative analyses could cover only a fraction of current capacities. And finally, the opportunity to communicate directly with emergency management staff in all fifty states was irresistible. The resulting extraordinary rate of response to the survey offered proof that the correct methodology was chosen.

3.2 SURVEY PARTICIPANTS

The target group for this research was professional emergency management staff members in state EMAs. Valid email contact addresses for staff members were gleaned from publically available websites and search engines. Staff listed on state EMA websites who were clearly and singly administrative, financial or legal were excluded in order to focus on professional emergency managers. Professional emergency managers basically perform the functions of emergency planning, training and exercising; disaster response and recovery operations; hazard mitigation; public information and awareness; grants administration; and maintenance of communications and online information-sharing resources. Some organizations include volunteer management, homeland security functions, public-private partnership offices and enhanced information technology departments. (Please see Appendix F for a look at apparent functions of state EMAs as evidenced by their websites.)

Email addresses for approximately 600 state EMA staff members were collected and used for the survey invitation email. Error messages returned from outdated addresses brought the valid email address count to 580. Addresses were available for all fifty states. An average of ten to fifteen addresses were found for each state. State geographic and population size were not found to be indicators of EMA staff size or the availability of EMA staff contact info.

Each state EMA was sent one email message with all addresses visible in the "To" section of the message. The message encouraged sharing the survey opportunity with others in the organization in order to maximize participation among those who may not have received the survey invitation. (Please see Appendix A for the full text of the email invitation to participate.)

One email message, identical to that sent to state EMA staff, was also sent through the UASI listserv for its wide readership among state and urban area emergency management throughout the U.S. The email emphasized that the survey was applicable only to state EMA staff. This mechanism for survey distribution was used primarily to reinforce the direct emails sent to state agencies, to add further credibility to the research and attempt to influence targeted state EMA decisions in taking the time and effort to respond.

The methodology used for the survey invitation resulted in 168 usable responses[4], a response rate of thirty percent. Responses were received from each state EMA organizational structure type sufficient to draw conclusions about the relationship of survey data to structure type. The percentages of responses by organizational structure category were relatively closely correlated to the percentages of actual organizational structures among state EMAs. For example, the number of state EMAs within military departments is 18, or 36% of the total

[4] From 175 participant responses, three were self-identified as belonging to county EMAs rather than state-level EMAs and were thus removed from data analysis. One response was removed due to insufficient questions answered. Three responses of "I don't know how my agency is structured" were also removed, since one focus of the research questions was the collaborative capacity by agency organizational structures. The remaining total of 168 responses was used for data analysis.

state EMAs. The number of survey responses from military-based state EMAs was 64, or 37% of the total responses. This suggests that the sample is representative of the population and increases the generalizability of the findings presented in Chapter 4, Data and Analysis.

Table 1 shows the final grouping of responses, by structural organization category, used for the data analysis. Also shown is a comparison of the number or responses by organizational structure to the number of state EMAs with each structure.

Table 1. State EMAs and Survey Responses by Organizational Structure with Responses of "Other" Recategorized

State EMA Structure Type	*Number of State EMAs with That Structure*	*Percent of State EMAs with That Structure*	*Survey Respondents By Structure Type*	*Percent of Respondents by Structure Type*
Office of the Governor	9	18%	58	35%
Public Safety Department	12	24%	40	24%
Homeland Security/ State Police	10	20%	6	4%
Military Department	19	38%	64	37%
Total	50	100%	168	100%

Note: This table shows the total state EMAs by organizational structure category and compares it to the total survey responses by category. Eight responses of "Other" were discerned from the comment box text and moved into the organizational structure they most closely resembled. Correspondingly, the two states with self-identified (NEMA 2012) organizational structures of "Other" were also grouped with the categories they most closely resembled in order to simplify the chart.

This final grouping of responses in this table demonstrates even further that the majority of state EMA organizational structures were well represented in the survey response. Military-based state EMA organizations had the highest rate of response to the survey. Homeland security/state police-based state EMA organizations had the lowest rate of response; nevertheless, enough responses were received from this—the smallest of the four broad-based categories—to ensure adequate representation.

3.3 SURVEY QUESTIONS

Survey questions were constructed using an instrument developed and refined by Jansen, Hocevar, Rendon and Thomas (2009) to gauge organizational capacity for collaboration in homeland security-related organizations. The instrument uses a framework that looks at factors in the categories of purpose and strategy for collaboration; structure for collaboration; lateral mechanisms and processes for collaboration; incentives and reward systems for collaboration; and the people aspects of collaboration. Using this framework, and current FEMA literature describing emerging needs of the emergency management discipline, in particular the FEMA SFI and vision documents, fifty questions were outlined to determine:

- general value placed on collaboration in an organization;
- support for forging relationships with diverse communities;
- support for solicitation and utilization of volunteers;
- support for partnering with the private sector;
- support for development of organizational social capital; and
- support for use and development of social media and technology tools for collaboration.

All questions except the three open-ended questions were phrased in the form of positive statements to which the participants responded using a 6-point Likert scale ranging from 1=Strongly Disagree to 6=Strongly Agree. No other

descriptors or qualifiers were added to the scale. [Complete text and sequence of survey questions can be found in Appendix A.]

The survey began with a question requesting consent to participate (Q1), three questions to determine the staff size, organization structure and history of structure change (Q2-4), including an open-ended question to explain the reason for structural change if known. The structure question asked respondents to identify the overall reporting structure of the state EMA; in other words, did the organization report to a governor's office, public safety department, military department, homeland security/state police department, or "other." If "other" was selected, a comment box was provided for describing the reporting structure. An option of "I don't know how my agency is structured" was also provided.

The purpose of this first survey section was to establish the general organizational framework in which respondents were employed. Collecting this data enabled analysis of responses by structural organization, to determine if agency structure made a difference in the response to questions. Responses to the questions regarding size of agency and history of structural change were found to have little value in the analysis.

Strategic and Operational Factors for Collaboration

This set of questions focused on the extent to which collaboration is valued, strategized, trained, or otherwise institutionalized within the state EMA organization's policies and practices. Each of the questions was phrased as a statement to which the respondent could select "Strongly Agree" (6), Strongly Disagree" (1), or one of four points in the range between the two.

A definition of collaboration was provided: *"state emergency management agencies working with other organizations to achieve common goals. Other organizations may include: other state agencies; neighboring state governments; DHS and FEMA program offices; FEMA regional administration; local and tribal governments and responders; state and local boards and commissions; emergency management professional/advocacy organizations; federal and state*

congressional representatives; educational institutions; nongovernmental organizations; federal law enforcement; faith-based and other community organizations; and private sector organizations, to name a few." Fourteen questions (Q5-18) followed.

Six questions examined strategic factors for collaboration:

There is agreement within my organization about the purpose and value of inter-organizational collaboration. (Question 5)

- *The success of my organization's mission requires collaborating effectively with other organizations. (Question 6)*
- *My agency has clearly established goals for inter-organizational collaboration. (Question 7)*
- *My agency always seeks a mutually beneficial solution when negotiating agreements with other organizations. (Question 11)*
- *The people in my agency show respect for differing points of view in other organizations. (Question 13)*
- *My agency collaborates with other organizations even when there are no financial/funding incentives. (Question 14)*

The remaining eight questions focused on operational factors for collaboration.

- *My agency takes a lead role in forming inter-organizational teams for preparedness planning and prevention. (Question 8)*
- *My agency's policies emphasize relationship building with other organizations. (Question 9)*
- *My agency makes training available in relationship-building skills. (Question 10)*
- *My agency has established protocols for sharing resources with other organizations. (Question 12)*

- *My organization's leaders regularly meet and confer with the leaders of other organizations about mutual collaboration. (Question 15)*

- *My agency works with other organizations to build a shared vision of future emergency management challenges. (Question 16)*

- *When recruiting new staff, my agency clearly values collaboration skills. (Question 17)*

- *When promoting staff, my agency clearly values collaboration skills. (Question 18)*

Relationship Building with Diverse Communities

The next set of questions centered on organizational support for relationship building with diverse communities. A definition of diverse communities was provided: *"…can mean not only communities that are geographically determined, but also to groups that have common interests or concerns related to emergency management (e.g., nationalities, religious beliefs, languages, economic situations, special physical needs or mental needs)."* Five questions (Q19-23) followed, to determine the extent to which participants felt their agencies valued relationship building with local communities and/or had put relevant policies or practices into place.

- *My agency's policies emphasize relationship building with local communities. (Question 19)*

- *My agency has developed relationships with local communities, to work together to build community resilience to disasters. (Question 20)*

- *My agency works with local communities to implement efforts to prevent radicalization, especially of youth, that often leads to violent acts. (Question 21)*

- *When recruiting new staff, my agency clearly values expertise in relationship building with local communities. (Question 22)*

- *When promoting staff, my agency clearly values expertise in relationship building with local communities. (Question 23)*

Soliciting and Utilizing Volunteers

Six questions (Q24-29) followed, to determine the extent to which participants felt their agencies valued volunteers, whether volunteer input was solicited and valued, and whether volunteer management skills were valued and/or trained in the organization.

- *My agency has clearly established goals for soliciting, training and utilizing volunteers. (Question 24)*
- *My agency solicits input from volunteers and uses that input to shape its volunteer program. (Question 25)*
- *My agency has protocols in place for credentialing volunteers for disaster response. (Question 26)*
- *My agency provides training in volunteer management to agency staff. (Question 27)*
- *When recruiting new staff, my agency clearly values expertise in soliciting and utilizing volunteers. (Question 28)*
- *When promoting staff, my agency clearly values expertise in soliciting and utilizing volunteers. (Question 29)*

Developing and Using Social Media and Networks

The next set of questions centered on social media tools and networks. A definition of social media was provided: "…social connection websites such as Twitter, Facebook, LinkedIn, etc., and the corresponding "apps" that allow instant two-way communications via websites, smartphones and other technologies." Seven questions (Q30-36) followed, to determine the extent to which participants felt their agencies actively encouraged, used and/or trained social media tools

and technologies. An eighth, open-ended question (Q37) asked for an example of a social media best practice from the participant's organization.

- *My agency uses social media tools and networks to communicate with local communities. (Question 30)*
- *My agency makes information about volunteer opportunities for emergency management work available through websites or social media sites. (Question 31)*
- *My agency provides training in social media technologies for staff to use in collaborating with other organizations. (Question 32)*
- *My agency works with other organizations to develop new "apps" for emergency preparedness planning and crisis management. (Question 33)*
- *My agency devotes resources (money and time) for learning about emerging social media technologies potentially useful to emergency preparedness planning and crisis management. (Question 34)*
- *When recruiting new staff, my agency clearly values expertise in social media and other technologies useful to emergency preparedness planning and crisis management. (Question 35)*
- *When promoting staff, my agency clearly values expertise in social media and other technologies useful to emergency preparedness planning and crisis management. (Question 36)*
- *Please describe a social media "best practice" from your agency. (Question 37)*

Private Sector Collaboration

Eight questions (Q38-45) followed, to determine the extent to which participants felt their agencies practiced private sector collaboration, whether their agencies were actively involved in private sector partnerships and whether training was provided in private sector partnering.

- *My agency has agreements in place with private sector organizations to share responsibilities in disasters. (Question 38)*

- *My agency takes the needs and capabilities of private sector organizations into account in disaster management planning. (Question 39)*

- *My agency collaborates with private sector organizations on cyber security issues. (Question 40)*

- *My agency collaborates with private sector organizations on critical infrastructure protection issues. (Question 41)*

- *My agency provides training in working with private sector organizations. (Question 42)*

- *My agency provides training in how to protect private sector proprietary sensitive or information. (Question 43)*

- *When recruiting new staff, my agency clearly values private sector partnering skills. (Question 44)*

- *When promoting staff, my agency clearly values private sector partnering skills. (Question 45)*

Building Social Capital

The last grouping of questions centered on social capital. A definition of social capital was provided: "the number and strength of work group, social group, faith/community group, family, friend, acquaintance, and professional colleague relationships that individuals, communities and organizations can draw upon in times of need." Four questions (Q46-49) followed, to determine the extent to which participants felt their agencies engaged relevant stakeholders, defined and agreed on collective outcomes, and had devised a method for measuring social capital in their organizations.

- *My agency has taken action to engage all relevant stakeholders in preparedness planning and prevention. (Question 46)*

- *My agency has worked with stakeholders to define and agree on collective outcomes. (Question 47)*

- *My agency has a method for measuring mutually agreed-upon collective outcomes. (Question 48)*

- *My agency has a method for measuring its "social capital." (Question 49)*

The final survey question (Q50) asked the open-ended question: "If there was one thing that could be done in your agency to improve inter-organizational collaboration, what would that be?"

3.4 ANALYSIS METHODOLOGY

Survey response data were extracted from the Survey Monkey tool and loaded into the SPSS (Statistical Package for the Social Sciences) program. This program was used to calculate the descriptive statistics (item and scale means and standard deviations) for groupings of the data by organizational structure of respondent organizations, and to do comparisons across the groups.

Survey responses that were unusable due to invalid (not part of target audience) or unidentified organizational structures, or insufficient survey answers, were removed from calculations. This resulted in total of 168 usable responses. Because there were few respondents in the homeland security/state police department organizational structure (6 total), this group was excluded from the comparative analyses. However, all respondents were included in the total sample descriptive analyses.

A critical value of $p<.05$ was used to determine statistical significance for all analyses. In addition, in order to allow for a discussion of item-level results, a critical mean difference was determined. Several targeted T-tests were conducted to determine the size of difference between two item means necessary to achieve the critical value of $p<.05$. The calculations found that if two items have means that differ by at least 0.2, then those means are statistically different ($p<.05$). Item-level mean differences less than 0.2 can not be claimed as

statistically different. Calculations were not done to compare all possible means. Instead, this “rule of thumb” (established using targeted T-tests) will be used in the presentation of findings in the next chapter.

The Cronbach’s alpha test was used to determine internal consistency reliability for each scale. These scales are the groupings of survey questions into seven factors: strategic action for building collaboration; operational aspects of collaboration; collaborating with local communities; working with volunteers; using social media; working with the private sector; and building social capital. In the Cronbach’s alpha test, any value higher than a .7 is considered statistically reliable for social science research. The reliabilities of scales used in this research ranged from .89 to .94, showing strong internal consistency reliability. Scale and item-level findings are presented in the next chapter.

3.5 RESEARCH LIMITATIONS

There are several limitations to consider when reviewing the methodology of this research. First, other than fact-based questions relating to respondent organization size and structure, all of the questions are entirely subjective. Responses are based on participant perceptions about their individual organizations, not on what may be factually occurring in those organizations. Questions were sent to professional state EMA staff at all levels in each organization, and the responses of a lower-level staff member may differ greatly from those of a director or manager. Also, the questions cross disciplines within state EMA organizations; if an organization is “stove-piped” internally, a participant in one section may not really know what is happening in another section. In the same vein, a lack of vertical information flow in an organization can impact perceptions; lower-level staff members may not have a view into what executive management is doing. That said, participants were not required to answer all questions, as the survey allowed them to skip questions they could not or did not want to answer.

A second limitation is that the anonymity of the survey allowed for no insight into which or how many states responded. Finally, the survey seeks solely to determine whether different structural organizations of state EMAs have an impact on their ability to meet emerging demands of the emergency management discipline. For any differences discovered, the Researcher can offer only speculation as to the reasons for differences. Further research will be needed to ascertain reasons for differences in how different state EMAs structures are faring in collaborative capacity.

4.0 DATA AND ANALYSIS

This chapter describes overall results of the survey, data collected, and analysis of findings. It begins with a presentation of the overall pattern of findings for the total sample. This is followed by a comparison of results for military-based vs. civilian-based agencies.

4.1 STATISTICAL ANALYSIS OVERVIEW

This section describes the results of statistical tests used to analyze and compare the survey response data. (For more information about the analysis methodology, see Section 3.4 of this thesis.) The data were analyzed using the seven collaboration factors:

1) strategic actions for collaboration;
2) operational actions for collaboration;
3) collaboration with local/diverse communities;
4) building social capital;
5) collaboration with the private sector;
6) collaboration with volunteers;
7) using social media and networks.

Item and scale means and standard deviations were calculated. (The mean and standard deviation for each of the Likert-scaled survey questions can be found in Appendix C.)

Table 2 illustrates the Cronbach alpha reliability of the seven collaboration factors, along with the mean and standard deviation.

Table 2. Mean Ratings of the Seven Collaboration Factors

Collaboration Factor	Alpha	Mean	Std Dev
Strategic action for collaboration	.92	**4.8**	1.1
Operational action for collaboration	.93	**4.1**	1.2
Collaboration with local/diverse communities	.89	**3.9**	1.2
Building social capital	.91	**3.6**	1.3
Collaboration with private sector	.93	**3.6**	1.3
Collaboration with volunteers	.94	**3.3**	1.4
Use of social media and networks	.93	**3.2**	1.4

Note: Ratings based on scale where 1 = Strongly Disagree, to 6 = Strongly Agree. Alpha = Cronbach alpha reliability.

This table demonstrates the overall collaborative capacity of state EMAs across the U.S. As a nation, our strongest collaborative capacity at the state EMA level is that we recognize the importance and the need for collaboration and have taken strategic action for it.

Beyond strategic action, however, state EMAs are not taking actions needed to operationalize or institutionalize collaboration. The difference in means, between 4.8 for strategic action and 4.1 for operational action, is significant. The rest of the mean values tell the same story. The next five specific aspects of collaboration are all rated below 4.0 on a 6-point scale. Among these five, collaboration with diverse communities has the highest rating (3.9), compared with use of social media (3.2) and collaboration with volunteers (3.3), which have the lowest ratings. Collaboration with the private sector and building social capital both have a mean rating of 3.6, which is statistically lower than collaboration with diverse communities, but higher than the two lowest rated factors.

By their own self-report, these data show that state EMAs are not taking adequate action to meet the collaboration needs of the emergency management discipline. The lowest mean value of 3.2 for social media is particularly telling.

Literature describing the powerful growth of social media across all communities, and its usefulness to the core capability mission areas of disaster prevention, protection, mitigation, response and recovery, has proliferated in the past few years. Gusty (2011) discusses the use of social media in public alert and warning, a core capability common to all five mission areas. Peters (2012) offers that social media can be used to significantly strengthen the prevention mission area of suspicious activity reporting. Lucus-McEwen (2012) describes the recent growth of technical volunteerism, defined as groups of geospatial information systems, social media and information technology experts now known as VTCs (volunteer technical communities), that have taken the initiative to further disaster response and recovery technologies on their own. Lack of state EMA capabilities in the area of social media may be hindering progress in other collaboration areas, since social media can be used to work more closely with local communities, volunteers and private sector organizations.

A complete table showing the means and standard deviations of the survey questions, organized by the seven factors of collaboration, can be found in Appendix D. This table allows us to delve more deeply into the specific actions needed to develop collaborative capacity in state EMAs and how we are doing as a nation in taking those actions. Overall, the individual question mean values in this table serve to reinforce observations made above regarding the status of state EMAs on the seven collaboration factors investigated in this research. A closer look at individual items reveals more detail to strengthen this national picture of state EMA collaborative capacity.

The analysis that follows in the next section discusses each of the seven collaboration factors separately.

4.2 STATISTICAL ANALYSIS OF SEVEN COLLABORATION FACTORS

In this section, tables showing the mean and standard deviation for each of the seven collaboration factors are followed by analysis of the results. (The entire table of survey questions by collaboration factor can be found in Appendix C for reference.)

Table 3. Item-Level Means – Strategic Action for Collaboration

Scale	Mean	Standard Deviation
Strategic action for collaboration	**4.8**	**1.1**
Success of our mission requires collaboration (Q6)	5.7	0.9
Agree on purpose, value of inter-organizational collaboration (Q5)	4.9	1.3
We collaborate even when there are no financial incentives (Q14)	4.9	1.3
Seeks mutually beneficial solutions in negotiating agreements (Q11)	4.4	1.3
Clearly established goals for inter-organizational collaboration (Q7)	4.4	1.4
People show respect for differing points of view in other orgs (Q13)	4.2	1.4

Note: Ratings based on scale where 1 = Strongly Disagree, to 6 = Strongly Agree.

As shown in Table 3, the strategic action item with the highest rating (5.7) is recognition of the strategic value of collaboration. Then, a significant drop occurs in the ratings of other strategic items, such as having goals for inter-agency collaboration (4.4) and respect for different points of view in other organizations (4.2). This suggests that collaboration is viewed as an ideal, but may be difficult for state EMAs to incorporate into strategic actions that would build organizational collaborative capacity.

Table 4. Item-Level Means – Operational Action for Collaboration

Scale	Mean	Standard Deviation
Operational action for collaboration	**4.1**	**1.2**
Agency takes lead role in forming inter-organizational teams (Q8)	4.7	1.3
Policies emphasize relationship building w/other organizations (Q9)	4.5	1.5
Agency has established protocols for sharing resources (Q12)	4.5	1.4
Leaders regularly meet w/other org leaders to collaborate (Q15)	4.4	1.3
Builds shared vision of future emergency management challenges (Q16)	4.3	1.5
When recruiting, agency values collaboration skills (Q17)	3.9	1.5
When promoting, agency values collaboration skills (Q18)	3.7	1.5
Agency provides training in relationship building skills (Q10)	3.7	1.6

Note: Ratings based on scale where 1 = Strongly Disagree, to 6 = Strongly Agree.

Table 4 shows the highest item rating in agencies taking a lead role in forming inter-organizational teams (4.7). Policies for building relationships (4.5) and protocols for sharing resources have similar rankings, indicating relatively the same level of activity in state EMAs overall. However, a sharp drop occurs in the ratings of other operational items such as emphasizing the value of collaboration skills in recruiting practices (3.9), and providing relationship-building skills training to staff (3.7). Emphasizing the value of collaboration skill in promoting staff also received a low rating (3.7). The low ratings for these activities suggests that operational actions for collaboration are still confined to higher level in state EMA organizations and have not yet filtered down to the general staff level.

Table 5. Item-Level Means – Collaboration with Local/Diverse Communities

Scale	Mean	Standard Deviation
Collaboration with local/diverse communities	**3.9**	**1.2**
Policies emphasize relationship building w/local communities (Q19)	4.7	1.4
Agency has developed relationships with local communities (Q20)	4.6	1.3
When recruiting, agency values local community relation skills (Q22)	3.8	1.6
When promoting, agency values local community relation skills (Q23)	3.7	1.5
Works w/local communities to prevent radicalization/violence (Q21)	2.6	1.4

Note: Ratings based on scale where 1 = Strongly Disagree, to 6 = Strongly Agree.

As shown in Table 5, the mean value of 2.6 response to the question regarding actions to prevent radicalization that often leads to extreme violent acts (Q21) demonstrated that most state EMAs are not working on this type of collaboration. This is an unsurprising response for two possible reasons. First, this question was worded with a more specific result than other questions that were more generally about building collaborative capacity among organizations and between partners. Second, this question has to do with the prevention

capability area, which up until the recent advent of PPD-8 and the NPG has been mostly the province of law enforcement agencies. The NPG (FEMA, 2011) and related national strategies, along with the FEMA SFI and visioning documents, clearly place prevention as a core capability area for all organizations in the emergency preparedness network. The low score on this survey question is likely not unique to state EMAs but is a capability target for federal and local EMAs as well. Moving "left of boom" (Lawrenson Smith LLC) as illustrated in Section 2.2, Figure 2, requires traditionally response-oriented EMAs to learn new skills to prevent extreme acts of violence by both terrorist and "lone-wolf" actors on American soil. As such, federal, state, local and tribal EMAs will need to collaborate closely to learn from law enforcement and from local communities the actions needed to spot radicalized behaviors and develop prevention capabilities.

Other rankings in Table 5 reveal a sharp disparity between organizational policy (4.7) and practice (4.6) for relationship building with local communities, and the valuing of these skills in the staff recruiting (3.8) and promotional (3.7) processes. As with operational actions for collaboration in Table 4, the Table 5 rankings suggest that state EMA policy and practice emphasizing collaboration skills is not occurring in the strategic/structural element of staff recruitment, or the incentives/rewards element of promoting staff.

Table 6. Item-Level Means – Building Social Capital

Scale	Mean	Standard Deviation
Building social capital	**3.6**	**1.3**
Engages relevant sectors in emergency preparedness planning (Q46)	4.3	1.3
Works w/stakeholders to define & agree on collective outcomes (Q47)	4.1	1.4
Agency has developed method to measure collective outcomes (Q48)	3.4	1.5
Agency has method for measuring social capital (Q49)	2.7	1.5

Note: Ratings based on scale where 1 = Strongly Disagree, to 6 = Strongly Agree.

Table 6 above and Table 7 below show that the collaboration factors of building social capital, and private sector collaboration, have the same overall ranking of 3.6. This indicates both factors are occurring in state EMAs at a similar level of activity. However, the mean rating for whether state EMAs have attained a method of measuring social capital (2.7) was the second to lowest item ranking in the survey. This suggests that, although planning and other activities are occurring in state EMAs for building social capital, at least to some extent, lack of a measurement definition may be hindering the incorporation of social capital into other strategic and operational actions that would strengthen and enhance it.

Table 7. Item-Level Means – Collaboration with the Private Sector

Scale	Mean	Standard Deviation
Collaboration with private sector	**3.6**	**1.3**
Collaborates w/private sector on critical infrastructure issues (Q41)	4.3	1.5
Accounts for private sector needs, capabilities in disaster plans (Q39)	4.2	1.4
Agreements in place w/private sector to share responsibilities (Q38)	4.0	1.6
Agency provides training in working w/private sector (Q42)	3.8	1.6
Collaborates with private sector on cyber security issues (Q40)	3.3	1.5
When recruiting, agency values private sector partnering skills (Q44)	3.3	1.5
When promoting, agency values private sector partnering skills (Q45)	3.2	1.5
Agency provides training in private sector proprietary info (Q43)	3.1	1.6

Note: Ratings based on scale where 1 = Strongly Disagree, to 6 = Strongly Agree.

Table 7 rankings echo the rankings of Table 4 and Table 5 with regard to staff recruitment and promotional activities. This indicates that collaboration with the private sector is occurring, but falling short in organizational activities that build staff skills. Further demonstrating this, the training provided to staff in handling private sector proprietary information received the lowest ranking (3.1) in this collaboration factor. The rankings above 4.0, for collaboration with the

private sector on critical infrastructure issues, show mild agreement that these activities are occurring in state EMAs.

Table 8. Item-Level Means – Collaboration with Volunteers

Scale	Mean	Standard Deviation
Collaboration with volunteers	**3.3**	**1.4**
Clearly established goals for soliciting, training volunteers (Q24)	3.6	1.6
Solicits input from volunteers, uses to shape volunteer program (Q25)	3.5	1.6
Protocols in place for credentialing volunteers in disasters (Q26)	3.4	1.7
Agency provides training in volunteer management (Q27)	3.3	1.6
When recruiting, agency values skills in working w/volunteers (Q28)	3.0	1.5
When promoting, agency values skills in working w/volunteers (Q29)	2.9	1.5

Note: Ratings based on scale where 1 = Strongly Disagree, to 6 = Strongly Agree.

Table 8 echoes a theme in previously shown tables: organizational work is occurring in this area, but not to the level of developing staff skills to build this collaborative capacity. The item-level means for collaboration with volunteers are among the lowest in the survey response, suggesting that, overall, attention to building collaborative capacity with volunteers is not an emphasis of state EMAs. In this case, there is mild agreement that state EMAs have strategized for collaboration with volunteers by establishing clear goals (3.6), and have operationalized working with volunteers by soliciting and using volunteer input (3.5), and some staff training in working with volunteers (3.3) is occurring; but placing emphasis on these skills in the staff recruitment (3.0) and promotional (2.9) processes is clearly falling short.

Table 9. Item-Level Means – Use of Social Media and Networks

Scale	Mean	Standard Deviation
Use of social media and networks	**3.2**	**1.4**
Use social media to communicate with local communities (Q30)	4.4	1.5
Uses social media to communicate volunteer opportunities (Q31)	3.4	1.6
Agency devotes resources to learning about new social media (Q34)	3.1	1.6
Works w/other organizations to develop emergency mgmt apps (Q33)	2.9	1.7
When recruiting, agency values social media skills (Q35)	2.9	1.5
Agency provides training in social media (Q32)	2.8	1.6
When promoting, agency values social media skills (Q36)	2.8	1.5

Note: Ratings based on scale where 1 = Strongly Disagree, to 6 = Strongly Agree.

Finally, Table 9 echoes the theme in earlier tables. Using social media to communicate with local communities received a relatively medium ranking of 4.4, suggesting that this activity may be starting to occur but is still a nascent activity in state EMAs. The rankings of all other items in this collaboration factor drop off sharply, indicating that there is much work to be done in this area of building collaborative capacity. As with Tables 4, 5, 7 and 8, staff training (2.8), recruitment (2.9) and promotion (2.8) processes received the lowest rankings within this collaboration factor, as well as some of the lowest rankings in the entire survey.

4.3 OPEN-ENDED COMMENT RESPONSES

Two open-ended comment questions were analyzed from the survey:

1) Please describe a social media “best practice” from your agency (Q37).

2) If there was one thing that could be done in your agency to improve inter-organizational collaboration, what would that be? (Q50).

Only forty-five participants (27% of the total respondents) responded to the social media best practice question. Responses were nearly evenly divided between military-based (36%), office of the governor-based (33%), and public safety-based (31%) organizations. (Please refer to Appendix E for complete text of responses to this question, organized by state EMA structural type.) Responses indicate that social media use in state EMAs is still too much in its infancy to reveal a best practice. For example, "we just started using social media and only use it on occasion" and "my agency is a newcomer to social media and just in the experimental stage" were comments indicative of the majority of responses across all state EMA organizational structures.

The strongest use of social media for disaster preparedness and response was apparent in the comments from public safety-based organizations: two agencies commented that they were currently in the hiring process for dedicated social media staff positions. The strongest use of social media for public information dissemination was apparent in the comments from Office of the Governor-based EMAs; 47% of this group's comments supported this. One comment each among public safety-based and Office of the Governor-based EMAs indicated their organizations restricted or prohibited use of social media; however, one-third of the responses in military-based EMAs indicated a restriction or prohibition on social media. Taken together, all of the responses paint a picture of undeveloped use of this collaborative capacity tool and the potential need to re-examine the policies related to the use of social media.

Seventy-two participants (43% of the total respondents) responded to the question on one thing that could be done in the organization to improve collaboration. Overall, respondent comments reinforced their answers to the Likert-scaled questions. The same themes were common among military-based and civilian-based organizations.[5] A majority of comments (51%) called for more

[5] Three respondents, however, took this opportunity to comment that their military-based EMA should be moved into a civilian-based organizational structure. Two of these respondents designated alternate structures: one indicated the Office of the Governor, and one indicated the State Patrol.

strategic planning and/or more leadership at management levels in the collaborative capacity areas in this study. Many of these comments crossed both the strategic and operational domains of collaboration. “Develop and communicate a clear, measurable objective and incorporate it into everyday operations and have managers lead by example;” “incorporation into the strategic plan;” and “improve our metrics for inter-organizational collaboration” are samples of such comments. Fifteen comments (20%) centered around the need for improved staffing and training for collaboration activities.

4.4 COMPARISON OF MILITARY-BASED VS. CIVILIAN-BASED AGENCIES

Overall, the survey results present two significant findings. First, as noted in the previous section, the data suggest that although as a nation we are in complete agreement that success of our state EMA missions requires collaboration, we have not yet taken adequate actions to achieve the collaborative capacity needed to meet emerging demands of the emergency management discipline. When examining responses to the seven collaboration factors as in Table 10 below, it is noteworthy that the pattern of rankings, with strategic actions for collaboration at the top and use of social media at the bottom, was the same for both military-based and civilian-based organizations. This pattern of responses provides a reliable finding that we are, as a nation of state EMAs, recognizing that collaboration is important to our missions but not taking adequate actions to build collaborative capacity.

The second research question was to investigate whether collaborative capacity varied depending on whether a state EMA was run from a military or civilian organization. The survey results show that military-based state EMAs lag significantly behind their civilian counterparts in the development of collaborative capacity. Examined by responses to the seven factors, military-based state EMAs showed less positive responses than civilian-based state EMAs in every category, as can be seen in Table 10.

Table 10. Military vs. Civilian State EMA Response Means by Seven Collaboration Factors

Question Category	Civilian-Based EMAs	Military-Based EMAs	Signifi-cance
Strategic action for building collaborative capacity	5.0 (.9)	4.6 (1.1)	*
Operational action for building collaborative capacity	4.4 (1.1)	3.8 (1.1)	*
Relationship building with local/diverse communities	4.2 (1.2)	3.5 (1.0)	*
Building organizational social capital	3.9 (1.3)	3.3 (1.1)	*
Working with and valuing the private sector	3.8 (1.3)	3.4 (1.1)	*
Soliciting, working with and valuing volunteers	3.6 (1.4)	3.0 (1.2)	*
Using social media tools and networks	3.3 (1.4)	3.0 (1.1)	*

Note: Top number is mean, bottom number is standard deviation. * = differences in means for two groups are significant ($p<.05$) using t-test.

Military-based state EMAs also stood out from their civilian counterparts in other aspects of the survey response. At 51% agreement to the statement "my agency has not changed its organizational structure," military-based state EMAs were shown to have had the least changes to their organizational structures, as compared to 37% for offices of the governor, 17% for homeland security/state police departments, and 16% for public safety departments.

Kaiser (2011) notes that there are no commonly accepted precise definitions of collaboration, and that "understanding and use of [collaboration] concepts…might differ meaningfully between the military and civilian sectors of government, given their different responsibilities, heritages, authority structures, organizational frameworks, and autonomy among the components." (Kaiser,

2011, 5) Lack of a common concept of collaboration between military and civilian organizations may also indicate that staff training on collaboration, and other internal mechanisms that enhance the perceived value of collaboration within the organization, may be even more important to effect in military-based state EMAs than in civilian-based EMAs,

THIS PAGE INTENTIONALLY LEFT BLANK

5.0 CONCLUSIONS AND RECOMMENDATIONS

The findings of this research indicate that as a nation, we have much work to do at the state level in preparing to meet emerging demands of the emergency management discipline. The data show that we have universal recognition that collaboration is needed to meet these needs, but the self-report survey data indicates only low to moderate achievements in collaborative capacity.

According to the presidential directives for a cohesive national preparedness system, and the related FEMA documents, collaboration among the whole community partners is a fundamental requirement. State EMAs are the hub of this ecosystem and must build the skills required to lead the whole community partners in collaboration. Evidenced by the results of this research, it appears we have much work to do to build these skills.

These actions are recommended for building overall collaborative capacity in state EMAs across the nation:

- *State EMAs should incorporate plans to meet emerging needs of the emergency management discipline into their strategic objectives and comprehensive planning documents.*

The mandates for omni-directional information sharing and collaboration, volunteer solicitation and utilization, social media and technology exploitation, and partnering with the whole community for resilience are clear. These mandates are not just clear to those of us in the field of emergency management, they are clear to the world. Citizens expect their governments to protect them from harm and to help them in times of need regardless of the size of national budgets or deficits. Not planning adequately, or failing to implement plans effectively, may subject state governments to claims of negligence.

FEMA offers an abundance of training and technical assistance programs for improving skills and growing the core capabilities of disaster prevention, protection, mitigation, response and recovery. States should exploit these offerings to the maximum, training concurrently with stakeholders whenever possible.

- *State emergency managers should develop policies that foster community involvement in disaster preparedness, working with local EMAs and responders in training community leaders to assume strong response roles in disasters.*

Performing such roles will reinforce the contribution and citizenship of community leaders, enhance their reputations and strengthen their roles within their communities. If state emergency management policies and practices recognize and support the roles of community leaders in disasters, the likelihood of future collaborations between government and communities will also be increased. State emergency managers should seek and develop tools to bridge the gap between government and individuals in ways that build trust between the two.

- *State emergency managers should develop training curricula, for both staff and collaboration partners, on learning the mechanisms for inter-organizational collaboration and the use of social media and other technologies that enable collaboration.*

The widespread adoption of handheld smartphones throughout society is enabling communication and coordination as never before. Opportunities abound for harnessing social media applications and devices to support emergency management functions. State EMAs should take a leadership role in working with citizens, communities, volunteers and private sector organizations along state public health, social services, commerce, transportation and law enforcement

agencies and educational institutions to develop interconnected websites, apps and other technologies that are defined by the needs of the whole community and not just individual organizations. Working on technology applications can provide a platform for learning collaboration skills: it requires that stakeholders partner to define mutually agreeable outcomes and the resources (time and money) that each will provide.

- *State emergency managers should consider adding or emphasizing skills in collaboration, public-private sector partnership, social media and volunteer management to the skills and capabilities that are valued in state EMA recruiting, hiring and promotional practices.*

Survey results demonstrated that organizational recruitment and promotion of staff, in a manner that values collaborative capacity, had among the lowest ratings of all the collaboration activities evaluated. A reason for this may be that human resource processes such as these are the most deeply embedded in organizations and the most difficult to change to meet emerging needs. These processes also may be the most attached to, and illustrative of, an organization's culture; and culture may be most sharply demonstrated by the manner in which an organization incentivizes and rewards behavior. It should be noted, however, that changing recruiting and promoting processes also requires the least amount of resources—time and money—to align with current strategies. Updating recruitment and promotional objectives in order to demonstrate value of collaborative capacity skills may be the most cost effective way for state EMAs to make significant progress in all needed areas. Outdated, incomplete or inadequate position descriptions and recruiting strategies should be revised to include the skills needed to meet the emerging demands of the emergency management discipline. Many of these skills may already exist in state EMA organizations, and demonstrating the value of such skills in hiring and promotional practices will serve to reinforce and reward these capabilities.

Another benefit of improved staffing and training practices for collaboration is that state EMA staff who understand the emerging demands of the discipline, and the corresponding collaborative capacities, can be empowered to improve their collaboration effectiveness by promoting collaboration successes from within their organizations. Staff can also work within many local, state-level and professional emergency management organizations to promote structures that enhance rather than inhibit collaborative capacity.

- *State emergency managers should consider a platform for collaboration with each other, to share lessons learned, best practices, innovations and challenges in working with volunteers, the private sector, diverse communities and social media .*

Currently there exist mutual aid agreements between states, and informal email networks of certain state EMA functions such as hazard mitigation and PIO (Public Information Officer). There is NEMA for the top leadership of state EMAs. However, there is no platform for state EMA staff on the whole to communicate with each other. State EMA staff interact ad hoc at professional association meetings and FEMA conferences and trainings, but the portion of staff able to travel to these events represents only a fraction of agencies. Because the needs and requirements of state EMAs are unique, it would be useful to have a communication and collaboration mechanism devoted to emergency management at the state level. A simple listserv for broadcasting relevant news and posing questions to members might be beneficial, and could serve as a membership mechanism for states to gather at national conferences. The UASIs have a listserv for this purpose that has become in many ways the de facto source for news of congressional homeland security and emergency management funding, and has also been the source for sharing practices among members. Technologies for collaboration are not limited to email, and therefore resources to initiate sharing of information among state EMAs should not be a factor.

- *Reasons for the differences in collaborative capacity between military-based and civilian-based state EMAs should be explored.*

A second important finding of the research for this thesis is that the structural organization of a state EMA affects its ability to develop collaborative capacities. Those organizations within state military departments have been shown by this research to be less actively engaged in collaborative activities that match the emerging demands of their discipline. Those organizations within civilian-based structures report more collaborative than their military counterparts by a significant degree.

This study demonstrates that organizational structure has an impact, but does not include any evidence as to reasons for the impact. Organizational culture differences between military and civilian organizations, and their implications, abound in the literature. These studies and findings should be applied to state EMA organizations, with further research as indicated. State military functions will always have an important role in large and catastrophic disaster response, and the need for civil-military staff collaboration will continue. To increase collaborative capacity in state military organizations, the reasons that stunt collaboration in those organizations—whether cultural or otherwise—should be explored, and opportunities sought for increasing both individual and organizational collaborative skills.

Why should military-based state EMAs appear to have less collaborative capacity than civilian-based EMAs? Military experience is valued universally in the emergency management field, not just because state governments emphasize—and sometimes require—the hiring of military veterans. Military experience provides breadth in protocol development, training, exercises and logistics management that is valuable in disaster planning and response. But problems may occur when military experience is the only experience sought or valued in the hiring process: the “soft skills” needed for partnering, for building relationships with diverse communities and for forging a shared vision of the future may be missing from the military-trained skills palette.

“When I was starting out” says Kathleen Tierney, director of the Natural Hazards Research Center at the University of Colorado at Boulder, “it was assumed that an emergency manager should be a retired military person who had a really good understanding of command and control issues and now there’s been a lot more thinking about what the skills and competencies [are] that go into making a good emergency manager.” She continues, “I think the field has become more professionalized as indicated by certification programs, the existence of many professional associations for emergency managers, and also specialized journals in emergency management.” (Pittman 2012) These sentiments describe a shift in thinking about the breadth of skills needed today in the emergency management discipline, and the assumption of military command and control as the sole or primary skill for emergency management as possibly outdated.

5.1 CONCLUSION

The implications of these thesis findings with regard to the emergency management ecosystem are important. Our view of this ecosystem has matured to the extent that we understand the full connectedness of the partners, ranging from individual citizens in communities all the way to the White House. But the majority of our existing preparedness planning efforts, national incident management systems and local response network protocols are still based on the notion of a system that works separately from the citizens it serves—a system that is largely based on a civil defense model that views disasters as events requiring a military action-based response. Reconciling this notion with recognition of the importance of collaboration to meet the emergency management demands of the future will require strategic action from all partners in the emergency management network.

From a national perspective, the findings of this research will be useful to FEMA for advancing preparedness initiatives and improvements. Further study of the implications of military-based EMAs may reveal policy improvements that can

be suggested to states without radically altering existing state EMA structures. As FEMA collaborates with states and the National Guard to explore whole of government partnerships, alternative or hybrid structures may emerge that have no form today. Barring radical changes, incremental improvements may be identified that can improve preparedness planning and collaboration toward an ultimate, more complete future solution.

Today's state EMA's face complex legal, practical and philosophical questions about what constitutes effective prevention, protection, mitigation, response and recovery. Leadership in this environment requires skills in working with diverse communities; a depth of understanding in the causes of radicalization that often leads to extreme violent acts; collaborative skills in partnering with the private sector, volunteers and nongovernmental organizations; and strategic planning and action in a complex adaptive system. For many states it also means working with other states, federal agencies and neighboring countries on difficult border issues. State emergency managers need political skills in working with governors, and technical skills in information management, interoperable communications, law enforcement aviation and urban rescue equipment. Additionally, since the bulk of many state EMA operations is funded by federal program dollars, leaders need a full understanding of multiple funding program objectives, federal regulations, and the issues of grants reform. The findings of this research offer a measure of where state EMAs stand in developing collaborative capacity. It is hoped that further research will be done to expand on this important work, and that the recommendations offered here will help lead our nation toward a readiness for a prepared, resilient future.

THIS PAGE INTENTIONALLY LEFT BLANK

LIST OF REFERENCES

Bach, Robert, Robert Doran, Laura Gibb, David Kaufman, and Kathy Settle. "Bach Policy Challenges." Working Paper presented at the Multinational Community Resilience Policy Group, London, November 4–5, 2010.

Bolman, Lee G. and Terrence E. Deal. "Reframing Organizations. Artistry, Choice and Leadership." John Wiley & Sons, Inc. Jossey-Bass, San Francisco CA. 2008.

Bradley, Jeffrey E. "The Impact of Organizational Culture on the Sharing of Homeland Security Information." Joint Forces Staff College, Norfolk VA. April 2008.

Bratton, William and Zachary Tumin. *Collaborate or Perish*. New York: Crown Publishing Group, 2012.

Brill, Douglas B. "Facebook and Twitter become emergency management tools." lehighvalleylive.com. February 19, 2012. http://www.lehighvalleylive.com/breaking-news/index.ssf/2012/02/facebook_and_twitter_become_em.html. Accessed September 9, 2012.

Britton, Neil. "Whither the Emergency Manager?" Ministry of Emergency Management and Civil Defense, Wellington, New Zealand. December 1999.

Brown, Roger Allen, William Federochko, Jr., and John F. Schank. "Assessing the State and Federal Missions of the National Guard." RAND National Defense Research Institute. 1995.

Callahan, Richard, Dan M. Haverty, and Ross Clayton. "California Network Practices for Homeland Security and Emergency Management." University of Southern California.

Canada, Ben. "State and Local Preparedness for Terrorism: Selected Policy Issues." CRS Report for Congress, Order Code RL31266, December 19, 2002.

Carrasco, Vivian. "Building Collaborative Capacity Across Institutional Fields: A Theoretical Dissertation Based on a Meta-Analysis of Existing Empirical Research." University of Texas at El Paso. May 2009.

Chia, Joy. “Engaging communities before an emergency: developing community capacity through social capital investment.” Australian Journal of Emergency Management, v.25 no.1, 18–22. January 2010.

City of Colorado Springs. “Waldo Canyon Fire Initial after Action Report.” October 2012.

“Connecticut Emergency Management and Homeland Security Authorities Summarized.” CRS Report for Congress.” Order Code RL21801. April 2, 2004.

“Colorado reorganizes homeland security.” Homeland Security NewsWire. October 21, 2011. URL: http://www.homelandsecuritynewswire.com/colorado-reorganizes-homeland-security Accessed February 1, 2012.

Currao, Thomas J. “A New Role for Emergency Management: Fostering Trust to Enhance Collaboration in Complex Adaptive Emergency Response Systems.” Master’s Thesis. Monterey CA: Naval Postgraduate School, 2009.

Davis, Lynn E. “Organizing for Homeland Security.” Issue Paper. RAND 2002. URL: http://www.rand.org/pubs/issue_papers/2005/IP220.pdf/. Accessed March 28, 2007.

Department of the Army. “Defense Support to Civil Authorities.” Army Doctrine Publication 3-28. July 2012.

Department of Homeland Security. “Fact Sheet: The Department of Homeland Security’s Approach to Countering Violent Extremism.” 2011.

———. “Fact Sheet: Office of State and Local Government Coordination & Preparedness.” SLGC Office headed by Josh Filler.

———. *LLIS.gov website*. Lessons Learned Information System. https://www.llis.dhs.gov/index.do. Accessed July 16, 2012

———. “National Disaster Recovery Framework.” September 2011.

———. “National Disaster Recovery Framework Interagency Operational Plan [Initial Draft].” March 2012.

———. “National Mitigation Framework [Working Draft].” March 2012.

———. “National Preparedness Goal.” September 2011.

———. “National Plan Review.” June 2006.

———. “National Preparedness System.” November 2011.

———. “National Prevention Framework [Working Draft].” March 2012.

———. “National Security Strategy.” May 2010.

———. “National Strategy for Homeland Security.” July 2002.

———. “Presidential Policy Directive/PPD-8: National Preparedness.” March 2011.

———. “Quadrennial Homeland Security Review Report: A Strategic Framework for a Secure Homeland.” February 2010.

———. “Strategic Plan Fiscal Years 2012–2016.” February 2012.

———. “Tribal and Local Jurisdiction Compliance Activities: Federal Fiscal Year 2006.” National Incident Management System Integration Center, DHS/FEMA. October 2005.

Donahue, Donald A., Stephen O. Cunnion, Carey D. Balaban, and Ken Sochats. “The All Needs Approach to Emergency Response.” Homeland Security Affairs Journal. February 2012. Vol. 8, Article 1.

Drabek, Thomas E., PhD. “Sociology, Disasters and Emergency Management: History, Contribution and Future Agenda.” Chapter to appear in *Disciplines, Disasters and Emergency Management: The Convergence and Divergence of Concepts, Issues and Trends in the Literature* anticipated 2005. Emergency Management Institute, Emmittsburg MD.

Duarte, Nestor. “Unleashing Our Untapped Domestic Collection is the Key to Prevention.” Master’s Thesis. Monterey CA: Naval Postgraduate School, 2007.

Dynes, Russell R. “Community Emergency Planning: False Assumptions and Inappropriate Analogies.” International Journal of Mass Emergencies and Disasters. August 1994. Vol. 12, No. 2, 141–158.

———. “Community Social Capital as the Primary Basis for Resillience.” University of Delaware Disaster Research Center: Preliminary Paper #344. 2005.

———. “Governmental Systems for Disaster Management.” University of Delaware Disaster Research Center: Preliminary Paper #300. 2000.

Federal Emergency Management Agency. “Crisis Response and Disaster Resilience 2030: Forging Strategic Action in an Age of Uncertainty.” January 2012.

———. “Developing and Maintaining Emergency Operations Plans.” Comprehensive Preparedness Guide (CPG) 101, Version 2.0. November 2010.

———. “FEMA Strategic Plan 2011-2014.” February 2011.

———. “FY 2012 Homeland Security Grant Program (HSGP) Funding Opportunity Announcement (FOA).” February 2012.

———. “Initial Draft—National Disaster Recovery Framework Interagency Operational Plan.” March 2012.

———. “National Disaster Recovery Framework.” September 2011.

———. “Strategic Foresight Initiative Summary.” Summary of results of scenario workshops held over the course of 2010 and 2011. December 2011.

———. “Strategic Foresight Initiative 2011 Summary Briefing.” Presentation of results of scenario workshops held over the course of 2010 and 2011. December 2011.

———. “A Whole Community Approach to Emergency Management: Principles, Themes and Pathways for Action.” December 2011.

———. “Working Draft—National Mitigation Framework for National Review.” March 2012.

———. “Principles of Emergency Management.” Emergency Management Institute (EMI). September 2007.

Ferro, Carmen, DaviFerro, Carmen, DaviFerro, Carmen, David Henry, and Thomas MacLellan. “A Governor’s Guide to Homeland Security.” National Governor’s Association for Best Practices, Homeland Security and Public Safety Division, November 2010.

Fischer, Henry W., Kathryn Gregoire, John Scala, Lynn Letukas, Joseph Mellon, Scott Romine, and Danielle Turner. “The Emergency Management Response to Hurricane Katrina: As Told by the First Responders—A Case Study of What Went Wrong and Recommendations for the Future.” Natural Hazards Center Quick Report No. 189, Fall 2006.

Frink, Amanda. “Late local input on state debris plan.” Chinook Observer, July 17, 2012. http://www.chinookobserver.com/news/local/late-local-input-on-state-debris-plan/article_d9117ed4-d063-11e1-927e-001a4bcf887a.html?success=1. Accessed July 18, 2012.

Geis, Donald. “By Design: The Disaster-Resistant and Quality-of-Life Community.” Natural Hazards Review, August 2000.

Gilbert, Stanley W. “Disaster Resillience: A Guide to the Literature.” National Institute of Standards and Technology, Special Publication 1117. U.S. Department of Commerce. September 2010.

Goss, Thomas. “’Who’s In Charge?’ New Challenges in Homeland Defense and Homeland Security.” Homeland Security Affairs Journal. 2006. Vol. 1, Issue 1, Article 2.

Gusty, Denis. “Alerts and Warnings in Social Media.” Presentation. Department of Homeland Security Science and Technology Directorate. June 20, 2011. http://www.chinookobserver.com/news/local/late-local-input-on-state-debris-plan/article_d9117ed4-d063-11e1-927e-001a4bcf887a.html?success=1. Accessed July 18, 2012.

Guth, David W. and Gordon A. Alloway. “Untapped Potential: Evaluating State Emergency Management Agency Websites 2008.” Findings of the University of Kansas Transportation Research Institute-funded study: *Crisis Communications: Evaluating Effectiveness of State Emergency Management Web Sites*. Project Number FED45344. 2008.

Hara, Gary M, Lt. Col. “Consequence Management: A Mission for the National Guard.” Strategy Research Project, U.S. Army War College, Carlisle Barracks PA. February 1998.

Harm, Col. Craig and Dr. Carl W. Hunt, PhD. “A Military Perspective in Collaboration: Where the Past Meets the Present.” Collaboration White Paper. June 2009.

Hartman, Richard. “COMMENTARY: AGENCIES SHOULD MONITOR SOCIAL MEDIA TO IMPROVE SERVICES.” NextGov.com. March 7, 2012. http://www.nextgov.com/health/2012/03/commentary-agencies-should-monitor-social-media-to-improve-services/50778/. Accessed September 9, 2012.

Hillyard, Michael. “Public Crisis Management. How and Why Organizations Work Together to Solve Society’s Most Threatening Problems.” Writer’s Club Press. ISBN: 0-595-00717, 228. 2000.

Hite, Monique. “A Summary to the Disasters Roundtable: The Emergency Manager of the Future.” National Research Council of the National Academies, National Academies Press. June 13, 2003. http://books.nap.edu/openbook.php?record_id=10801&page=2.

Hocevar, Susan Page, Gail Fann Thomas, and Erik Jansen. “Building Collaborative Capacity: An Innovative Strategy for Homeland Security Preparedness.” Innovation Through Collaboration. Advances in Interdisciplinary Studies of Work Teams, Vol 12. 255–274. 2006.

Horwitz, Steven. “Making Hurricane Response More Effective: Lessons from the Private Sector and the Coast Guard During Katrina.” George Washington University, Mercatus Policy Series, Policy Comment No. 17, March 2008.

Jansen, Erik, Susan Page Hocevar, Rene G. Rendon, and Gail Fann Thomas. “The Theory and Measurement of Interorganizational Collaborative Capacity in the Acquisition and Contracting Context.” Except from proceedings, Sixth Annual Acquisition Research Symposium of the Naval Postgraduate School, Vol. II: Defense Acquisition in Transition. April 22, 2009.

Jardine, Sheryl. “The Impact of Incentives and Requirements on Group Collaboration.” Master’s Thesis. Monterey CA: Naval Postgraduate School, 2010.

Kaiser, Frederick M. “Interagency Collaborative Arrangements and Activities: Types, Rationales, Considerations.” CRS Report for Congress, Order Code R41803, May 17, 2011.

Kano, Megumi, Michele M. Wood, Dennis S. Mileti and Linda B. Bourque. “Public Response to Terrorism.” National Consortium for the Study of Terrorism and the Response to Terrorism, the U.S. National Science Foundation and the Southern California Injury Prevention Research Center. November 2008.

Kasapoglu, Aytul, Dennis S. Mileti, and Mathieu Deflem. “Is the United States Ready for Future Catastrophes? Estimating the Effectiveness of Organizations for Hazard Mitigation Since 9/11.” Journal of Homeland Security, January 14, 2008.

Koon, Bryan W., Nancy Dragani, Gerald L. Smith, John E. Russell, Chauncia Willis, and Linda Jorge Carbone. “Weathering the Storm: A State and Local Perspective on Emergency Management.” Congressional hearing testimony, One Hundred Twelfth Congress, First Session, June 10, 2011.

Kuznar, Larry. “Anthropological Perspectives on Collaboration.” Collaboration White Paper. June 2009.

Lalonde, Carol. “Crisis Management and Organizational Development: Toward the Conception of a Learning Model in Crisis Management.” Paper presented at Organizational Learning, Knowledge & Capabilities Conference, London, Ontario, Canada. June 2007.

Lindsay, Bruce R. “The Emergency Management Assistance Compact (EMAC): An Overview.” CRS Report for Congress, Order Code RL34585, July 21, 2008.

———. “Social Media and Disasters: Current Uses, Future Options, and Policy Considerations.” CRS Report for Congress, R41987, September 6, 2011.

Lucus-McEwen, Valerie. “Technical Communities Redefine Disaster Volunteerism.” *Emergency Management Magazine*. February 13, 2012. http://www.emergencymgmt.com/disaster/Technical-Communities-Redefine-Volunteerism.html. Accessed December 1, 2012.

“Massachusetts Emergency Management and Homeland Security Authorities Summarized.” *CRS Report for Congress.”* Order Code RL32325. March 23, 2004.

Mata, Vinicio R. “The Contribution of Police and Fire Consolidation to the Homeland Security Mission.” Master’s Thesis. Monterey CA: Naval Postgraduate School, 2010.

McEntire, David A. “The Status of Emergency Management Theory: Issues, Barriers and Recommendations for Improved Scholarship.” Paper presented at FEMA Higher Education Conference, Emmittsburg MD, June 8, 2004.

McLoughlin, David. “A Framework for Integrated Emergency Management.” *Public Administration Review.”* Vol. 45, Special Issue: Emergency Management: A Challenge for Public Administration. January 1985.

Mileti, Dennis. “Alerting Populations About Emergencies.” Presentation delivered to the Annual Meeting of the U.S. Department of Energy, Emergency Management Issues/Special Interest Group, May 16, 2012.

“Mississippi Emergency Management and Homeland Security Authorities Summarized.” *CRS Report for Congress.”* Order Code RL32316. March 22, 2004.

Moynihan, Donald P. “What Makes Hierarchical Networks Succeed? Evidence from Hurricane Katrina.” Paper presented at annual meeting of the Association of Public Policy and Management, Madison WI, November 2–4, 2006.

National Academy of Public Administration. *Improving the National Preparedness System: Developing More Meaningful Grant Performance Measures.* Report for U.S. Department of Homeland Security, Federal Emergency Management Agency and the U.S. Congress by Panel: Leighty, Cigler, Dodge, Hatry, Mullen, Raub, Springer, Stanley. October 21, 2011.

National Emergency Management Association (NEMA). “NEMA 2012 Biennial Report.” Survey data is restricted to membership. Highlights available at: http://www.nemaweb.org/index.php?option=com_content&view=article&id=474&Itemid=442. Accessed November 10, 2012.

———. “About State EM Agencies/State Emergency Management Organizations.” http://www.nemaweb.org/index.php?option=com_content&view=article&id=209&Itemid=377. Accessed July 17, 2011.

Naval Postgraduate School, Homeland Security Digital Library. “Understanding the Power of Social Media as a Communication Tool in the Aftermath of Disasters.” Testimony before U.S. Committee on Homeland Security and Governmental Affairs, 112th Congress, First Session, May 5, 2011. Compilation from: http://hsgac.senate.gov/public/index.cfm?FuseAction=Hearings.Hearing&Hearing_ID=e928effc-4bfd-4024-9017-130bb45b4ed4.

“Nevada Emergency Management and Homeland Security Authorities Summarized.” *CRS Report for Congress.”* Order Code RL32320. March 23, 2004.

Nicholson, William C. “Emergency Planning and Potential Liabilities for State and Local Governments.” State and Local Government Review, Vol. 39 No. 1, 44–56. 2007.

Norris, Fran H., Susan P. Stevens, Betty Pfefferbaum, Karen F. Wyche, and Rose L. Pfefferbaum. “Community Resilience as a Metaphor, Theory, Set of Capacities and Strategy for Disaster Readiness.” American Journal of Community Psychology, Published online December 22, 2007.

Pelfrey, William V. “The Cycle of Preparedness: Establishing a Framework to Prepare for Terrorist Threats.” Journal of Homeland Security and Emergency Management, Vol. 2, Issue 1, Article 5, 2005.

Peters, Lynda A. “Utilizing Social Media to Further the Nationwide Suspicious Activity Reporting Initiative.” Master’s Thesis. Monterey CA: Naval Postgraduate School, 2012.

Pittman, Elaine. *How Social Research Can Help Emergency Managers Plan*. Interview with Kathleen Tierney. Emergency Management, April 9, 2012. http://www.emergencymgmt.com/disaster/Social-Research-Help-Emergency-Managers-Plan.html?page=1&. Accessed July 18, 2012.

President Barack Obama. “Strategic Implementation Plan for Empowering Local Partners to Prevent Violent Extremism in the United States.” December 2011.

———. “Presidential Policy Directive/PPD-8.” March 2011.

Public Entity Risk Institute, Fairfax VA. “Characteristics of Effective Emergency Management Organizational Structures.” 2001.

Quarantelli, Enrico. “Conventional Beliefs and Counterintuitive Realities.” Social Research: An International Quarterly of the Social Sciences, Vol. 75, No. 3. Fall 2008, 878–904.

Reale, Joseph. “Harnessing the Power of Collaborative Relationships to Improve National Preparedness and Responsiveness.” Master’s Thesis. Monterey CA: Naval Postgraduate School, 2011.

Rozario, Kevin. “The Culture of Calamity: Disaster and the Making of Modern America.” University of Chicago Press. 2007.

Schumacher, Ludwig. "Emergency Management Span of Control: Optimizing Organizational Structures to Better Prepare Vermont for the Next Major or Catastrophic Disaster." Master's Thesis. Monterey, CA: Naval Postgraduate School, 2008.

Smith, Johnnie L. "Model for Effective Organization and Communication of Homeland Security Activities at the State Level." Master's Thesis. Monterey CA: Naval Postgraduate School, 2007.

"South Dakota Emergency Management and Homeland Security Authorities Summarized." *CRS Report for Congress."* Order Code RL32435. June 18, 2004.

Snowden, Dave. Cynefin Framework. YouTube video: http://www.youtube.com/watch?v=N7oz366X0-8. July 2010.

Stever, James A. "Adapting Intergovernmental Management to the New Age of Terrorism." Administration Society, Vol. 37, No. 4. September 2005, 379–403.

Sylves, Richard, PhD. "Why Revolutionary Change is Needed in Emergency Management." Presentation developed for delivery to the 8th Annual Emergency Management Higher Education Conference, June 7–9, 2005.

Thomas, Gail Fann, Susan Page Hocevar, and Erik Jansen. "A Diagnostic Approach to Building Collaborative Capacity in an Interagency Context." Report, Monterey, CA: Naval Postgraduate School, September 2006.

"Thousands of wildfire warnings undelivered." *Columbus Telegram.* Accessed July 14, 2012. http://columbustelegram.com/news/national/thousands-of-wildfire-warnings-undelivered-in-colo/article_bfcdd02f-8b92-56fc-b5d6-51bfd1dd9543.html.

Warner, Neil. "C2 Interoperability – An Australian National Whole of Government Approach." 9th International Command and Control Research and Technology Symposium: Coalition Transformation: An Evolution of People, Processes and Technology to Enhance Interoperability. 2004.

Wasserman, Robert. "Guidance for Building Communities of Trust." U.S. Department of Justice. ISBN: 978-1-935676-19-5. July 2010.

Waugh. William L, Jr., and Gregory Streib. "Collaboration and Leadership for Effective Emergency Management." Public Administration Review. 131. December 2006.

Wenger, Dennis. Recorded comments of: "The Emergency Manager of the Future: Summary of a Workshop." June 13, 2003. Washington, DC. http://books.nap.edu/openbook.php?isbn=NI000431. Accessed June 10, 2011.

Wenger, Dennis, E. L. Quarantelli, and Russell R. Dynes. "Disaster Analysis: Emergency Management Office and Arrangements." Final Project Report #34 to FEMA. Disaster Research Center, University of Delaware. 1986.

"West Virginia Emergency Management and Homeland Security Authorities Summarized." *CRS Report for Congress."* Order Code RL32559. September 3, 2004.

Wise, Charles R. "Special Report Organizing for Homeland Security." Public Administration Review 62, no 2. March/April 2002.

———. "Organizing for Homeland Security after Katrina: Is Adaptive Management What's Missing?" Public Administration Review 66, no 3. May/June 2006.

Woodbury, Glen. "Recommendations for Homeland Security: Organizational Approaches at the State Government Level." Master's Thesis. Monterey CA: Naval Postgraduate School, 2004.

Woster, Kevin. "Repairs continue, trust comes slowly a year after Missouri River flood." Rapid City Journal, July 15, 2012. http://rapidcityjournal.com/news/repairs-continue-trust-comes-slowly-a-year-after-missouri-river/article_3da5e915-3ccb-50c4-9db9-ce410cf41e6d.html. Accessed July 16, 2012.

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX A. TEXT OF SURVEY INVITATION EMAIL SENT TO EACH OF FIFTY STATES

Dear State Emergency Management Colleagues:

You are invited to participate in a survey designed to assess the collaborative capacities of state emergency management agencies. I am conducting this study for my thesis in partial fulfillment for a master's degree at the Naval Postgraduate School Center for Homeland Defense.

The survey is expected to take 20-25 minutes to complete. It is web-based and completely anonymous. Participant-specific data will not be identified or stored. You do not have to answer every question. Participation is entirely voluntary and you may exit the survey tool at any time. To participate, please click on this link:

https://www.surveymonkey.com/s/[redacted]

If clicking the link does not work, please copy and paste it into your browser.

This survey will be active until July 12, 2012.

This email invitation is being sent to the emergency management agencies in all fifty states. Email addresses in the message distribution have been gleaned from publicly available sources and may not be comprehensive or current. Please feel free to pass this email on to others in your organization, to offer them the opportunity to participate.

If you are interested in a copy of the completed research, please contact me at jenniferschaal@gmail.com or (253) 720-8551.

Thanks for your time!

Jennifer Schaal
Washington State Emergency Management Division

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX B. TEXT OF ON-LINE SURVEY OF STATE EMERGENCY MANAGEMENT AGENCIES CONDUCTED JUNE 17–JULY 12, 2012

Q1 - Consent to Participate in Anonymous Survey

You are invited to participate in this research study entitled "Assessing the Collaborative Capacity of State Emergency Management Agencies." The purpose of the research is to study emergency management activities at the state government level that involve collaboration with other organizations and communities.

This survey will be conducted via Survey Monkey. Only answers to survey questions will be collected. No personal identifying data will be collected or stored. Survey responses will be presented anonymously to the Researcher. There is minimal risk that data collected could be mismanaged.

This survey is expected to take 20-25 minutes to complete. Your participation is voluntary. If you participate, you are free to skip any questions or stop participating at any time without penalty. The alternative to participating is to not participate, which you may choose by clicking the "I do not wish to participate" button below. Your responses to the survey are anonymous.

The anticipated benefit of this study is to add to the body of research about best practices for state emergency management agency inter-organizational collaboration to meet emerging needs of the discipline. You may receive a copy of the completed research by contacting the Researcher at jenniferschaal@gmail.com or (253) 720-8551. Contacting the Researcher does not affect the anonymity of your participation in the study.

If you have questions about this research, contact Naval Postgraduate School Associate Professor Susan Hocevar at shocevar@nps.edu or (831) 656-2249. If you have questions regarding your rights as a research subject, contact Naval Postgraduate School Internal Review Board (IRB) Chair Capt. John Schmidt at jkschmid@nps.edu or (831) 656-3864.

Please select one of the following choices:

- ☐ I consent to participate in this study.
- ☐ I do not consent to participate in this study.

Q2 - Please indicate how your state's emergency management agency is structured:

- o My agency reports to my state's Office of the Governor.
- o My agency reports to my state's Public Safety Department.
- o My agency reports to my state's Homeland Security/State Police Department.
- o My agency reports to my state's Military Department.
- o I don't know how my agency is structured.
- o If your organization's structure does not fit the options above, please explain how it is structured. _____

Q3 - With regard to your answer in Question (1), has your agency changed its organizational structure:

- o Within the past year?
- o Within the past five years?
- o Within the past ten years?
- o My agency has not changed its organizational structure
- o My agency is in the midst of, or is planning, a change in organizational structure.
- o I don't know if my agency has changed its organizational structure.
- o If your agency has changed or is changing its organizational structure, if you know the reason for the change, please summarize it here:

  _____

Q4 - My agency's size is:

- o Over 300 employees
- o 200-299 employees
- o 100-199 employees
- o 50-99 employees
- o Under 50 employees

Q5 - In this survey, "collaboration" means state emergency management agencies working with other organizations to achieve common goals. Other organizations may include: other state agencies; neighboring state governments; DHS and FEMA program offices; FEMA regional administration; local and tribal governments and responders; state and local boards and commissions; emergency management professional/advocacy organizations; federal and state congressional representatives; educational institutions; nongovernmental organizations; federal law enforcement; faith-based and other community organizations; and private sector organizations, to name a few.

There is agreement within my organization about the purpose and value of inter-organizational collaboration.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q6 - The success of my organization's mission requires collaborating effectively with other organizations.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q7 - My agency has clearly established goals for inter-organizational collaboration.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q8 - My agency takes a lead role in forming inter-organizational teams for preparedness planning and prevention.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q9 – My agency's policies emphasize relationship building with other organizations.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q10 - My agency makes training available in relationship-building skills.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q11 - My agency always seeks a mutually beneficial solution when negotiating agreements with other organizations.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q12 - My agency has established protocols for sharing resources with other organizations.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q13 - The people in my agency show respect for differing points of view in other organizations.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q14 - My agency collaborates with other organizations even when there are no financial/funding incentives.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q15 - My organization's leaders regularly meet and confer with the leaders of other organizations about mutual collaboration.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q16 - My agency works with other organizations to build a shared vision of future emergency management challenges.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q17 - When recruiting new staff, my agency clearly values collaboration skills.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q18 - When promoting staff, my agency clearly values collaboration skills.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q19 - The next few questions focus on collaboration with diverse communities, which can mean not only communities that are geographically determined, but also to groups that have common interests or concerns related to emergency management (e.g., nationalities, religious beliefs, languages, economic situations, special physical needs or mental needs).

My agency's policies emphasize relationship building with local communities.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q20 - My agency has developed relationships with local communities, to work together to build community resilience to disasters.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q21 - My agency works with local communities to implement efforts to prevent radicalization, especially of youth, that often leads to violent acts.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q22 - When recruiting new staff, my agency clearly values expertise in relationship building with local communities.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q23 - When promoting staff, my agency clearly values expertise in relationship building with local communities.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q24 - My agency has clearly established goals for soliciting, training and utilizing volunteers.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q25 - My agency solicits input from volunteers and uses that input to shape its volunteer program.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q26 - My agency has protocols in place for credentialing volunteers for disaster response.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q27 - My agency provides training in volunteer management to agency staff.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q28 - When recruiting new staff, my agency clearly values expertise in soliciting and utilizing volunteers.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q29 - When promoting staff, my agency clearly values expertise in soliciting and utilizing volunteers.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q30 - In this survey, "social media and networks" means social connection websites such as Twitter, Facebook, LinkedIn, etc., and the corresponding “apps” that allow instant two-way communications via websites, smartphones and other technologies.

My agency uses social media tools and networks to communicate with local communities.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q31 - My agency makes information about volunteer opportunities for emergency management work available through websites or social media sites.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q32 - My agency provides training in social media technologies for staff to use in collaborating with other organizations.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q33 - My agency works with other organizations to develop new "apps" for emergency preparedness planning and crisis management.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q34 - My agency devotes resources (money and time) for learning about emerging social media technologies potentially useful to emergency preparedness planning and crisis management.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q35 - When recruiting new staff, my agency clearly values expertise in social media and other technologies useful to emergency preparedness planning and crisis management.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q36 - When promoting staff, my agency clearly values expertise in social media and other technologies useful to emergency preparedness planning and crisis management.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q37 - Please describe a social media "best practice" from your agency:

Answer_____

Q38 - My agency has agreements in place with private sector organizations to share responsibilities in disasters.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q39 - My agency takes the needs and capabilities of private sector organizations into account in disaster management planning.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q40 - My agency collaborates with private sector organizations on cyber security issues.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q41 - My agency collaborates with private sector organizations on critical infrastructure protection issues.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q42 - My agency provides training in working with private sector organizations.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q43 - My agency provides training in how to protect private sector proprietary sensitive or information.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q44 - When recruiting new staff, my agency clearly values private sector partnering skills.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q45 - When promoting staff, my agency clearly values private sector partnering skills.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q46 - The next few questions are about social capital. In this survey, social capital means the number and strength of work group, social group, faith/community group, family, friend, acquaintance, and professional colleague relationships that individuals, communities and organizations can draw upon in times of need.

My agency has taken action to engage all relevant stakeholders in preparedness planning and prevention.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q47 - My agency has worked with stakeholders to define and agree on collective outcomes.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q48 - My agency has a method for measuring mutually agreed-upon collective outcomes.

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q49 - My agency has a method for measuring its "social capital."

Strongly Disagree					Strongly Agree
1	2	3	4	5	6

Q50 - If there was one thing that could be done in your agency to improve inter-organizational collaboration, what would that be?

Answer_____

APPENDIX C._SURVEY QUESTIONS ORDERED BY SCALE OF POSITIVE RESPONSE, HIGHEST TO LOWEST

Survey Question (Posed as a Statement)	No. of Responses	Mean	Standard Deviation
Success of our mission requires collaboration (Q6)	171	5.7	.9
Agree on purpose, value of inter-organizational collaboration (Q5)	170	4.9	1.3
We collaborate even when there are no financial incentives (Q14)	170	4.9	1.3
Policies emphasize relationship building w/local communities (Q19)	169	4.7	1.4
Agency takes lead role in forming inter-organizational teams (Q8)	170	4.7	1.3
Agency has developed relationships with local communities (Q20)	171	4.6	1.3
Policies emphasize relationship building w/other organizations (Q9)	169	4.5	1.5
Agency has established protocols for sharing resources (Q12)	169	4.5	1.4
Seeks mutually beneficial solutions in negotiating agreements (Q11)	169	4.4	1.3
Leaders regularly meet w/other org leaders to collaborate (Q15)	170	4.4	1.3
Use social media to communicate with local communities (Q30)	171	4.4	1.5
Clearly established goals for inter-organizational collaboration (Q7)	170	4.4	1.4
Builds shared vision of future emergency mgmt challenges (Q16)	169	4.3	1.5
Collaborates w/private sector on critical infrastructure issues (Q41)	165	4.3	1.5
Engages relevant sectors in emergency preparedness planning (Q46)	168	4.3	1.3
People show respect for differing points of view in other orgs (Q13)	170	4.2	1.4
Accounts for private sector needs, capabilities in disaster plans (Q39)	169	4.2	1.4
Works w/stakeholders to define & agree on collective outcomes (Q47)	168	4.1	1.4
Agreements in place w/private sector to share responsibilities (Q38)	167	4.0	1.6
When recruiting, agency values collaboration skills (Q17)	169	3.8	1.5
When recruiting, agency values local community relation skills (Q22)	164	3.8	1.6
When promoting, agency values collaboration skills (Q18)	165	3.7	1.5
When promoting, agency values local community relation skills (Q23)	165	3.7	1.5
Agency provides training in relationship building skills (Q10)	170	3.7	1.6
Clearly established goals for soliciting, training volunteers (Q24)	165	3.6	1.6
Solicits input from volunteers, uses to shape volunteer program (Q25)	165	3.5	1.6

Survey Question (Posed as a Statement)	No. of Responses	Mean	Standard Deviation
Uses social media to communicate volunteer opportunities (Q31)	165	3.4	1.6
Agency has developed method to measure collective outcomes (Q48)	161	3.4	1.5
Protocols in place for credentialing volunteers in disasters (Q26)	165	3.3515	1.70296
Collaborates with private sector on cyber security issues (Q40)	165	3.3273	1.52285
When recruiting, agency values private sector partnering skills (Q44)	157	3.2994	1.52528
Agency provides training in working w/private sector (Q42)	164	3.7683	1.54918
Agency provides training in volunteer management (Q27)	167	3.2635	1.59896
When promoting, agency values private sector partnering skills (Q45)	157	3.2102	1.48078
Agency provides training in private sector proprietary info (Q43)	162	3.1296	1.59634
Agency devotes resources to learning about new social media (Q34)	166	3.0904	1.58715
When recruiting, agency values skills in working w/volunteers (Q28)	162	3.0123	1.46592
When promoting, agency values skills in working w/volunteers (Q29)	162	2.9074	1.45237
Works w/other organizations to develop emergency management apps (Q33)	165	2.8606	1.71043
When recruiting, agency values social media skills (Q35)	163	2.8589	1.51485
Agency provides training in social media (Q32)	167	2.8263	1.56768
When promoting, agency values social media skills (Q36)	163	2.8221	1.47372
Agency has method for measuring social capital (Q49)	162	2.6914	1.46717
Works w/local communities to prevent radicalization/violence (Q21)	163	2.6319	1.42706

APPENDIX D._SURVEY QUESTION ITEM-LEVEL MEANS–SEVEN COLLABORATION FACTORS

The following is a table of survey results showing the mean and standard deviation for each of the seven collaboration factors, with mean and standard deviation detail for survey question results within each factor.

Scale	Mean	Standard Deviation
Strategic action for collaboration	**4.8**	**1.1**
Success of our mission requires collaboration (Q6)	5.7	0.9
Agree on purpose, value of inter-organizational collaboration (Q5)	4.9	1.3
We collaborate even when there are no financial incentives (Q14)	4.9	1.3
Seeks mutually beneficial solutions in negotiating agreements (Q11)	4.4	1.3
Clearly established goals for inter-organizational collaboration (Q7)	4.4	1.4
People show respect for differing points of view in other orgs (Q13)	4.2	1.4
Operational action for collaboration	**4.1**	**1.2**
Agency takes lead role in forming inter-organizational teams (Q8)	4.7	1.3
Policies emphasize relationship building w/other organizations (Q9)	4.5	1.5
Agency has established protocols for sharing resources (Q12)	4.5	1.4
Leaders regularly meet w/other org leaders to collaborate (Q15)	4.4	1.3
Builds shared vision of future emergency management challenges (Q16)	4.3	1.5
When recruiting, agency values collaboration skills (Q17)	3.9	1.5
When promoting, agency values collaboration skills (Q18)	3.7	1.5
Agency provides training in relationship building skills (Q10)	3.7	1.6
Collaboration with local/diverse communities	**3.9**	**1.2**
Policies emphasize relationship building w/local communities (Q19)	4.7	1.4
Agency has developed relationships with local communities (Q20)	4.6	1.3
When recruiting, agency values local community relation skills (Q22)	3.8	1.6

Scale	Mean	Standard Deviation
When promoting, agency values local community relation skills (Q23)	3.7	1.5
Works w/local communities to prevent radicalization/violence (Q21)	2.6	1.4
Building social capital	**3.6**	**1.3**
Engages relevant sectors in emergency preparedness planning (Q46)	4.3	1.3
Works w/stakeholders to define & agree on collective outcomes (Q47)	4.1	1.4
Agency has developed method to measure collective outcomes (Q48)	3.4	1.5
Agency has method for measuring social capital (Q49)	2.7	1.5
Collaboration with private sector	**3.6**	**1.3**
Collaborates w/private sector on critical infrastructure issues (Q41)	4.3	1.5
Accounts for private sector needs, capabilities in disaster plans (Q39)	4.2	1.4
Agreements in place w/private sector to share responsibilities (Q38)	4.0	1.6
Agency provides training in working w/private sector (Q42)	3.8	1.6
Collaborates with private sector on cyber security issues (Q40)	3.3	1.5
When recruiting, agency values private sector partnering skills (Q44)	3.3	1.5
When promoting, agency values private sector partnering skills (Q45)	3.2	1.5
Agency provides training in private sector proprietary info (Q43)	3.1	1.6
Collaboration with volunteers	**3.3**	**1.4**
Clearly established goals for soliciting, training volunteers (Q24)	3.6	1.6
Solicits input from volunteers, uses to shape volunteer program (Q25)	3.5	1.6
Protocols in place for credentialing volunteers in disasters (Q26)	3.4	1.7
Agency provides training in volunteer management (Q27)	3.3	1.6
When recruiting, agency values skills in working w/volunteers (Q28)	3.0	1.5
When promoting, agency values skills in working w/volunteers (Q29)	2.9	1.5
Use of social media and networks	**3.2**	**1.4**
Use social media to communicate with local communities (Q30)	4.4	1.5
Uses social media to communicate volunteer opportunities (Q31)	3.4	1.6
Agency devotes resources to learning about new social media (Q34)	3.1	1.6

Scale	Mean	Standard Deviation
Works w/other organizations to develop emergency mgmt apps (Q33)	2.9	1.7
When recruiting, agency values social media skills (Q35)	2.9	1.5
Agency provides training in social media (Q32)	2.8	1.6
When promoting, agency values social media skills (Q36)	2.8	1.5

Note: Ratings based on scale where 1 = Strongly Disagree, to 6 = Strongly Agree.

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX E._SURVEY RESPONSES TO THE SOCIAL MEDIA BEST PRACTICES QUESTION, BY STATE EMERGENCY MANAGEMENT AGENCY ORGANIZATIONAL TYPE

- Social media best practice responses from **military**-based state EMAs:

"we just started using social media and only use it on occasion"

"my agency is a newcomer to social media and just in the experimental stage"

"putting agency items of interest out through social media"

"reluctantly allows some of us to moderate a blog"

"we are basically locked out of most internet access…absolutely forbidden to access social media during work hours…even if activated for a disaster and locals are using social media, we are still locked out, and threatened with termination of employment if we violate this…"

"[we have] a…Facebook page for each program and a…Current Disaster specific page dedicated to sharing information during the response and recovery of specific disasters"

"we push out emergency info via web"

"use of website to convey information…use of Facebook to promote earthquake preparedness"

"we have an agency Twitter account and Facebook page"

"use of Twitter and Facebook"

"we create public awareness campaigns that include public input via social media"

"PIO [Public Information Officer] uses Twitter and Facebook during disasters to keep public and media informed"

"restrict usage to select staff (e.g. external affairs)"

"our PIO is the only one authorized to post social media for the agency"

"PIOs use Facebook and Twitter"

"PIO has a blog and Twitter and is the only one allowed to put forth information…doesn't use Facebook because…doesn't want two-way conversations; social media is used strictly for information sharing, not collaboration or engaging the public"

- Social media best practice responses from **Office of the Governor**-based state EMAs:

"the agency is just starting to move forward in this area…some counties are well ahead of the State"

"upper management does not laugh when you mention Twitter or Facebook"

"…we use web, Twitter, press releases and website…we also use Mass Notification"

"[state EMA] website for general public to use as a reference"

"Twitter, Facebook"

"we use Nixle, Twitter, Facebook"

"agency maximizes the use of Twitter and is dabbling in the use of Facebook"

"Ready App on iPhones"

"we have a Facebook account"

"public information on website…website connection to Facebook, Twitter and FlickR"

"pushing out daily newsletters with local information during the first several days of a disaster, using Facebook and Twitter as part of the means to get the information out"

"we monitor all social media during a major crisis response to ensure that our message is getting to people and is an accurate message"

"although a very new technique for my agency, during day-to-day and disaster, our external affairs unit uses social media to keep our first responders and citizens abreast of things happening that could impact their day"

"none…[state EMA] doesn't allow its own employees to get Facebook nor promote Twitter, Facebook or other social tools that would benefit the agency… [instead expects] everyone to learn off our website "

"social media is not…used within my agency at this time, it is something that we are slow and steady about"

- Social media best practice responses from **public safety** office-based state EMAs:

"Watch Center uses social media as an additional tool to monitor/identify incidents occurring in the state"

"updates regarding status and response efforts sent out on Facebook and Twitter during disasters"

"weather watches and warnings are posted via social media…further, we are going to begin utilization of 'Ping 4' on mobile phones"

"state agencies are mostly blocked from social media sites and don't use/build/monitor them…barely use internet sites"

"Facebook and Twitter pages but not updated often"

"Facebook, Twitter, website communication to public, media chiefly during emergencies"

"only the public affairs office may use social media…the rest of the organization is forbidden, by policy, to use it while working"

"our agency is on Facebook and Twitter but staff does not have access to the Facebook page or Twitter account due to outdated policies and a lack of initiative on the part of our IT staff to make the sites accessible within a policy that would govern their usage"

"[our state EMA] teaches local and state emergency management professionals how to use Twitter and other social media at conferences held across the state"

"public affairs office is deeply involved with FEMA and their social media initiatives…we use social media 24/7 with additional efforts during disasters"

"we are currently working towards utilizing social media…we are in the process of hiring a person just for this activity"

"using an aggregator (like Tweetdeck or Hootsuite), we've begun tracking social media during incidents…when possible we'd like to promote a #hashtag prior to weather or other widespread events to help us filter and refine searches more quickly"

"we are currently in the process of creating a 'Social Media' position"

"we have a Facebook and Twitter account and often post preparedness information and projects on these accounts…also post information about anniversaries of historical disasters to remind citizens of the hazards and their impacts…during an event we monitor social media to ensure we have an accurate picture of what is happening…we also look at YouTube for videos of the scene"

THIS PAGE INTENTIONALLY LEFT BLANK

APPENDIX F. A SCAN OF STATE EMERGENCY MANAGEMENT AGENCY WEBSITES JULY 2011

The following is a by-state detail of emergency management organizations, gleaned from state websites. (All links referenced were accessed July 24–27, 2011.) In listing "Services" the intent was to glean functional actions that could be taken by stakeholders accessing the agency's website. The purpose of differentiating between the two was to discern how the agency approached emergency management as a discipline, versus their website managers listing yellow-pages-type content they thought would be useful. For example, information local emergency managers could use to plan or act, such as weather mapping or up-to-date hazard alerts was included, but web links to other news or sources were not. For another example, if guidance or templates for planning activities was offered, or access to boards or commissions that engaged in emergency planning activity, then "Planning" as a function was included; if merely lists of existing plans were offered, this was not included. There were understandably many gray areas to this discernment.

Alabama:
Emergency Management Agency (EMA)
http://ema.alabama.gov/.
Parent Organization is Office of the Governor
Services: CERT, Citizen Corps, Disaster Recovery, Family Disaster Planning, FEMA Assistance, Hazard Mitigation Assistance, Hazardous Weather Guide, Housing Recovery, Preparedness Planning, Risk Analysis Mapping, Special Needs Planning, Weather Information

Alaska:
Division of Homeland Security & Emergency Management Agency (DHS&EM)
http://www.ak-prepared.com/.
Parent Organization is Military [& Veterans Affairs]
Services: Grants, Interoperable Communications, Infrastructure Protection, LEPC, Mitigation, Planning, Public Outreach, Security Vulnerability Assessment, State Emergency Response Commission, Training & Exercise

Arizona:
Division of Emergency Management Agency (AZDEMA)
http://www.ak-prepared.com/.
Parent Organization is Military Department

Services: CERT, EMAP, Hazard Mitigation, Hazardous Materials, Homeland Security, Logistics, National Shelter System, Radiological Preparedness, Recovery, Special Needs Planning, Training & Exercise, Tribal Relations

Arkansas:
Department of Emergency Management (ADEM)
http://www.dem.azdema.gov/.
Parent Organization is Office of the Governor
Services: Administration [CSEPP, CERT, Homeland Security Branch, Fire Services, Mitigation] Disaster Management [Area Coordination, Operations, Recovery], Federal Surplus, Communications [Response Coordination], Preparedness [Earthquakes, Exercise, Law Enforcement, Planning, CERT, Training]

California:
Emergency Management Agency (Cal-EMA)
http://www.oes.ca.gov/.
Parent Organization is Office of the Governor
Services: Access & Functional Needs, Administration [Grants Monitoring], Audits & Evaluations, Legislative Affairs, Fire & Rescue, Homeland Security [Citizen Preparedness, Grants, Human Trafficking, Information Analysis Watch & Warning, Infrastructure Protection, Planning & Research, Training & Exercises], Law Enforcement & Victim Services [Children Victim Services, Domestic
Violence, Drugs, Gangs, Sexual Assault], Public Safety & Victim Services; Regional Response, Recovery

Colorado:
Division of Emergency Management (DEM)
http://dola.colorado.gov/dem/index.html.
Parent Organization is Department of Local Affairs
Services: CSEPP (Chemical Stockpile Emergency Program), Disaster Business Planning, Emergency Planning Commission, Exercises, Field Services, Hazard Preparedness, MACC (Multi-Agency Coordination Center), Mitigation, Operations, Plans, Recovery, Training

Connecticut:
Department of Emergency Management & Homeland Security (DEMHS); currently being consolidated into a Department of Emergency Services & Public Protection
http://www.ct.gov/demhs/site/default.asp.
Parent Organization is Office of the Governor
Services: 911 Special Needs Registration, Citizen Corps, Communications, Coordination Councils, Grants, Legislative/Government Relations, Natural Hazards, Planning, Public Assistance, Radiological Preparedness, Regional Incident Management Teams, State Response Framework, Strategic Planning, Training & Exercise, USAR

Delaware:
Emergency Management Agency (DEMA)
http://dema.delaware.gov/default.shtml.
Parent Organization is the Department of Safety and Homeland Security
Services: Citizen Corps, Disaster Preparedness, Hazardous Materials Information, Partner Information, State of Emergency Driving Information, Training & Education

Florida:
Divison of Emergency Management (Cal-EMA)
http://www.floridadisaster.org/.
Parent Organization is Office of the Governor
Services: Business Preparedness, Disability Disaster Information, Family Preparedness, Kids Preparedness, Mitigation, Natural Hazards, Request a Speaker, Response, Recovery, State Emergency Response Team, Threat Reporting, Training & Exercise

Georgia:
Emergency Management Agency/Homeland Security (GEMA)
http://www.gema.state.ga.us/.
Parent Organization is Office of the Governor
Services: 911, Citizen Corps, Donations & Volunteers, Evacuation Maps, Excess Property, Hazard Mitigation, Hurricanes, Insurance, ISAC, Local Government Assistance, Newsroom, Public Assistance, Radiological Preparedness, School Safety, Survivor Resources, Threat Reporting, Training & Exercises

Hawaii:
State Civil Defense
http://www.scd.hawaii.gov/index.html.
Parent Organization is Military Department
Services: Amateur Radio, Debris Cleanup, Disaster History 1955-2011, Earthquake/Tropical Storm History 2006-2011, Emergency Alert System, Hazard Mitigation, Hazmat Training, Preparedness, Recovery, Public Assistance, Satellite Mapping, Shelter-In-Place, Special Needs, Tsunamis, WMD Training

Idaho:
Bureau of Homeland Security
http://www.bhs.idaho.gov/.
Parent Organization is Military Department
Services: Business Preparedness, COOP, Critical Infrastructure, Disaster Assistance, Grants, Hazardous Materials, Hazards Preparedness, Logistics, Mitigation, Neighborhood Preparedness, Pet Preparedness, Recovery, Response, School Preparedness, Training & Exercise, Volunteering, Warning Systems

Illinois:
Emergency Management Agency (IEMA)
http://www.state.il.us/iema/. 225 employees, $618 million budget
Parent Organization is Office of the Governor
Services: Disaster Preparedness, Earthquake Information, Interoperable Communications, FOIA, Lightning Safety, Homeland Security, Mammography Facility Certification, Mitigation, Nuclear Safety, Recovery, Response, State Emergency Response Commission, Planning, Public Assistance, Terrorism Preparedness, Training & Exercises

Indiana:
Emergency Management Agencies and Field Services
http://www.in.gov/dhs/2797.htm.
Parent Organization is Department of Homeland Security

Services: Building Plan Review, Certification, Emergency Response & Recovery, Field Services, Fire & Building Safety Services, Grants Management, Inspections, Mitigation, Permitting, Planning & Assessment, Preparedness, Training & Exercises

Iowa:
Homeland Security & Emergency Management (HSEMD)
http://www.iowahomelandsecurity.org/.
Parent Organization is Military Department
Services: CERT, Citizen Corps, Citizen Preparedness, Critical Infrastructure, Disaster History 1951-2011, EMAC, Grants, Hazard Mitigation, Immigration & Citizenship Disclaimer, Interoperable Communications, Kids & Disasters, LEPC, Public Assistance, Radiological Emergency Preparedness, Special Populations, Training & Exercise

Kansas:
Division of Emergency Management (KDEM)
http://www.kansastag.gov/kdem_default.asp.
Parent Organization is Military Department
Services: Commissions, Donations, Flood Info, GIS Mapping, Mitigation, Planning, Preparedness, Public Assistance, Recovery, Technological Hazards, Training & Exercises

Kentucky:
Division of Emergency Management (KYEM)
http://www.kansastag.gov/kdem_default.asp.
Parent Organization is Military Department
Services: Acronyms & Definitions, CSEPP, Earthquake Program, EMAP, Hazard Mitigation, Hazardous Materials, LEPC, Planning, Public Assistance, Response, SAR, Training & Exercises

Louisiana:
Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP)
http://gohsep.la.gov/.
Parent Organization is Office of the Governor
Services: Alerts & Warnings, Biological, Cyber Security, Drought, Dams, Evacuation Mapping & Planning, Fire, Flooding, Hazardous Materials, Heat, Hurricanes, Interoperable Communications, Legal Counsel for Disaster Recovery, Mitigation, Pet Planning Videos, Nuclear, Recovery, Response, Terrorism, Thunderstorms, Winter Weather

Maine:
Emergency Management Agency (MEMA)
http://www.state.me.us/mema/.
Parent Organization is Military Department
Services: Citizen Terrorism Preparedness, Grants, Hazardous Materials, Homeland Security, Information & Analysis Center, Mitigation, Planning, River Flow Advisory Commission, State Emergency Response Commission, Threat Reporting, Training & Exercise

Maryland:
Emergency Management Agency (MEMA)
http://www.mema.state.md.us/MEMA/index.jsp.
Parent Organization is Military Department?
Services: Business Preparedness, Family Preparedness, Floods, Hurricanes, Kids Preparedness, Livestock, Mitigation, Pets, Public Assistance, Schools Preparedness, Special Needs, State Color-Coded Terrorism Advisory System, Technological Disasters, Training & Exercise

Massachusetts:
Emergency Management Agency (MEMA)
http://www.mass.gov/?pageID=eopsagencylanding&L=3&L0=Home&L1=Public+Safety+Agencies&L2=Massachusetts+Emergency+Management+Agency&sid=Eeops.
Parent Organization is Public Safety
Services: 211, Donations & Volunteer Efforts, EMAC, Evacuation Steps, Floodplain Management, Hazard Mitigation, Heat, Hurricanes, Nuclear Preparedness, Planning, Power Outage Safety, Public Assistance, Rebuilding, Severe Weather, State Emergency Response Commission, Tornadoes, Training, Traffic & Weather Info

Michigan:
Emergency Management and Homeland Security Division (EMHSD)
http://www.michigan.gov/msp/0,1607,7-123-1593_3507_5909---,00.html.
Parent Organization is Michigan State Police
Services: 911, Citizen Awareness & Preparedness, Citizen Corps, Hazardous Materials, Homeland Security Grants, Mitigation, Telecommunications Planning, Training & Exercise

Minnesota:
Homeland Security & Emergency Management Agency (HSEM)
https://dps.mn.gov/divisions/hsem/Pages/default.aspx.
Parent Organization is Public Safety
Services: All-Hazards Planning, Disaster Recovery, EMAC, Emergency Alert System, EPCRA, Grants, Hazard Mitigation, Homeland Security & Emergency Response, Radiological Planning, School Safety Center, Weather Awareness & Preparedness, Training

Mississippi:
Emergency Management Agency (MSEMA)
http://www.msema.org/.
Parent Organization is Office of the Governor
Services: Disaster Planning, Earthquakes, Exercise, Floods, Hazard Mitigation, Hurricanes, Logistics, Radiological Preparedness, Recovery, Response, Safe Rooms, Severe Weather, Nuclear, Training, Transparency, Winter Weather

Missouri:
State Emergency Management Agency (SEMA)
http://sema.dps.mo.gov/.
Parent Organization is Public Safety
Services: All-Hazard Planning, Dam Failure, Disaster History 1957-2011, Donate/Volunteer, Earthquakes, Extreme Heat, Fires, Floodplain Management &

Insurance, GIS Mapping, Health & Safety Considerations, Mitigation, Public Assistance, Radiological Preparedness, Recovery Partnership, Response, Scams & Fraud Avoidance, Nuclear, Tornadoes, Thunderstorms, Training & Exercises, Transparency, Severe Winter Weather. Weather Information

Montana:
Disaster & Emergency Services Divison (DES)
http://dma.mt.gov/des/.
Parent Organization is Military Department
Services: Avalanche, CERT, Chemical/Biological Warfare, Dam Failures, Drought, Earthquakes, Flooding, Hazardous Materials, Hazmat, Homeland Security, Landslide/Mudflow, Mutual Aid, Nuclear Attack, Severe Weather, Soil Failure, State Emergency Response Commission, Tornados, Training, Vector-Borne Diseases, Volcanic Fallout, Wildland Fires

Nebraska:
Emergency Management Agency (NEMA)
http://www.nema.ne.gov/index.shtml.
Parent Organization is Military Department
Services: Amateur Radio System, Citizen Corps, Emergency Alert System, Flooding, Grants, Hazard Mitigation, Homeland Security, Interoperable Communications, Planning, Public Assistance, Technological Hazards, Training & Exercises

Nevada:
Department of Emergency Management (DEM)
http://dem.state.nv.us/.
Parent Organization is Public Safety
Services: Boards & Commissions, Grants Management, Mitigation, Planning, Recovery, Traffic Information, Training & Exercises, VOAD, Wildfires

New Hampshire:
Homeland Security & Emergency Management (HSEM)
http://www.nh.gov/safety/divisions/hsem/. 50 employees
Parent Organization is [Public] Safety
Services: Bioterrorism, Boards & Commissions, Citizen Corps, Disaster Behavioral Health, Emergency Alert System, Hazard Mitigation, Hazardous Materials, Homeland Security, Laws & Rules, Natural Hazards, Nuclear Power Plants, Planning, Training

New Jersey:
Emergency Management and Homeland Security (EMHSD)
http://www.state.nj.us/njoem/.
Parent Organization is Michigan State Police
Services: Access & Functional Needs Preparedness Planning, Business & Industry Preparedness Planning, Citizen Corps, CERT & Teen CERT, Disaster Public Assistance, Disaster Reservist Program, Exercise Support Team, Evacuation Routes, Fire Corps, Local Government Preparedness Planning, Local Officials Training, Medical Reserve Corps, Mitigation & Reducing Risk, Neighborhood Watch Program, Nuclear Emergency Planning, Partner Information, Pet Preparedness Planning, Protective Actions, Schools & Day Care Preparedness Planning, Training, Volunteers in Police Service, USAR, Weather & Traffic Information

New Mexico:
Division of Homeland Security and Emergency Management (NMDHSEM)
http://www.nmdhsem.org/.
Parent Organization is Office of the Governor
Services: Communications, Fusion Center, Grants, Hazmat, Mitigation, Preparedness, Response & Recovery, USAR

New York:
Division of Homeland Security and Emergency Services (DHSES)
http://www.dhses.ny.gov/.
Parent Organization is Office of the Governor
Services: Alerts, COOP Planning, Counterterrorism, Cyber Security, Equipment, Fire, FOIL (FOIA), GIS Clearinghouse, Grants, Hazard Mitigation, Interoperable Communications, Laws & Policies, Mass Fatality Planning, Pandemic, Planning, Radiological Planning, Threat Reporting, Training

North Carolina:
Division of Emergency Management
http://www.nccrimecontrol.org/Index2.cfm?a=000003,000010.
Parent Organization is [Crime Control &] Public Safety
Services: Emergency Alert System, Emergency Management Association, Community Preparedness, Family Preparedness, Floodplain Mapping, Fusion Centers, GIS U.S. Hazard Mapping, Grants, Hazardous Materials, Homeland Security, Hurricanes, Immigration & Visa Issues, Interoperable Communications, Medical Surge, Mutual Aid, Nuclear Plant Emergency Drills, Recovery, Severe Weather, State Emergency Response Commission, Threat Reporting, Tornadoes, Training & Exercise

North Dakota:
Department of Emergency Services (NDDES)
http://www.nd.gov/des/.
Parent Organization is Military Department
Services: Disaster Declarations History 1993-2010, Disaster Recovery & Mitigation, Donations, Floods, Homeland Security, Public Assistance, Training & Exercise

Ohio:
Emergency Management Agency (EMA)
http://ema.ohio.gov/.
Parent Organization is Public Safety
Services: Disaster Assistance Toolbox, Emergency Management Association, Interoperable Communications, NFIP, Nuclear Power Plant Emergency, Planning, Radiological Emergency Planning, Snow Emergency information, Training, VOAD

Oklahoma:
Department of Emergency Management (OEM)
http://www.ok.gov/oem/.
Parent Organization is Office of the Governor
Functions: Disaster & Wildfire History 2003-2011, Earthquake Safety, Flood Safety, Human Services, Lightning Safety, McReady, Mitigation, Planning, Preparedness, Public Assistance, Saferoom Information, Tornado Safety, Training, Weather Notifications, Wildfire Safety, Winter Weather Safety

Oregon:
Emergency Management (OEM)
http://www.oregon.gov/OMD/OEM/
Parent Organization is Military Department
Services: Citizen Corps, COOP, CSEPP, Earthquakes, Grants, Mitigation, Public Assistance, Recovery, Training & Exercise

Pennsylvania:
Emergency Management Agency (PEMA)
http://www.pema.state.pa.us/portal/server.pt/community/pema_home/4463.
Parent Organization is Office of the Governor
Services: 911 Program, Citizenship & Immigration Disclaimer, Disaster Assistance, Hazard Mitigation, Community & State Planning, Grants Management, Homeland Security, Human Services, Infrastructure Repair, Intrastate Mutual Aid, Nuclear Power Plant Safety, Public Assistance, Right to Know, Threat Reporting, Training & Certification, USAR, VOAD, Warning & Communications Systems

Rhode Island:
Emergency Management Agency (RIEMA)
http://www.riema.ri.gov/.
Parent Organization is Military Department
Services: Cyber Security, Floodplain Management, Grants, Hazards Preparedness, Kids Preparedness, Performance & Accountability Report, Resource Typing, SAR, Training & Exercises

South Carolina:
Emergency Management Division (SCEMD)
http://www.scemd.org/.
Parent Organization is Military Department
Services: Civil Disorder, Coastal & Riverine Flooding, Dam Failure, Disaster Assistance for Farmers, Droughts, Earthquakes, Field Operations, Fires, Hurricanes & Tropical Storms, Legislative & Policy Coordination, Mitigation, Nuclear Power Plants, Preparedness, Public Assistance, Recovery, Response, Severe Winter Weather, Terrorism, Training, Transportation

South Dakota:
Office of Emergency Management (OEM)
http://dps.sd.gov/emergency_services/emergency_management/default.aspx.
Parent Organization is Public Safety
Services: 911, Citizen Corps, Grants, Hazardous Materials, Homeland Security, Planning, Public Assistance, Training & Exercises

Tennessee:
Emergency Management Agency (TNEMA)
http://www.tnema.org/.
Parent Organization is Military Department
Services: Communications Energy Failure, Failure, Family Preparedness, Fire, Geologic Hazard, Hazardous Materials, Response, Terrorism & Crime, Training & Exercises, Transportation, Energy Failure

Texas:
Division of Emergency Management (TDEM)
http://www.txdps.state.tx.us/dem/.
Parent Organization is Public Safety
Services: 211, Councils & Committees, Grants, Hurricane Planning, Mitigation, Planning, Recovery, Training & Exercise, Wildfires

Utah:
Division of Emergency Management (TDEM)
http://publicsafety.utah.gov/emergencymanagement/.
Parent Organization is Public Safety
Services: CSEPP, Earthquake Preparedness, Flood Safety, Grants, Hazmat, Homeland Security Taskforce, Lightning Safety, Natural Hazards, NFIP, Power Outages, SAR, Surplus Property, Training & Exercises, VOAD, Winter Weather Preparedness

Vermont:
Vermont Emergency Management (VEM)
http://vem.vermont.gov/.
Parent Organization is Public Safety
Services: Amateur Radio Civil Services, CERT, Community Preparedness, Emergency Alert System, Grants, Mitigation, Planning Committees, Radiological Preparedness, Training & Exercises

Virginia:
Department of Emergency Management (VDEM)
http://www.vaemergency.com/.
Parent Organization is Public Safety
Services: CERT, Citizen Corps, Contracts & Procurement, Disaster Recovery, Fire Corps, Grants, Medical Reserve Corps, Neighborhood Watch, Planning, Preventing Repetitive Loss, Rebuilding, Recovery, Training, VIPS

Washington:
Emergency Management Division (EMD)
http://www.riema.ri.gov/.
Parent Organization is Military Department
Services: E911, 6 Language Translations, Business Portal, Government Preparedness, Grants, Human Services, Kids Preparedness, Logistics & Resources, Natural Hazards, Neighborhood Preparedness, Radio Systems, SAR, Technological Hazards, Warning Systems, Training & Exercises

West Virginia:
Division of Homeland Security and Emergency Management (WVDHSEM)
http://www.wvdhsem.gov/index.html.
Parent Organization is Office of the Governor
Services: Citizen Corps Council, Emergency Operations Plan, Flood Insurance, Flood Observing & Warning System, Floodplain Recovery, Hazard Mitigation, LEPC, Radiological Emergency Planning, State Emergency Response Commission

Wisconsin:
Division of Emergency Management (WEM)
http://emergencymanagement.wi.gov/.
Parent Organization is Military Department
Services: Emergency Alert System, EPCRA, NFIP, Hazard Mitigation, Hazardous Materials, Mitigation Success Stories, Planning, Radiological Preparedness, Recovery, Training & Exercises

Wyoming:
Office of Homeland Security (WOHS)
http://wyohomelandsecurity.state.wy.us/main.aspx.
Parent Organization is Office of the Governor
Services: Communications Resources, Grants, IED Program, Infrastructure, K9 Program, Preparedness Resources, State Emergency Response Commission

(Note: PIO functions, WebEOC logins, Organization Human Resource/Financial/Administrative functions were not catalogued because these are presumed to be internal functions or directed to other emergency management organizations. Directories of staff and lists of local emergency contacts were not noted. Tier II functions were not noted as this function was not clear.)

INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center
   Ft. Belvoir, Virginia

2. Dudley Knox Library
   Naval Postgraduate School
   Monterey, California

3. Susan Hocevar
   Department of National Security Affairs
   Naval Postgraduate School
   Monterey, California

4. Ellen Gordon
   Department of National Security Affairs
   Naval Postgraduate School
   Monterey, California