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# Best Practices in Emergency Management Fire All Around New Mexico as a Case Study

Theodora Muehlenweg

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**BEST PRACTICES IN EMERGENCY MANAGEMENT:  
A CASE STUDY OF NEW MEXICO**

by

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**THESIS**

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## BEST PRACTICES IN EMERGENCY MANAGEMENT

## Dedication

I would like to dedicate this paper to the upcoming generations of New Mexico. I hope that we do not leave our future citizens without ways to prepare for the unexpected. I dedicate this project to my boyfriend Ryan Schotter, he has been supportive, not only of my education but of every aspect of my success. He has been my cheerleader, my therapist, and my biggest friend. Since I first had the idea to write about crisis and emergency, I had the support of my patient brother Nic Muehlenweg, my close friends Milagro Mendoza, who always took the time to listen; and Sandy Schotter, who always gives me love even when I may not deserve it. I would also like to thank Danielle Gallegos, Clarissa Johnson and Heather Mobbley. Their friendship has kept me together. And finally my mentor Steven Meilleur, who not only convinced me I could write thesis, but that I should. I could not have done this alone, and I am eternally grateful for all the support I have had along the way.

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**BEST PRACTICES IN EMERGENCY MANAGEMENT:  
A CASE STUDY OF NEW MEXICO**

**by**

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Abstract

This paper explores best practices in emergency management, using eight interviews and a focus group to examine how New Mexico Emergency Managers (EM) individually apply best practices. The interviews were conducted with local EMs from New Mexico. The focus group was conducted using a group of four EMs from central New Mexico. This paper is an exploratory qualitative study to identify which best practices are used within New Mexico. The purpose of this broad approach is also to determine where further research is necessary. This paper also explores briefly concepts of terminology, public administration, disaster management and current trends in the context of crisis and emergency management. The best practices identified for this research are in the areas of planning, communication and networking.

*Keywords:* Emergency management, best practices, New Mexico

## TABLE OF CONTENTS

<b>LIST OF FIGURES .....</b>	<b>vi</b>
<b>INTRODUCTION .....</b>	<b>2</b>
Origins of Emergency Management .....	4
Language Difficulties from Excess Terminology .....	6
All Disasters are Local .....	7
How Emergency is Handled .....	9
Concepts Important for Emergency Management .....	10
Scope of Paper .....	12
<b>REVIEW OF LITERTURE .....</b>	<b>12</b>
Emergency Management at a Glance .....	13
Management in the Emergency Context.....	15
Standardization within the profession of Emergency Management .....	17
Theory within Emergency Management .....	18
Crisis in New Mexico .....	19
Best Practices .....	20
Best Practices the Emergency Plan .....	21
Best Practices in Communication .....	25
Best Practices through Networking .....	27
Conclusions .....	29
<b>METHODOLOGY .....</b>	<b>32</b>
Statement of Research Problem .....	32
Hypothesis .....	32
Research Design and Methods .....	33
Interviews .....	33
Focus Group .....	35
Overview of Methods Available .....	36
Best Practices .....	37
<b>DISCUSSION AND ANAYLSIS .....</b>	<b>37</b>
Best Practices 53 .....	53
Planning as an Example of Best Practices .....	58
Communication as an Example of Best Practices .....	59
Networking as a Best Practices .....	62
Discussion of the results .....	63
Limitations of the Study .....	65
Conclusions and Recommendations .....	67
<b>CONCLUSIONS .....</b>	<b>70</b>
<b>REFERENCES .....</b>	<b>74</b>

## BEST PRACTICES IN EMERGENCY MANAGEMENT

## LIST OF TABLES

Table 1. Review of Literature .....	79
Table 2. Definitions and Concepts.....	81
Table 3. Crisis versus Emergency .....	83
Table 4. Interview participants .....	84
Table 5. Questions (Interviews) .....	85
Table 6. Focus Group Participants .....	85
Table 7. Best Practices Examples .....	86
Table 8. Resource Allocation .....	87
Table 9. Political Restraints .....	88
Table 10. Emergency Management as a Young Profession .....	88
Table 11. Leadership .....	89
Table 12. Inter-politics .....	89
Table 13. Terminology .....	90
Table 14. Other Issues .....	91

Best Practices in Emergency Management

Fire All Around

New Mexico as a Case Study

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## INTRODUCTION

Crisis and emergency management is crucial for local governments. Disaster has the potential to effect almost every individual within the community. However, emergency management within New Mexico has little academic research (McEntire & Myers, 2004). While the federal government has done an extensive amount of work on creating protocols and plans for large-scale emergencies following Hurricane Katrina, there is still a lack of research on the smaller local level here within the Land of Enchantment (Wyatt-Nichol & Abel, 2007).

The emergency management function at the local level developed out of the Emergency Planning and Community Right to Know Act of 1986 (Schneider, 2013). Although there were plenty of federal mandates calling for disaster mitigation, local governments were not quick to make preparedness functions an absolute priority (Perry & Lindell, 2003). Unless the threat of a specific hazard was considered eminent, the support at a local level would be hard to sustain (Flin, 1996). From inception emergency management has held low political support and this usually accompanies scarce resources (Schneider, 2013).

Crisis and emergency are a social construction, meaning that they have different meanings for different people (Drennan & McConnell, 2007). Citizens in a community view threats depending on their own beliefs, interpretations, roles and responsibilities (Schneider, 2013). It is often the job of local public management to discern quickly what events are happening and how to respond to them (Drennan & McConnell, 2007). The identification, evaluating, addressing, and monitor potential incidents can be a large burden on local management (Drennan & McConnell, 2007).

**Growing Importance of Emergency Management.**

Since the beginning of the 20th century, governments have become increasingly aware of the importance of preparing for disaster. As the world becomes more interconnected and technology continues to increase our communication capacities, emergencies have introduced more complex and potential hazards that have grown exponentially. There is a debate as to whether emergency has gotten worse, or events simply more televised than ever before. Either way, there is more responsibility on public managers to combat potential danger to citizens. Governments and organizations are thus starting to change how they define effectiveness, and this change is leading to innovations in dealing with threats (Morgan, Kirwan, Rohr, Rosenbloom & Schaefer, 2010). Planning has become a higher priority.

The concept of emergency management has been around for ages, not until recently it has begun to cement into a definable profession. It is becoming ever more specialized as there are now specific degree offerings in emergency and disaster planning and management. More cities are designating a specific “EM” position (Schneider, 2013). Emergency management is also becoming an integral part of a more compressive community decision making processes (Schneider, 2013).

While it is growing as a professional field, emergency management is still youthful in its research. The number of peer reviewed scholarly articles is growing, and the interdisciplinary nature of emergency management allows for a diverse draw of knowledge from subfields including public administration, environmental policy, economics, and law (Drennan & McConnell, 2007). There are several risk analysis and hazards management journals as well as Cambridge Scientific Abstracts (CSA), ABI/INFORM Complete, (ProQuest), Academic Search

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Primer (EBSCO), Web of Science (Thomson Reuters), etc. (Neal & Phillips, 1995; Drennan & McConnell, 2007). However, the local level research within New Mexico is still lack luster (source?).

Preparedness has also been significant in shaping the emergency management profession (Alexander, 2005). No emergency management function can exist without a strong preparedness capability. This capacity is built through planning, training and testing. This has led to an increased professionalism within the discipline of emergency management. Crisis is not a time for impromptu responses. There has been increasing penalties for those who do not prepare for crisis, whether it is financial, legal, or personal penalties, unpreparedness is not longer tolerable in our complex world. Planning for all foreseeable contingencies is almost a form of insurance (Nudell & Antokol, 1988).

### **Origins of Emergency Management**

Disaster activities on a national scale still remained fragmented after World War II because over 100 federal agencies were involved in some aspect of disaster response (Bumgarner, 2008). After the much publicized Accident in 1978 at the Three Mile Island nuclear power plant in Pennsylvania, the need to centralize federal emergency function could no longer be ignored (Drennan & McConnell, 2007).

On April 1, 1979, President Jimmy Carter signed an executive order to establish the Federal Emergency Management Agency (FEMA) (Bumgarner, 2008). FEMA provided a central authority to stabilize and standardize disaster response within the United States (Alexander, 2005). FEMA was able to absorb a majority of the disaster-related agencies including the Federal Insurance Administration, the National Fire Prevention and Control Administration, the National Weather Service Community Preparedness Program, and the Federal Disaster Assistance

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Administration upon its inception (Toft & Reynolds, 2005). FEMA also assumed the responsibility for civil defense (FEMA, 2014). As of April 2014, FEMA has 14,844 employees across the country – at headquarters, the ten regional offices, the National Emergency Training Center, Center for Domestic Preparedness/Noble Training Center and other locations (Bumgarner, 2008).

After the tragic events of September 11<sup>th</sup> 2001, the concept of federal emergency management was faced with an unprecedented test (Drennan & McConnell, 2007). The terrorist attack exposed weaknesses within the coordination of emergency and disaster activities within the United States (Bumgarner, 2008). Consequently, Congress passed the Homeland Security Act of 2002, which created the Department of Homeland Security (DHS) (Drennan & McConnell, 2007). This new agency was designed to better coordinate efforts among the differing federal agencies that deal with law enforcement, disaster preparedness and recovery, border protection, and civil defense. In 2003, FEMA was absorbed into Homeland Security and became a part of the department's Emergency Preparedness and Response Directorate. The scope of FEMA has broadened to help more during times of emergency (FEMA, 2005).

The responsibilities and roles of emergency management can be debated but most agree that Emergency managers must be comprehensive with their approach, meaning that emergency managers must consider and take into account all hazards, all phases, all stakeholders and all impacts relevant to disasters (Stern, 2009). This is a common term for almost every EM, everyone under FEMA follows the All-Hazards model (FEMA, 2014). The all hazard approach is defined as the management of any incident or event which would require an organized response by a public, private, and/or governmental entity in order to protect life, public health and safety; this could include protection of values and efforts to minimize any disruption of

## BEST PRACTICES IN EMERGENCY MANAGEMENT

governmental, social, and economic services (Kapucu, 2008). Often the best methods for preparing to manage all types of disaster events is an all-hazards, capability-based approach to preparedness. Instead of having an emergency plan for every situation, having one that would have wider applicability allows for quicker action (Drennan & McConnell, 2007).

### **Language Difficulties from Excess Terminology**

The subject of emergency and crisis can be a difficult subject to research because it is known by so many different terms including: emergency management, disaster preparedness, incident management, risk maintenance, etc. The management of this concept is an even more difficult term to grapple with. On its own, public management is a very complex entity (Moore, 1995). It can be a daunting task to understand how exactly an emergency or crisis event is actually managed because the intersecting agencies and jurisdictions involved (Drennan & McConnell, 2007) (See Table 2).

The terminology used within relevant literature comes with predisposed notions (Drennan & McConnell, 2007). A term preferred by one professional may be different for another. Inevitably people will view crisis through the lens of their own beliefs, interpretations, responsibilities, and roles (Drennan & McConnell, 2007). Common vernacular of managers can vary based upon their region or even their background. “Emergency” induces a sense of urgency, while “crisis” often appears as an ambiguous term that ignites complex emotions (Hilgers, 2010). This paper refers to this subject as emergency management because that is what professionals in this area use. There has been an increasing drive for standardization of the terms and concepts used within emergency management (Alexander, 2005). Textbooks specifically written for emergency management have tried to distinguish managing large-scale political and environmental incidents from private sector crisis involving asset risk and financial failure

## BEST PRACTICES IN EMERGENCY MANAGEMENT

(Drennan & McConnell, 2007; Baird, 2010). The term “crisis” is used within most literature, so it has been used in this paper. Emergency was chosen for the title of this paper because this is how EMs in New Mexico identify with the profession. For simplicity, the management of an unplanned or unexpected event will be the focus of this work.

Emergency management covers a broad range of topics including prevention, preparation, response and recovery. While emergency can appear to the public as a common sense idea, few understand exactly what goes into the emergency management function (Drennan & McConnell, 2007). Emergency can get very complicated. There are various agencies and departments from local to federal government that try to grapple with the complicated components of responding to any type of situation or emergency. The overlapping jurisdictions get confusing and the task of maneuvering and understanding this process falls on emergency management (Lindell, Prater & Perry, 2007). This task is further complicated by desires of the public.

### **All Disasters are Local**

All disasters are initially local, with local authorities including law enforcement taking charge immediately after an event occurs (Drennan & McConnell, 2007). If the event becomes overwhelming for a local government’s standard operating procedures then state emergency management is utilized. Federal assistance is almost always available for when an event escalates too quickly (Toft & Reynolds, 2005). However, this can be a point of confusion when trying to predict how large an incident will become, this is especially true for fire. A gust of wind can take a fire from being managed easily by local fire response to something almost impossible for the state to handle by itself (Drennan & McConnell, 2007). Cities are often prepared for small localized events through the emergency services like fire rescue and police units, the type of

## BEST PRACTICES IN EMERGENCY MANAGEMENT

events that overwhelm those resources are the events that need more calculated and more complex planning (Drennan & McConnell, 2007).

FEMA and DHS are the leading federal agencies for emergency management standards and local EMs will often utilize their resources (Alexander, 2005). These agencies will also provide federal grants and other funding resources that will help municipalities with smaller budgets (Drennan & McConnell, 2007). The United States and its territories are broken down into ten regions for FEMA's emergency management purposes. FEMA supports, but does not override state authority.

There has been recent discussion by those within the field about separating FEMA from DHS. Since adding FEMA to DHS, many have wondered if this reorganization has helped or hindered the ability of FEMA to effectively handle its responsibilities (Waugh & Streib, 2006). This discussion is propagated by many who believe terrorism is a small sector of emergency management planning. Therefore, having FEMA as a part of DHS simply adds more bureaucratic paperwork than benefit (Kipp & Loflin, 2010). Others argue it provides legitimacy to the organization (Drennan & McConnell, 2007). Regardless of this debate, emergency issues sometimes need federal authority when the size of the incident exceeds state and local handling capacities and available resources. Crisis may force an organization to reorganize. In today's society after a crisis occurs, decision makers along with their policies and their institutions will inevitably pay for the consequences of "failing" to react to a crisis as the public deems appropriate (Drennan & McConnell). Often there is a decline in support and perhaps removal from office for some senior public officials who were responsible, or who were simply seen as being responsible for weak and/or ineffective crisis mitigation.

### **How Emergency is Handled**

Emergency response is typically managed through a flexible organizational structure known as the Incident Command System (Kapucu, 2008). Public safety officers must respond to disaster with enough resources to ensure that the safety of the public is adequately addressed. Since the aftermath of recent hurricanes has given more public attention to the preparation for large-scale disasters (Drennan & McConnell, 2007).

Crisis management has become a topic that provokes a great deal of discussion regarding the role of government. While most would agree that government should help and protect its citizens during times of emergency, the question of how much protection and help should it provide, also needs to be addressed (Moore, 1995).

Hurricane Katrina is the go-to example for failures in leadership. It was convenient to point fingers at the New Orleans mayor Ray Nagin, Louisiana governor Kathleen Blanco, and President George Bush, but each individual's lack of leadership played a role in the outcome. The failures of any event will have consequences (Drennan& McConnell). Regardless of the outcome of a disaster, individuals will be affected, often on a personal level. For example, following the aftermath of Hurricane Katrina many lost their hope and family, this failure on the response end resulted in the FEMA director Michael Brown being fired (Drennan& McConnell). The disastrous consequences from Katrina led to new ways of thinking about emergency management. Officials at all levels pledged to create better intergovernmental relationships. Collaboration can no longer be ignored as a vital piece in the process, (Waugh & Streib, 2006).



## BEST PRACTICES IN EMERGENCY MANAGEMENT

### **Concepts important for Emergency Management**

A number of systems have been developed by FEMA and DHS, which generally most emergency managers employ and agree on (Drennan & McConnell, 2007). The major three concepts are the ICS or incident command center, NRF or the national response framework and the NIMS or the national incident management system. Together these things make up the core of what emergency management focuses on organizing during a complex emergency. The National Response Framework lays out the guiding principles for all level of domestic response to help agencies prepare for and respond to disasters as a unified national structure. The NRP builds on the National Incident Management System (NIMS) and the Incident Command System (ICS) coordinating response and implementation at any level and at any time for local, state, and national emergency or disaster response. The National Response Framework (NRF) is a widely accepted as the standard, (Alexander, 2005). NRF doctrine explains that any given Incident may begin with a single response discipline within a single jurisdiction has the potential to expand to multi-disciplinary or multi-jurisdictional that might require additional resources or capabilities. The NRF sets out principles that are widely accepted in the Emergency Management profession (FEMA, 2010).

An ICS set up is typical for most large-scale response situations (Toft & Reynolds, 2005). ICS was developed in the 1970s following a series of catastrophic fires in California's urban interface, meaning the area which development was growing in fire prone areas. The property damage in California from this time ran into the millions, and many people died or were injured (FEMA, 2005). The personnel assigned to determine the causes of these unwanted outcomes studied all the relevant case histories and discovered that the response problems could rarely be attributed to a lack of resources or a failure of tactics. Instead these studies showed that response

## BEST PRACTICES IN EMERGENCY MANAGEMENT

problems more likely a result from a problem of inadequate management (Kapucu, 2008). The ICS is a management system designed to enable effective and efficient domestic incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure. The ICS is designed to enable effective and efficient domestic incident management with communication and coordination (Toft & Reynolds, 2005).

The state of New Mexico experiences similar issues with the wild land urban interface. Fire causes a tremendous amount of distress within many areas of the state. New Mexico is no stranger to emergency. Besides fire, other severe weather issues are likely to occur like wind, and drought, and flooding. New Mexicans face the threat of a variety of natural disasters and the threat of man-made disasters. In the last ten years, New Mexico dealt with an unprecedented series of emergencies from drought to fire, flooding and severe winter weather, and even tornadoes.

The potential hazards give reason for emergency plans within New Mexico to be catch-all and ready for any unexpected event and the All-Hazard model has been adopted. The DHS is very active within New Mexico and works with the state to prepare emergency plans and provide training. DHS also runs large-scale drills and scenarios that are often a component of DHS grant compliance (FEMA, 2010). The purpose of the State of New Mexico All-Hazard Emergency Operations Plan (EOP) is to establish the New Mexico Emergency Operations System, which organizes the state's response to emergencies and disasters while providing for the safety and welfare of its citizens (Botan & Penchalapadu, 2009).

**Scope of Paper**

This paper focuses on public entities, specifically government agencies, in attempting to define and understand emergency management within New Mexico. This paper focuses on how local EMs deal with their current obstacles and climate and how they are effective. Specifically trying to understand which best practices are used and how they can be more effective to improve emergency management within New Mexico.

Emergency management is important for all levels of government. Public organizations will inevitably deal with crisis and emergency, and whether these events are small or large effective crisis management is crucial for every level of public management. Disaster is unavoidable, and every organization must prepare for unplanned events (Flin, 1996). New Mexico has not had the large-scale emergencies that have afflicted states like Louisiana or New York, which has led to an underdeveloped emergency management infrastructure throughout the state. For example, many municipalities have an EM, which is a subset of another position. While the argument for the importance of disaster planning may seem obvious to those trained in this field, it can be difficult to convince those at higher levels of the government to allocate funding to something that is hypothetical (Drennan & McConnell, 2007).

A series of eight interviews and a focus group with local emergency managers was conducted to explore best practices. This research was approved by IRB on July 23, 2014, with modifications approved on October 1, 2014. The modifications made were simply adding more detail to the consent forms. The questions asked within the interviews ranged from a series of grounding questions like “how would you describe your job?” and “what is the most important thing that you deal with”. Other questions asked centered around handling emergency better

## BEST PRACTICES IN EMERGENCY MANAGEMENT

within New Mexico and how individual EMs currently handled emergency using best practices. The Focus group focused solely on how best practices are defined and employed. Emergency Management is a complex and important task that not many people understand, this paper is an exploratory approach to better comprehend how EMs in New Mexico best manage crisis.

### **REVIEW OF LITERATURE**

The purpose of this research explores how EMs apply best practices locally in New Mexico. This paper will also make a case for the importance of having EMs in local public governance. The emergency manager (EM) can come from diverse backgrounds (Drennan & McConnell, 2007). With a little more than fifty years as an organized field, emergency management is still relatively new both academically, as well as professionally (Schneider, 2013). This leads to a disjointed understanding of how emergency management works, with few among the public actually understanding what an EM does (Drennan & McConnell, 2007).

Emergency has the potential to happen anywhere, and it is incumbent upon government to ensure preparedness (Drennan & McConnell, 2007). How emergency can be best handled seems to be a continually updating process (Wyatt-Nichol & Abel, 2007). EMs in New Mexico employ best practices by ensuring planning is maintained, engaging in effective communication and creating beneficial network relationships. These three themes were found through the literature as well as within the interviews and focus group.

#### **Emergency Management Setbacks at a Glance**

Citizens are often disappointed with how disaster is handled (Haras & Brasley, 2011). There are going to be disasters no matter how many resources are devoted to mitigation plans. Mitigation is simply a plan to protect the population from harm by preparing for its occurrence (Schneider, 2013). Mitigation can include any activities that may help reduce or eliminate the

## BEST PRACTICES IN EMERGENCY MANAGEMENT

probability damages during a disaster. Mitigation can also include long-term activities like investment in land-use management, or establishing comprehensive emergency management programs (Drabek & Hoetmer, 1991). Disasters will inevitably occur regardless of preparation (Schneider, 2013). When an event occurs and lives or property are lost, no matter how well the government responds to that event, the community will still be faced with undesirable consequences.

When government declares an emergency response “successful”, there will be those who have lost family members, and they will strongly disagree and may sue government for losses incurred from disaster (McEntire & Myers, 2004). The assumption that the government should assume responsibility when something goes wrong is a popular American idea (Moore, 1995). Often government is financially liable for harm caused by disaster, even when the event was classified as an “act of nature” (Augustine, 1995).

Despite the type of emergency situation, it will require fast and frugal decision-making by EMs (Rahm & Reddick, 2011). Since crisis is often viewed as a social construction and it can be expected that individuals will view threats in dissimilar ways. The variety of individual reactions to an event can create even more unknowns. Often agencies will have conflicting secondary and tertiary goals and objectives. Some goal conflicts may pose challenges for public managers, however it may be an unfair assumption to assume that achieving more than one objective necessitates sacrificing one or more others. When a public manager juggles multiple performance criteria, it does not inevitably involve some form of a trade-off or sacrifice (Coombs, 2001). This assumption is dangerous when it is adopted because public managers implicitly marginalize the potential contributions of delivering results. This is an important

## BEST PRACTICES IN EMERGENCY MANAGEMENT

lesson for EMs. Public managers and EMs can still be successful despite the setbacks (Rahm & Reddick, 2011).

For managers of public organizations, success often depends on finding ways of coordinating various people and other resources to effectively carry out programs and improve overall performance (Wenger, 2008). An EMs must coordinate multiple organizations. The constrained system of public government requires resource sharing between departments in times of stress (Zaharia, 2012). Obviously, the task before an EM is difficult and very complicated. The actual individual in the position making decisions can impact the success of a campaign. EMs must have the ability to build collaborative relationships with the various agencies they work with in order to be successful (Jaques, 2010). Any public manager must learn to stretch resources and work with others to achieve complex directives. EMs can be more effective in their missions by leading and collaborating with other departments (Drennan & McConnell, 2007).

The emergency management department is not the sole actor in times of crisis. Hundreds of diverse organizations play various roles in dealing with a disaster and many of these roles are not linked directly. This is why the individuals involved in leading the agencies within a disaster can have such a great impact on the outcome of the campaign. If an individual has the skills in order to collaborate effectively, often the response will have a more successful outcome (Waugh & Streib, 2006).

### **Management in the Emergency Context**

Emergency management is the managerial function charged with creating the framework within which communities reduce vulnerability to hazards and cope with disasters (FEMA, 2005). Emergency Management often connects to the entire community. When a community

## BEST PRACTICES IN EMERGENCY MANAGEMENT

views itself as somehow connected with emergency response, the EM has an easier job of creating community resilience. Large-scale disaster will often invoke the need for the whole community support and call upon individuals within the community to come together and help with recovery. Emergency management seeks to promote safer, less vulnerable communities with the capacity to cope with hazards and disasters. Emergency management protects communities by coordinating and integrating all activities necessary to build, sustain, and improve the capability to mitigate against, prepare for, respond to, and recover from threatened or actual natural disasters, acts of terrorism, or other man-made disasters (FEMA, 2005). This is sometimes done through media campaigns for at home preparedness kits or within neighborhood associations on a family-to-family basis (Drennan & McConnell, 2007).

The emergency management field and the scope of its functions have significantly evolved and changed since WWII (Alexander, 2005). Today, communities demand different competencies and skills for emergency management response (Bumgarner, 2008). Some of the obvious reasons for these changes have been the rise in technological advances. There has also been a rise in performance standards of emergency management systems to ensure the effective response to natural or human-made disasters (Alexander, 2005; Kapucu, 2011). The measurement of outcomes have made every department of government step up in justifying its actions, (Moore, 1995).

Emergency management requires constant funding justifications. EMs anticipate future disasters and take preventive and preparatory measures to build disaster-resistant and disaster-resilient communities. EMs employ risk management principles such as hazard identification and risk analysis in assigning priorities and resources (Schneider, 2013). EMs must ensure unity of effort among all levels of government and all elements of a community this is not an easy

## BEST PRACTICES IN EMERGENCY MANAGEMENT

assignment. Ensuring unity requires broad and sincere relationships among individuals within organizations to encourage trust. There also needs to be advocacy for a team atmosphere within response efforts. Networking will help build consensus and facilitate communication (Drennan & McConnel, 2007).

This task of networking and communication can extend beyond the public sector community and will have numerous and diverse stakeholders interested in effective disaster management (Drennan & McConnel, 2007). EMs synchronize the activities of all relevant stakeholders to achieve the common purpose of disaster recovery. Effective EMs use creative and innovative approaches in solving disaster challenges. Effective EMs will also value a science and knowledge-based approach based on education, training, experience, ethical practice, public stewardship and continuous improvement (Schneider, 2013).

### **Standardization within the Profession of Emergency Management**

In order to judge how well an organization is handling crisis, there first must be an agreed upon measurement or basis for assessing victory or failure (Alexander, 2005). Many organizations create their own degree of excellence required for a particular purpose. The Oxford English Dictionary (2nd edition, p.1721) gives numerous pertinent definitions of the word "standard", including "an object or quality or measure serving the basis or example or principle to which conform or by which accuracy or quality of other is judged" and "the degree of excellence required for a particular purpose" and "a thing recognized as a model for imitation" (Alexander, 2005; Drennan & McConnel, 2007). For emergency management we can view any response standard as the minimum accepted levels of function that ensures accountability and efficiency for a particular community (Alexander, 2005).



## BEST PRACTICES IN EMERGENCY MANAGEMENT

A standardized procedure for handling any type of emergency not only protects government from potential litigation, but it also shields the public from wanton policy (Alexander, 2005). If the government has standardized the plan and the terminology used for combating potential risks, it will be easier for the public to understand and follow the process (Drennan & McConnell, 2007). Since the public wants to know why and where taxpayer dollars are spent, Emergency professionals must provide just rationale for their decisions.

### **Theory within Emergency Management**

Emergency Management early on approached disaster using chaos theory (Seeger, Sellnow & Ulmer, 2003). Chaos Theory deals with nonlinear things that are effectively impossible to predict or control (Gilpin & Murphy, 2008). Disaster is one of those phenomena that falls within this category. Frequently described by fractal mathematics, which captures the infinite complexity of nature (Seeger, Sellnow & Ulmer, 2003). By understanding the environment in which EMs operate, by understanding that ecosystems, social systems, and economic systems are interconnected, EMs can plan against actions which may end up being detrimental to a community's long-term well-being (Seeger, Sellnow & Ulmer, 2003).

David McEntire describes theory as ideal conditions we desire in the world, so within emergency management wish to mitigate the rising tide of disaster losses and prevent uncoordinated and haphazard response and recovery plans. Since emergency management interacts with so many different disciplines it is difficult to pinpoint definitive concepts in the budding profession. Often, theory will clarify terms and provide sound academic definitions, however there is little consensus within the EM field. McEntire sees the notion of convergence

## BEST PRACTICES IN EMERGENCY MANAGEMENT

as a common concept for emergency management, meaning that during a disaster, people and resources will flow to it and this could create problems itself (2004).

Since “emergency” is a debatable term, many EMs use the theory of sense making (Seeger, Sellnow & Ulmer, 2003). Sense making is understood as the process by which people give meaning to experience. Often, EMs can mitigate recovery by keeping the media from assigning a meaning to a situation after a response that is unnecessarily negative. Sense making can also be a collaborative process of creating shared awareness and understanding out of different individuals' perspectives and varied interests. This is often understood in an organizational context, but it can be transferred to a community resiliency plan, (Seeger, Sellnow & Ulmer, 2003).

Another theory that categorizes how organizations deal with risk and crisis is organizational learning theory (Seeger, Sellnow & Ulmer, 2003). This is essentially when an organization which is able to sense upcoming changes from signals from its environment and when the organization can adapt accordingly it will be successful (Seeger, Sellnow & Ulmer, 2003).

This idea can be easily transferred to the EMs context; whenever there is an incident, the response must be able to react in the correct way for the most efficient response (Seeger, Sellnow & Ulmer, 2003). There has been research conducted on the theory of emergency management (Coombs, 2007), but no academic research that looks in-depth at how New Mexico deals with crisis incidents on a local level. Crisis happens at the local level, when a disaster strikes, those who first feel the effects are the locals in the area, the first responders on the scene are also local.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

To understand crisis in any area, we must understand the local infrastructure.

### **Crisis in New Mexico**

Any number of disasters can occur within New Mexico, from earthquakes, floods, severe winds, fire, hazardous materials releases, to transportation accidents. On its website for the Office of Emergency Management, Albuquerque lists potential hazards including: terrorism, wildfire, flooding, and major chemical spills, among others (<http://www.cabq.gov/emergency-management-office>). These events have the potential to be extremely varied (OEM, 2014). The New Mexico Department of Homeland Security Emergency Management does not have a evaluation program in place currently (NMDHSEM, 2014).

New Mexico is very dependent on the structure provided by the federal government. New Mexico gets \$2.63 back for every tax dollar it sends to the government; this is the eighth-highest return among all the states (Gilson, 2012). Federal funding totaled 37.9 percent of all state revenue, giving the state the 10th highest rank in this area (Gilson, 2012). New Mexico's per capita federal worker rate was 15.22 for the fourth highest rate among the states (Gilson, 2012). The reliance on federal government for funding carries over to other parts of New Mexico. The Department of Homeland Security provides most of the funding for emergency management positions and resources (FEMA, 2014).

Emergencies often overwhelm local government capacity. Emergency can transcend jurisdictional boundaries. This makes intergovernmental coordination an essential element for the protection of lives and property. This cooperation is also essential for the maximum use of available resources (Rahm & Reddick, 2011).

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Under the Intrastate Mutual Aid System (IMAS), any member of a jurisdiction may request assistance from any other jurisdiction to help prevent, mitigate, respond to, or recover from an emergency or disaster, or in concert with drills or exercises, (OEM, 2014). The Intrastate Mutual Aid System is closely tied to the State of New Mexico's participation in the Emergency Management Assistance Compact (EMAC) for the seamless escalation of disaster response and execution of national mutual aid (NMDHSEM, 2014). This is all possible through DHS funding (OEM, 2014).

### **Best Practices**

Although an emerging profession emergency management has developed many standards for high quality programs (Perry & Lindell, 2003; Alexander, 2005). To observe the nuances of any field it is helpful to look at best practices. Best practices can be extremely informative in understanding how to achieve better results and higher outcomes. Every professional field has its own form of best practices.

Best practices are defined as a method or technique that has consistently shown results superior to those achieved with other means, and this is used as a benchmark. Many use the term, best practices, to describe the process of developing and following a standard way of doing things that multiple organizations can use (Alexander, 2005). While some consider best practices to be merely a buzzword, every profession needs to have standards at which to compare success (Alexander, 2005).

The concept of best practices within emergency management still seems slightly fragmented. There is so much data available it can be hard to sort through. The Department of

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Homeland Security and Federal Emergency Management Agency has thousands of examples of lessons learned and best practices from various agencies. Each day there are front-line responders at local, state and federal level governments who are creating new and innovative best practices. Emergency responders constantly participate in exercises and real-world incidents, which have produced valuable lessons for emergency response professionals. These local best practices are collected on an online database called LLIS.gov (DHS, 2014). This is a national online network of lessons learned and best practices. LLIS was designed to help emergency responders, homeland security officials and government agencies prevent, prepare for, respond to, and recover from disasters (DHS, 2014). This paper will focus on the best practice concepts of plans, communications and networks.

**Best Practice the Emergency Plan.** Emergency management will always have plans in place, which coordinate response and influence outcomes. Having a plan, however, does not necessarily mean the response will be well coordinated. What makes a plan successful is debated by experts (Drennan & McConnel, 2007), but a plan must be understood by all those involved in the response process. Planning activities in response to an event are a component of overall incident management and are aligned with parallel response processes associated with prevention and protection. EM's will prepare programs comprised of functional areas like "operations and procedures, hazard and risk identification, plans and procedures. Sometimes, these are called strategic plans, operational plans, or even recovery plans. These plans will often include some component of hazard mitigation, public information and public education (Drennan & McConnel, 2007).

There is not just standards for emergency response from governmental agencies, the organization *Ready* is a national public service advertising (PSA) campaign designed to educate

## BEST PRACTICES IN EMERGENCY MANAGEMENT

and empower Americans to prepare for and respond to emergencies including natural and man-made disasters (Ready, 2014). According to Ready, the first step when developing an emergency response plan is to conduct a risk assessment and to identify potential emergency scenarios in the local area (Ready, 2014). Communities are an integral part of emergency response (Drennan & McConnel, 2007).

An understanding of what can happen will enable managers to determine resource requirements and to develop plans and procedures to prepare communities. All-hazards does not mean having a plan for each kind of potential emergency. All-hazards does not mean that each program literally needs to be prepared for any and all hazards that might manifest themselves in any particular community or state (Drennan & McConnell, 2007). It does mean that there are commonly occurring kinds of disasters that can be mitigated with adequate preparation. This can be things like the need for emergency warning or mass evacuation that can be addressed in a general plan and that that plan can provide the basis for responding to any kind unexpected events. An emergency plan is critical for responding equitable and adequately to any given situation (Drennan & McConnell, 2007).

Any emergency plan should be consistent with the performance objectives, not only of the department but also of the agency. When writing an emergency plan, the resources that are available must be utilized effectively because extra resources may become unavailable. When an emergency happens the organization may be lacking the resources listed within the plan.

Within a plan there should always be an assessment of what resources may be readily available for incident stabilization. Considering internal resources and external resources including public emergency services and contractors (Henstra, 2010). Resources are often

## BEST PRACTICES IN EMERGENCY MANAGEMENT

shared between departments, a plan must include a dialogue of equitable sharing of resources (Wyatt-Nichol & Abel, 2007). Public emergency services often work together during an incident. Documentation of available resources should be continually updated (Henstra, 2010). Effective plans must have a component for covering resources that may not be immediately available when an incident occurs. This can include using alternative vehicles for victim transport, borrowing resources from private entities or even more create means to make up resource deficiency.

The traditional methods for planning for emergencies have become be viewed as outdated in light of today's highly vulnerable environment. Originally, plans were systemic around four stages, including preparedness, response, recovery, and mitigation (McEntire, 2002). The literature suggests an understanding of the comprehensive vulnerability management approach versus the all-hazards model. The idea is to be proactive rather than reactive in assessing the risks to the community (Rahm & Reddick, 2011).

Plans should include a way to handle response, relief and a recovery, as well as the rebuilding phase. During the response phase of disaster management there should be a set of procedures for engaging personnel beyond standard operating procedure. Plans will be even more effective if they include a type of protection of assets, mitigation of damage, a procedure for how to resume critical function and ultimately how to restore normal operating procedures as soon as possible.

Most of these plans set up an emergency operations center (EOC) and incident command center (ICS) that will address the disaster while it occurs (OEM, 2014). According to FEMA the local EOC operations must communicate and relate to the National Incident Management

## BEST PRACTICES IN EMERGENCY MANAGEMENT

System (NIMS) (NMDHSEM, 2014). According to FEMA, the EOC provides a central location from which government at any level can provide interagency coordination and executive decision-making in support of the incident response. The EOC does not command or control the on-scene response (NMDHSEM, 2014). The EOC carries out the coordination function through information collection and evaluation, priority setting and resource management. The decisions made at the EOC are not tactical decisions; the tactical decisions are made by the Incident Commander and the Command Staff at the incident scene (NMDHSEM, 2014).

The City of Albuquerque has an EOC, and according the office of emergency management website in the event of an emergency or disaster, the EOC's primary purpose is to support the incident commander at the incident location (OEM, 2014). They describe their EOC as having various divisions plan for future activities related to the emergency and develop strategies to recover from the incident. Albuquerque's emergency management website also boasts that the Albuquerque EOC is organized on the guidelines of the U. S. Department of Homeland Security as outlined in the National Incident Management System (NIMS) (OEM, 2014). They claim that this ensures maximum operational effectiveness between all levels of government.

Under the Homeland Security guidelines, the four sections include Operations, Logistics, Planning, and Finance, which all have a chief and several divisions (OEM, 2014). Their operations will include Police and other Law Enforcement, Fire, Rescue, Hazardous Materials, Public Health, Energy, and Communications. They also state that other divisions may be involved as well. If a disaster occurs, the EOC Situation Analysis Team (SAT) will evaluate and decide which divisions need to be activated to best support the incident (OEM, 2014).



## BEST PRACTICES IN EMERGENCY MANAGEMENT

Response Plans will also include volunteer management and alignment of intergovernmental agencies. Volunteers are often critical to successfully carrying out an emergency response. While many organizations would like to think that they are volunteer-ready, the reality is that a thoughtful and strategic assessment should take place before a successful volunteer program can be launched and maintained. Providing volunteers with the resources and information they need, not only to do their specific volunteer position but also to be a bona fide member of the organization's team, means setting aside time for training and orientation.

Effective emergency plans will also include drills and tests to run to determine whether or not a plan is “ready” (OEM, 2014). EMs must train personnel so they are familiar with detection, alarm, communications, warning and protection systems. They must review plans with staff to ensure they are familiar with their role and can carry out assigned responsibilities. EMs must regularly conduct evacuation, sheltering, sheltering-in-place and lockdown drills so employees will recognize the sound used to warn them and they will know what to do. Facilitating exercises to practice plans, and familiarizing personnel with the plan will help EMs identify any gaps or deficiencies in their plan (Drennan & McConnell, 2006). Plans should be well written and easy to understand. After a disaster occurs a damage assessment and facility repair must take place. A plan ensures the fairness of this process.

**Best Practices in Communication.** The next crucial element for effective emergency management is communication. While this does overlap with planning, since communication components are often written into the emergency plan. According to the New Mexico Department of Homeland Security and Emergency Management (NMDHSEM) communication is a critical factor that can hinder emergency response, the ability to communicate in real time is

## BEST PRACTICES IN EMERGENCY MANAGEMENT

critical to establishing command and control at the scene of an emergency, to maintaining event situational awareness, and to operating overall within a broad range of incidents (NMDHSEM, 2014). The failure to communicate can mean the failure of the response plan.

The United States has a highly trained first-responder community. New Mexico is no exception (OEM, 2014). There are many highly trained professionals and volunteers ready to respond quickly and be the first on the scene. However, first responders like emergency medical services (EMS), fire-rescue personnel, and law enforcement officers are useless without a reliable voice communication system communicate with all second and third responders. The ability to share data information across disciplines and jurisdictions to successfully respond to day-to-day incidents and large-scale emergencies (IMCA, 2014). If responders cannot communicate with one another, they cannot coordinate their efforts.

NMDHSEM boasts the communication operability is assured because they include the community in their plan design. They created the Communications Preparedness Council (IPC) with the New Mexico public safety community, the New Mexico Legislature recognized a need for comprehensive and coordinated statewide interoperable communications network and established the Emergency Communications Interoperability act (SB 173-2009) signed April 6, 2009. NIMS defines interoperability as the ability of public safety service and support providers to communicate in real time. NMDHSEM also created the Statewide Interoperable Communications Working Group (SICWG) in which they allow membership to be open to all public safety and NGO personnel with an interest in statewide interoperable communications. SICWG is described as being composed of multijurisdictional, cross discipline agencies with knowledge of and interest in the field of public safety radio communications technology (NMDHSEM, 2014).

## BEST PRACTICES IN EMERGENCY MANAGEMENT

The key to good emergency management is effective communication. Homeland Security in the National Emergency Communications Plan (NECP), outlines a plan which states that the Federal, State, local, tribal, and private sectors must work together and support each other to achieve nationwide operability, interoperability, and continuity of emergency communications (DHS, 2014). Understanding the pattern of a crisis can help communicators anticipate problems and respond effectively. For communicators, it's vital to know that every emergency, disaster, or crisis evolves in phases and that the communication must evolve in tandem. By dividing the crisis into phases, the communicator can anticipate the information needs of the media, stakeholders, and the general public (DHS, 2014).

**Best Practices through Networking.** The final piece for an effective emergency manager is the ability to effectively network with other organizations and agencies. Resources are obviously a critical part to the success of an emergency response; a critical way that EMs receive resources is by networking with other agencies and correctly playing intergovernmental politics. While communication and networking often overlap, networking can facilitate communication and vice versa. Networking can also have effects on intergovernmental politics and the receiving of finite resources, specifically between federal, state and local intergovernmental networks. EMs are more effective if they have the ability to develop relationships and use the resources available to them their network.

Government organizations are not autonomous actors in the increasingly complex field of public management. Government agencies have become less hierarchical and increasingly reliant upon other systems for delivery of public services. Thinking of these intergovernmental transactions as a network of relationships, it is clear that emergency response is a complicated affair. In collaborative network theory, cooperation will depend on the degree of competition

## BEST PRACTICES IN EMERGENCY MANAGEMENT

between groups. Within an emergency there will hopefully only be minimal competition, but intergovernmental politics can have effects on outcomes. Looking at governmental objectives as part of a collaborative service delivery system makes it easier to understand why it has become difficult for any governmental entity to complete a task alone (Silva, 2011).

The EM must be a collaborative leader, meaning they have the difficult task of guiding a group of independent yet related entities toward accomplishing a task, which all members of the network are seeking to achieve, but none are able to accomplish alone. For a network to operate optimally, all the members must value the functioning of the network and must agree that the achievement of their agency's goals will be heightened as a consequence of working within the network. Teamwork must be regarded as an important means by all members (Silva, 2011). EMs must ensure that all stakeholders are invested in community resilience.

Individuals can become network leaders by being public managers or EMs. When acting as a network leaders, they must establish a common foundation for the network to operate in to accomplish this the shared vision (Silva, 2011). An effective network will create expectations all agree upon. When expectations are not agreed upon by all those within the network, the desired outcome will be difficult to achieve (Silva, 2011). Another way an EM can insure success of their network is for the appropriate number and mix of resources be available. The EM should not ask for too many nor too few resources. Resources will define what the organization or agency will be able to accomplish, so if all members bring their resources to the table, the right blend of resources will allow for successful completion of the desired task (Silva, 2011). This is the desired outcome for emergency response.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

When EMs are operating within this network context, leaders need to spend more time with an individualized focus (Silva, 2011). EMS need to focus on the needs of the individuals which they employ. This kind of leadership includes motivating staff, creating and nurturing an environment trust, treating others as equals, and maintaining or fostering the idea of a “close-knit group” (Silva, 2011). The hierarchical values do little good for a manager in a network setting while leading their agency to work with other groups and organizations to achieve a goal (Silva, 2011). As governments increasingly turn to networks as means to accomplish their mandated responsibilities, the environment for achieving public service delivery will increase in complexity (Silva, 2011).

Today, collaboration and networking in managing emergencies is a theme consistent within all government and nongovernment entities. The National Response Framework (NRF) established a comprehensive, all-hazards approach to enhance the ability of governmental agencies to manage domestic incidents (FEMA,2014). This plan strongly emphasized the coordination and integration of capabilities at all levels of government, private organizations, nonprofit organizations, and individual citizens. NRF acknowledged the important role of local governments because it called for handling all incidents at the lowest possible organizational and jurisdictional level (Kapucu, 2001). Emergency response processes has given rise to gaps and tensions between local participants and federal participants.

## **Conclusions**

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Emergency response will inevitably need the resources from across the community from economic, social-psychological and political; the mobilization of organization and individual volunteer can bring a community together and can create a sense of efficacy and may make the community more resilient in the future (Waugh & Streib, 2006).

EMs get their resources from other agencies, grants, from legislated financial assets, but also from their own data. EMS must stay up on new available resources by being educated about the growing field. EMS look at lessons learned (LLIS.gov), IAEM, Preparedness summits, conferences and AARs. Emergency management capacity is built from the ground up; neighborhood and community programs necessarily must stand on their own because federal assistance could take days to arrive. “The federal government is always the elephant in the room, possibly facilitating or inhibiting the actions of others” (Waugh & Streib, 2006).

The actual response to disaster is often an *ad hoc* affair involving organized nongovernmental actors, governmental actors, and emergent groups that often become well organized and long lived. Everyone involved cannot have complete control; it will be almost impossible to have fully commanded attention nor compel compliance. Volunteers will come to help regardless of whether you invite them or not. Better integration of all organizations involved would be the best approach, but this will never be easy to achieve. Not all differences in chain of command can be smoothed over in a timely fashion and goal conflicts will be common, as well as distrust. The demand for hierarchy and management control will not always make sense to first and second responders (Waugh & Streib, 2006).

The complexity of the field makes navigating best practices available a difficult task, but if EMs can develop strategic plans that can be realistic in their implications, communication and

## BEST PRACTICES IN EMERGENCY MANAGEMENT

networking capabilities are more likely to follow. While regulated by FEMA and DHS, EMs have much discretion in how they carry out their roles. To be effective in emergency response planning, communication and networking; EMs need to coordinate among diverse groups of differing levels of governmental agencies, response organizations, and community support resources (Erickson, 1999).

### **METHODOLOGY**

There is ample evidence that emergency management is a diverse and growing field (Sommers & Svara, 2009). Emergency management within New Mexico is not largely studied on the local individual EM level. This research is focused on evaluating how EMs within New Mexico employ best practices. Specifically focusing on emergency plans, communications and networking.

Emergency management is local, not just federal. The right response to domestic emergencies requires effective action from state and local governments, private sector and voluntary associations, communities, individuals, along with support from federal officials (FEMA, 2014). The best way to ensure cooperation and to meet shared responsibilities is not to put “big government” in charge. Federalism has long been the strategy for allocating responsibilities to meet the needs of citizens after disasters. There has been a push to standardize terms (Alexander, 2005). FEMA has worked to create a standardized role for all emergency management systems (EMS) involving incident command centers (ICC) and hierarchical command and controls systems (FEMA, 2014). Disaster is handled by those who first respond, so those that are on the ground first, the locals. Often local plans will conflict with the federal schemes, so the Department of Homeland Security will give funding to those agencies with

## BEST PRACTICES IN EMERGENCY MANAGEMENT

federal grants who are willing to comport with the federal terminology (Drennan & McConnell, 2007).

To understand all these complicated issues on a more intimate level, two approaches were used; first, personal interviews with key informants, and second a focus group with an emergency management team/network. Cognitive interviews were set up with 8 different individuals who work within various parts of the various emergency or risk enterprises within New Mexico. The focus group was conducted with a local emergency management network. With the varied perspectives much information was collected.

### **Statement of the Research Problem**

The original research question was as follows: How do emergency management programs in New Mexico's public sector employ best practices in emergency management?

Best practices within emergency management are often highlighted as an important aspect of effective response. The exact definition of emergency management depends on the governmental agency. FEMA sets out guidelines, the Department of Homeland Security has guidelines and states and municipalities also have their own definitions. Actual implementation of best practices within New Mexico is not studied academically.

**Hypothesis.** There was concern beginning this research that the topic would be too broad, after extensive research, however, it is not too broad. The notion of best practices within New Mexico are so diverse that it is almost impossible to discern what exactly they are. Books could be filled with the amount of "best practices" available to EMs. Trying to discover how and exactly which best practices are followed is an important question for emerging EMs within New Mexico. Since it would take a large scale and possibly expensive survey to pinpoint the exact



## BEST PRACTICES IN EMERGENCY MANAGEMENT

answer to this question, this paper merely explores the question to open the door for further study.

The original hypothesis for this research was that those managers who networked more would be more successful. This hypothesis is essentially flawed because it is almost impossible to collect the data needed to prove or disprove being that this study lacks the scale and funding necessary. Most EMs did not want to share how they networked specifically, so actually finding the truth in this is difficult for the scope of this research.

### **Research Design and Methods**

Eight interviews were conducted with EMs in New Mexico. Internet searches were used to locate several managers, and then those interviewed were asked if there was anyone they knew could contribute to this research. Six of the interviews were conducted in person, while two were conducted over the phone. The Researcher recorded the interviews, took notes, and then listened to the interviews, followed by more detailed note taking. Each interview lasted for no more than one hour. Each interviewee was asked the same questions with varying probing questions based on their responses.

A focus group was also conducted with four EMs who are located in central New Mexico. Individuals were identified to participate using the attendance and availability of the Department of Homeland Security 2014 Conference of Emergency Management held in Albuquerque New Mexico. At the beginning of the conference EMs were asked if they would be interested in being a part of a focus group. The focus group took place on the last day of the conference and lasted for one hour and 15 minutes. The focus group has three major questions all centered around best practices in emergency management.

**Interviews.** Using qualitative methodology, interviewees were chosen using non-probabilistic sampling based on convenience. Key informant interviews were chosen because it allowed this topic to be explored in depth. This type of interview allowed the discovery of information that would not have been available with a survey method. Key informants helped this research understand the system and influences of best practices on local EMs within New Mexico.

Other reasons the key informant interviews were chosen for this paper are because they are inexpensive and fairly simple to conduct. They provide readily understandable information and compelling quotations for reports. They are also flexible, as questions and topics can be added or omitted during the interview (Creswell, 2003). One of the challenges of writing questions for key informant interviews is allowing the respondents enough leeway to provide information that represents their special knowledge and perspective while keeping the interview focused (Creswell, 2003).

Table 4 illustrates the code letters for those interviewed. Of those who participated within the interview, there were two who worked with the city in some capacity, four who worked with a federal entity and one that worked for the state. One of the individuals who identified as working with a municipal entity also worked with a private organization in an emergency management capacity.

Initially three interviews were set up then a method of snowball sampling was used to find others to interview. Snowball sampling was used to prevent unintentional bias in selecting individuals to interview. Eight personal interviews with key informants were conducted each lasting about an hour. This research needed knowledgeable informants on the subject so it could

## BEST PRACTICES IN EMERGENCY MANAGEMENT

not be random. The data collected cannot be used to make generalizations of an entire group, but will hopefully inform research in this area and other places where research may be needed in this complex topic.

Table 5 lists interview questions that were asked. While not every interviewee was asked these specific questions, many of them approximate questions that were asked. Follow up and probing questions were asked in conjunction with this list. These questions were chosen because they explored what an emergency in Emergency Management may deal with. While some of them were for grounding such as "what got you into emergency management?" these questions allowed the interviewee to become more comfortable discussing themselves. Often those being interviewed referred directly to manuals and procedural policy without directly talking about their personal experiences. Asking subjects to share themselves prior to more in-depth questions allowed the interviewee to become more comfortable with the interview set up.

The questions were not random all were asked because of the information found from the literature review. Interviews were conducted in a semi-structured manner. Several key questions that help to define the areas to be explored, but also allows the interviewer or interviewee to diverge in order to pursue an idea or response in more detail. The flexibility of this approach, particularly compared to structured interviews, also allows for the discovery or elaboration of information that is important to participants but may not have previously been thought of as pertinent by the research team.

**Focus Group.** A focus group was also conducted with a local emergency management team, within the community of central New Mexico. The Largest cities including Santa Fe and Albuquerque were chosen because the location and population. The focus group lasted over an hour. Individuals were solicited during the 2014 New Mexico Department of Homeland Security

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Conference. Six individuals initially agreed to participate, however only four showed up to the meeting. Two individuals were emergency managers for municipalities while the other two were planning specialists for emergency planning for the Department of Health.

Table 6 presents the information of those who actually participated in the Focus Group. They have been coded to make their identity semi anonymous. Two individuals were from the city level while two were from the state level. The two individuals who participated from municipalities each played different roles; one was an arm of the police department while the other was an arm of the fire department. All four of these individuals had worked with each other prior to the focus group, so they felt comfortable sharing their thoughts and opinions.

The selection of the participants of the focus group was to find EMs who network with each other, so central New Mexico was used, not only because it's possess the largest population, but also because EMs frequently communicate between Albuquerque and Santa Fe. This was the locality of the participants of the focus group.

The focus group is the only tool with which the Researcher can analyze and test the information given. It helped grasping the participants' behaviors, their understanding and perception of an intervention, which would not be possible with an interview. Group interviewing can collect a variety of points of view and perceptions stimulated by the interaction between participants.

For the focus group one framing question was asked as follows, "take a few minutes to think about what constitutes "best practices" in operation of an excellent emergency management program." Once the focus group began the following question was asked, "From your experience what do you think you and other EMs do to implement best practices?" The next question asked was "How do you define best practices?"

### **Overview of the Methods Available**

This study is of small scale and cannot speak to larger or general emergency management, but it does inform the academic community where research is lacking. The advantage to using this exploratory approach allows avenues for future research. Exploratory research was chosen here because this research conducted for a problem that has not been clearly defined (Creswell, 2003).

This research explores the best practices within New Mexico, but little data is available about which best practices are used where and how often. Based on the research within the review of literature there was not enough evidence to make conceptual distinctions or posit an explanatory relationship (Creswell, 2003). To better answer specific questions and to get the exact numbers of what best practices are employed within the state of New Mexico, a large-scale survey with an incentive component would best served in that type of large data collection.

### **Best Practices**

To test best practices within New Mexico, there are three components found regularly reoccurring within the literature that pertained to emergency management and best practices. Comparing the theoretical projection best practices as an idea with how things were actually done by EMs within New Mexico will be subsequently analyzed further within the analysis. There is a wide variety of things considered to be “best practices” but on LLS.gov as discussed earlier, which lists in detail lesson learned practices for current emergency managers, there are no examples specifically from New Mexico.

Table 7 shows the best practices focused in on based on the data provided in this study. The three main categories are planning, communication, and networking. This table describes

## BEST PRACTICES IN EMERGENCY MANAGEMENT

exact examples of each. Planning can include the EOC and NIMS. Communication can be anything from use of smart phones to GPS. Networking is creating relationships and sharing resources.

After analyzing the information available academically as well as professionally from organizations like FEMA and DHS, and then examining the answers from the interviews and the course of discussion from the focus group. The themes in Table 7 appeared overwhelmingly important. Although the exact data into these concepts were touched on and agreed upon by local Ems, the data found was precursory. Findings will be discussed in the next section.

## DISCUSSION AND ANALYSIS

The open nature of this research risked an overbroad analysis or an overwhelming amount of too much data and knowledge. The Researcher found that the field of emergency management within New Mexico is still new and very chaotic. The lack of specific empirical research made it difficult to pinpoint exactly where to begin sorting through the data collected. The beneficial aspect of using a broad analysis approach allows for acceptance of many diverse ideas and positions that would not be acceptable to discuss in a more focused paper.

Three main themes emerged from the interviews and the focus group; these themes centered on the importance of planning, communication, and networking. While these three concepts overlap there was an interesting dynamic because most of the EMs had similar views of what they felt was important.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Emergency management is a people oriented profession and the more individuals care, the more likely they were to open up about discussing their views and ideas. This research makes claims as talking points only, this was not a large nor diverse enough study to draw generalizations as a whole, but it does open some doors for further research.

Every EM who participated in this study believed in the future of emergency management and believed in potential improvement, “[If we be] judicious about where we spend money - also be[ing] aware of best practices elsewhere and how to apply them, we can be better at our jobs. This is a multi-disciplinary field and this can be used to our advantage, we can have a positive influence on this profession” (Respondent D, personal communication, July 29, 2014).

### **Findings**

The restrictions on public managers, as outlined in the review of literature, certainly influences EMs as well. Almost every individual interviewed wanted more resources spent specifically on emergency preparedness. Resource competition is common for those in governmental positions.

The local EM must balance budget constraints and political battles to ensure that their organization will be prepared to handle an emergency when it strikes (Somers & Svava, 2009). Focus areas for any administration include the planning for utilization of public resources, mitigation of the impact of negative events to the community, and the active management of those resources in an actual event where the ability to forecast the progression of the event is difficult (Lindell, 2007).

Getting others in government to understand that emergency management is important was cited by three of those interviewed, while better training for emergency management was

## BEST PRACTICES IN EMERGENCY MANAGEMENT

brought up by another four interviewed. Table 8 shows the variety of responses. The difficulties of resource competition is clearly an issue for EMs.

An Emergency Department may be unable to adequately prepare for an emergency if it lacks the resources necessary to fully respond to a threat. If government is unable to provide the services its population needs, it's failing at its most basic function of existence. Government must be sure they can provide the services needed when their people are in need (Henstra, 2007). Table 8 illustrates how resource allocation is an issue for EMs. "Emergency management is underfunded often, under staffed... an elected official does not want to put money for something we are not sure is going to happen" (Respondent A, personal communication, July 25, 2014).

The issue of inadequate funding can be countered through purposeful advocacy. Many of the interviewees mentioned an EM must play a part in reforming the organization's mindset, whether that be the funding agency or other sectors of the government. Many EMs believe that to be successful a manager, one must be able to work with the resources they have before them, make wise and rapid decisions, and take courageous actions. Besides funding justification issues, apathy and a lack of urgency was cited in conjunction with this problem as a potential cause. EMs can counter this through education of the community. Other concepts that Table 8 illustrates is how EMs thought it is important to raise awareness to others in management and the research other available funding. All but one of those interviewed cited a lack of support and funding from higher up management as something that made their job more difficult. Administrative setbacks are a common problem for public managers so it would make sense that EMs experience this kind of issue.

"There's actually... real liabilities there, that certainly the political leaders are concerned about if things don't go well and this is a difficult thing. . . it does



## BEST PRACTICES IN EMERGENCY MANAGEMENT

seem like there is this tension in the field, in that we want to do everything that we can and we want to well document our efforts but at the same time we know that the worst disasters are unexpected and there are always going to be outcomes that nobody was able to plan for, like specific cascading events, fire, flood, tornado, all happening at once and inevitably there are going to be things we don't want, loss of life etc, so how can we document our data to improve on those thing without creating an environment that creates a paralysis of fear of failure, especially at the higher level, a fear of failure" (Respondent I, personal communication, August 15, 2014).

As this quote asserts, resource issues can be even more complicated because of the political restraints that can put departments in a bind. Congress or other funding agencies may cut funding to those agencies which are under-performing during election cycles. This fluctuation requires public managers be able to work around whatever policy goal to accomplish the purpose of the specific department that the manager runs.

Table 9 elaborates on some of the themes addressed in the literature review. Political leaders can have influence over EMs, but the realities of emergency create serious tension and unpredictable outcomes. It is common for governmental organizations to be given goals but not the budgetary resources to accomplish those expected goals (Rahm & Reddick, 2011). If the goal is to prevent emergency, often this task is too ambiguous to even understand. Disasters are not always preventable and their harm cannot always be mitigated. Here, the success of an EM is hard to determine. Again, disaster will occur regardless of planning. So no matter how well an emergency is handled, citizens may still be harmed. Even if detailed program evaluation

## BEST PRACTICES IN EMERGENCY MANAGEMENT

plans are done, it maybe still difficult to hold managers accountable for the complete unknown. So we may be unable to determine if the goal was met.

The delivery of emergency services are a part of routines that develop from standard operating procedures by emergency response departments, like fire and police. EMs who participated in this study brought up the necessity of having an understanding of what standard operating procedures were already in place in conjunction with how these current procedures can be expanded during times of need (Alexander, 2005). EMs take those pre-existing services and combine them for a larger scale of service delivery during extremely complicated incidents. State-level participants find themselves in the middle often trying to negotiate for management of gaps and tensions between intergovernmental relations, while at the same time addressing urgent, situational specific aspects of the emergency (Brooks, 2012). This becomes the job of ICS to utilize the pre-existing service delivery mechanism for a coordinated response and recovery.

An EM who worked for a university cited the use of large-scale events like football games as training operations, essentially treating each as a larger incident for testing communication and other response services. During these types of events, a large scale collaboration is already in place, specifically with all the diverse police departments already mobilized. Ensuring communication is current is a vital component (Respondent C, personal communication, August 6, 2014).

The topic of service delivery is much easier to grapple in the private sector because it deals with the effective management of customer service and customer satisfaction, while government is not concerned with the concept of “customer satisfaction” (Liddle & Diamond,

## BEST PRACTICES IN EMERGENCY MANAGEMENT

2012). Many government officials do not view their constituents as customers. Government officials are constantly being held accountable for how well they provide the services that are needed. Unfortunately, citizens will probably never be completely satisfied with government activity because it is impossible to please everyone. One of those interviewed eloquently stated, “We hear when we get it wrong, we never hear how we get it right” (Respondent F, personal communication, August 6, 2014).

Before EMs felt comfortable expressing their personal opinions, many of them described protocol or listed objectives of their organization. Many of those interviewed felt it necessary to refer to official definitions provided by DHS or FEMA. There was also many references to specific framework outlined by the federal government. This citation of “official” material may have been influenced by the relative immaturity of emergency management as a profession. During the focus group it was agreed that this profession is still youthful and is still trying to figure things out.

“Emergency management is in its infancy, it has to be defined by the agency, what works for one agency may not work for another, best practice for one agency, does not mean that another agency would have the infrastructure to support that best practice, so it can be very agency specific. Like postal service delivery of medical services, this may not work in metropolis like Albuquerque” (Respondent J, personal communication, August 15, 2014).

Since it is still growing as a field, there is no standardized educational background required for the profession (Alexander, 2005). When asked how their jobs have changed EMs had many different responses, Table 9 shows these responses. Some EMs had a change in scope of their job, “[I am] working more in the day to day life of the University, [I have been]

## BEST PRACTICES IN EMERGENCY MANAGEMENT

becoming more proactive with student needs. The whole university has pushed to better train students, I provide active shooter training regularly... [this has been a] conscious decision and an evolution of where my role is going” (Respondent C, personal communication, August 6, 2014). Others have changed the amount of training they provide and how often they do certain actions.

There are many new degrees being offered in emergency management and disaster planning (Drennan& McConnell, 2007). FEMA’s website lists twenty colleges where one can obtain a bachelor’s degree in emergency management. Many of those who participated in this study did not have advanced degrees, but many planned to pursue one.

Technology has influenced the development of the emergency management profession. Technology has not only opened doors for how EMs can reach individuals, it has also changed the way some approach problems. During the focus group there was criticism that the dependence on technology can hinder some disaster response, especially if cell towers access was inhibited. “Technology introduces an increase in complexity, it can change our demographics, expand our risk. We can reach more people through social media and our ability to reach more people can make us more responsible in the event of an incident” (Respondent G, personal communication, August 14, 2014).

The plethora of free information and training available through FEMA was cited repeatedly as critical for being a successful EM. It is the responsibility of the EM to take advantage of this training and simply staying up to date on all available information. The body of knowledge available has evolved over decades and will continue to evolve and expand as a diverse array of academic disciplines continue to explore hazards, vulnerabilities, and resulting events through their research and as EM scholars emerge to add even more to the discipline emergency management.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

The Researcher observed a split between experience background versus education background. The focus group all believed that it was the responsibility of the emergency management professional to educate themselves with the vast and rich body of knowledge available. The group acknowledged that contributions to the body of knowledge have been made by scholars in a wide variety of disciplines, e. g., sociology, public administration, geography, anthropology, economics, political science, communications, engineering, psychology, and can be found in books, scholarly peer-reviewed journal articles, and research center publications. They cited periodicals and journals. They also supported joining various organizations that supply knowledge they may not seek otherwise. All believed staying current on knowledge was a part of the job, although they disagreed about the need for formal education. The ability to think critically was cited by all EMs within this study as critical.

The Researcher witnessed during the 2014 New Mexico DHS Conference, the way professionals addressed each other was telling of their relationship, many had a teasing friendship established from years of working alongside each other. While others did not appreciate the playful banter and let their perception of others be influenced by organizational reputation. There was an amount of organizational competition. Individuals develop a personal network from those that they associate with; the networks developed not only from the organization individuals were employed but also from policy. Sometimes personal behavior of individuals did not influence perceptions by others, but understood policy did. If an individual disagreed with a top down policy choice it was likely to reflect their opinion of individuals with that agency, it was also the reputation of a department and that influenced how some thought of other individuals within that organization.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

There is also a shift in demographics that emergency management must change some of their classical response techniques. One individual during the interviews brought up changing demographics, none of the other EMs brought this up but they alluded to experiencing it. Table 10 shows the acknowledgement of changing times for EMs. A large element of crisis management is addressing the changing geographic landscape of where people live. A new problem that has emerged from sprawling development is trying to deal with fire where wildlife and urban development overlap. Urban and suburban development in or near wildland vegetation, poses a major threat to the environment. Housing development causes habitat loss and fragmentation, threatens wildlife populations, and results in biodiversity declines. There is ample evidence that wild land urban interface housing profoundly affects the environment, yet much of what we know about the impacts of housing development has been learned by studying environmental response along urban-to-rural gradients.

Emergency management is a paradox. “On one hand, emergency response requires meticulous organization and planning, but on the other hand, it is spontaneous” (Waugh & Streib, 2006). Leadership was not a topic brought up by those whom the Researcher interviewed, but it was alluded to during the focus group. Those in the focus group agreed that strong leadership was necessary to manage an incident; they all agreed that someone without experience could not handle running an incident command. Table 11 illustrates concept of leadership discussed by participants. One way to combat something that cannot be prepared for is to have sustainable coordination and strong leadership.

Leadership is often a crucial component of managing emergencies. One way to gauge effectiveness of leadership is to look at how well coordination was administered. Collaboration is often defined as the necessary foundation whenever consequences of disaster are dealt with

## BEST PRACTICES IN EMERGENCY MANAGEMENT

(Waugh & Streib, 2006). While these are complex and theoretical and often difficult to pinpoint in real life situations, all EMs stress their importance.

All the EMs in this research believed in the importance of coordination. Most of the efforts of an emergency management department involves varying levels of coordination. State, local, tribal and territorial agencies are responsible for assessing the situation, identifying and prioritizing requirements, while activating available resources and capabilities. “We are constantly looking 7-10 days out, our department is continually planning. We do a lot of pre-planning with partner agencies. We do a tremendous amount of coordination and outreach” (Respondent F, personal communication, August 10, 2014).

Most of the EMs who were interviewed were reluctant to make assumptions or generalizations about their organizations as a whole. The Researcher observed the importance of how an individual or organization was perceived by its peers. There also seemed to be a reluctance to share actualities. While it does seem to be a profession of communal knowledge and shared resources, when asked exactly, most individuals were reluctant to share the exact best practices in which they engaged. No one would tell the Researcher their specific network of operation. There was a general consensus of referring to higher federal guidelines, then to delve into detail about what they did specifically.

During the recent New Mexico DHS conference, some individuals were more willing to participate with this research than others. There seemed to be a reluctance to allow outsiders to participate within the profession. Some of the individuals that were interviewed did not take the idea of someone without any experience seriously as pursuing this type of profession or “making it” to a management profession. This may be the result of working within a resource competitive

## BEST PRACTICES IN EMERGENCY MANAGEMENT

environment and a constant need to justify the actual need for an emergency preparedness plan.

There seemed to be a consensus on preparing communities for resilience and having each household prepare a preparedness kit. Some of the individuals that were interviewed did not take outsiders seriously as pursuing this type of profession or “making it” to a management profession without a hands on background from an emergency response agency like fire rescue or Red Cross.

EMs often wear many hats, this is especially true for New Mexico. Many of those interviewed did more than one job or had multiple, sometimes competing responsibilities. The fact that many who serve in an EM capacity also have another responsibility, like safety or security will make it difficult for that individual to focus solely on emergency management. This seems to be a trend in emergency management within New Mexico. The EMs in the interviews were asked how their organization has been successful.

“[We have an] enterprise wide collaborative system, we have been successful reaching out to and working with public, private, nonprofit. On a broader level there has been higher strategic organizational approach; stove piping,[it is] difficult to be successful when you’re constantly worried about protecting your turf, to be a successful [EM] you have to constantly be willing to work together”(Respondent A, personal communication, July 25, 2014).

Individual reputation also played an important role for the EMs who participated in the focus group. Since the interviews were conducted in isolation, the solicitation of those to participate in the focus group took place at the conference so many others who participated within the profession were around. This seemed to make individuals more guarded in their



## BEST PRACTICES IN EMERGENCY MANAGEMENT

conversations with me and also less welcoming. There was a sense of playful comradery and mocking with many professionals. Individuals' reputations really influenced how others interacted with the Researcher depending on who introduced themselves and who were around.

“The most difficult thing for me personally [has been]...Juggling and dealing with personality coming from different professions, and ideas...but we have to work together... [I was] Surprised about the interdepartmental politics, the various funding sources, the egos, and the change from elections. It really comes down to how you provide your funding justifications” (Respondent G, personal communication, August 14, 2014).

Ego was cited as getting in the way of efficient coordination and resource allocation. Several individuals cited the resource competition and funding frustration as being because of ego. Perhaps the Researcher's ego got in the way on one occasion when one of the individuals during the focus group made a comment that, “Someone like you could handle social media but not coordinating an event.” These types of comments were common throughout my discussion during the conference. Reputation and experiences are very valuable for those within emergency management.

“You have convince those around you, [who are not in emergency management] that planning [is important] planning for something that the city manager is going to say "this is never going to happen" or “why does the county need an EM?” if you can justify yourself and your position, you can be successful. It will be a battle [getting] additional resources. You as an individual; [must get] internal buy in for your program, [you have to] educate your partners. Sometimes it is about finding [a] leader or [a] program. Simply knowing whoever is in charge [and]

## BEST PRACTICES IN EMERGENCY MANAGEMENT

creating [that] relationships to help you later” (Respondent G, personal communication, August 14, 2014).

Another issue that can create a setback may be the simple fact that a department is currently unpopular politically. Political restraints can put departments in a bind. Congress may cut funding to those departments during election cycles. This fluctuation requires public managers be able to work around whatever policy goal to accomplish the purpose of the specific department that the manager runs. Table 12 illustrates the issues of politics within trying to be a successful EM.

Although often difficult and complex, the discussion of terminology can be helpful because making sense is an integral part of enacting effective management (Smith & Toft, 1998). Risk will always exist in our complex social world (Comfort, 2005). Crisis understanding will depend on perception. Crisis can cause a lot of damage and negative consequences for an organization, so it is important to be prepared, even if the crisis seems unlikely. There is obvious ambiguity within all these definitions; we should remember that the causes and effects of a crisis might be unknown.

The lack of standardized terminology became apparent during the interviews. Many seemed reluctant to use the word “crisis” or answer some of the Researcher’s questions. This could be an issue of not understanding the question or terminology, perhaps they did not realize what was meant by best practice or did not understand what was being referred to when asked to describe a network.

The most commonly used term by professionals within this field is “emergency” Emergency and crisis are interchanged within the literature. The Researcher asked professionals

## BEST PRACTICES IN EMERGENCY MANAGEMENT

to define crisis during the interviews. Most EMs view themselves as responsible for emergency. Can “crisis management” and “emergency management” be used interchangeably? Not all managers view themselves as connected to the word “crisis” (Henstra, 2007). Two individuals interviewed and one in the focus group blatantly refused to use the word “crisis.”

Originally in the scope of this research an incident was referred to as “crisis”, but once interviews began being conducted, it became clear to the Researcher that the questions needed to be changed because individuals refused to use the word “crisis.” The Researcher’s original intent to interview “EMs” changed to professionals who work within the emergency management field. The actual position of EM is often looped in with another title as well.

While some adequately answered the question “how do you define crisis?”, others simply refused saying that they would not use the term “crisis.” Interestingly the literature uses the terms interchangeably and often solely uses the word crisis. Some thought when the Researcher approached them about crisis, they assumed this referred to the health field. Yet again, the literature uses “emergency” often for health related reasons. When the Researcher had applied to the IRB for approval of this research, the terms that the literature provided were used, but in using those terms, perhaps some professionals in emergency management within New Mexico were turned off. Especially two professionals, both of whom are of the mentality that crisis is a foreign term to this profession. While the Researcher regarded it as an interesting discussion of semantics, it now appears to be a deeper issue of misunderstandings of terminology within the profession’s identity crisis.

Since not all individuals who work within emergency management like the word crisis, not every EM uses it. Some emergency preparedness individuals view this word as overused and often used more for effect than for meaningful classification. Other managers see this word as a

## BEST PRACTICES IN EMERGENCY MANAGEMENT

term of art in the preparedness continuum. One EMs described crisis to me as a process with three steps. He stated that an *incident*, which can be normally managed by a single department's standard operating procedures, flows as it excels into an *emergency*, which he described as an event or occurrence requiring action by emergency personnel to prevent or minimize loss of life. And the final step is a *disaster*, which is defined as a severe event causing great loss. But other EMs do not recognize this hierarchy of terms. There is a chart of definition of terms in table 2.

Table 13 illustrates the varying stances on terminology. As table 13 shows, many did not like the word crisis. Those who seemed more able to discuss the ideas regardless of the terms used and not getting hung up on exact word choice seemed more adaptable to the diverse climate of this profession. Participant A was the most open to discussion and terminology and he showed more understanding for the field than anyone else who participated in this study. He did not fight word choice nor did he refuse to answer questions based on a disagreement of a word choice. He seemed the most ready to diversely deal with a situation.

Openness and adaptability are clearly desired qualities of an EM. The notion of ego and exclusion may be a reason for word choice preference. When you control the language used, you control the discussion. However, when you allow an open discussion of concepts, your desire is not power based but instead open for different possibilities. The desire to restrict word use and desire to use only official definitions may show a close mindedness to open possibility.

While free thinking is a trait exhibited by all those who participated in this study, this research does not mean to belittle any individuals who refused to use the word crisis. Just on a whole, those who did not get competitive with terminology seemed more ready for an emergency.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Participant C stated that the largest threat to his organization is a microwave fire. While his span of control is much smaller, it is interesting that Participant H who controls maybe an even smaller chunk of an organization, he seemed more interested in opening up communication throughout the state with handheld radios and preparedness training for all. While both individuals came from a background of EMS they had a much different approach to conceiving emergency. Perhaps it was the perception of budgetary restrictions.

EMs analyze risk constantly, often this is done through evaluation consequences. Many of the EMs I spoke with discussed the importance of understanding and preparing for consequences. “Consequences mean the damages (full or partial), injuries, and losses of life, property, environment, and business that can be quantified by some unit of measure, often in economic or financial terms” (FEMA, 2014). Consequences are hard to plan for because it can be difficult to find their direct cause and their potential variability. Consequences can be mitigated as stated earlier. However, sometimes it is often difficult to prepare for them at all because consequences can occur anywhere in the emergency management process (Schneider, 2013).

The topic of consequences was discussed in most detail during the focus group. It is apparent that most who allowed me to talk with them are extremely passionate about their jobs and view emergency preparedness as a necessity because the consequences are too great. The notes from these interviews are filled with countless personal anecdotes from EMs personal experiences of the human element of holding someone after a hurricane ripped away their house and personal possessions, of trying to comfort aide workers cleaning up body parts following a crash, of comforting family members after earthquakes where loved ones are still stuck in buildings, etc. EMs take seriously those who have had experience with large disasters.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

While there is a developing range of new degrees specifically in emergency management, most of these degrees are still relatively new and only three of those interviewed held master's degrees. Currently, it did not seem that education helped an individual's reputation within this field. Many EMs come from EMS, others come from military or other voluntary agencies like the Red Cross. Most of those interviewed in this study came from EMS, only one of those who participated in this study had not had some sort of back ground with EMS, fire rescue or military experience; it seems generally the profession develops from volunteers. The approach of each EM is unique based on their background.

Safety was a topic that came up often because many of the EMs interviewed were also safety officers. Safety seems to be an integral component of mitigation planning since safety can be easily enforced using proper training and ensuring current procedures in place promote safety.

One surprising insight from this research is that emergency management is not the sole responsibility of government nor any one organization. When an emergency happens, everyone must work together. Individual civilians can play a large role in helping the government. EMs are often disappointed with the lack of responsibility individuals take in their part of emergency response.

“There is also an apathy by the public to be prepared and take preparedness seriously. Individuals can help their own community become resilient; cannot stop events from happening, people in community can help themselves, their neighbors. If each individual had an emergency kit and a communication plan, [and each person could] be self-sufficient for 72 hours, we could respond better and faster, we have scarce resources, government can help

## BEST PRACTICES IN EMERGENCY MANAGEMENT

those with more need, those who are injured or disabled, and so forth”

(Respondent G, personal communication, August 14, 2014).

**Best Practices in Emergency Management**

The varying responses in what best practices are show the diversity of the understanding of this terminology. It almost appeared as a fleeting concept when conducting this research,

“yeah I think each step of the way, every component part of my program can have a best practice, implementation, that’s based on what I think will improve disaster or emergency management field... little bitty pieces, could be in the training, could be in the exercises, could be all over, so I think it’s an individual choice, individual observation of something that’s clicks with you that says snap, hey I can take this from x agency or person and this makes it better here, so I think what makes it... I think how we define it is really important, how do we define best practice... Whatever helps us do our job better” (Respondent J, personal communication, August 14, 2014).

In this literature review it was identified that plans, communications and networking were the most prominent forms of best practice. These themes reoccurred and most documents pertaining to best practices usually had one of these ideas as a component. The governing federal agencies seem to use the term best practices whenever there is a lesson learned in an AAR or a situation of “successful management”. Within the focus group, the professionals warned of how AARs may be misleading to make an agency appear “successful” for political reasons. One individual commented about how a superior stated that they knew what they needed to fix and there was no reason to have such detail in an official report.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

“The best practice in my agency is to keep everyone involved and everyone informed. By keeping Safety and Emergency in front of everyone by keeping them informed and involved when a disaster strikes your injuries could be less and your recover would be much faster” (Respondent B, personal communication, July 28, 2014).

Many of those interviewed brought up education resources as being free and easily accessible. Training awareness and educating staff and community so EMs could be more efficient in responding for emergency events. Awareness and training are currently the focus of more emergency management programs. As table 14 illustrates, it is important that the community be involved in preparedness.

EMs understand that it is a priority “making constituents understand what they need to do in an emergency; EMs have existed for a long time, crisis managements just getting more mainstream, because we want more preparedness, we want our lights on 24/7; [we have become] more information savy as a society, this has led to our expectations rising as individuals, disaster is not more complex; We have just complicated the way we respond to things, look at NRF and ICS. These things are complicated but they help us react to situations and help people. We are successful because we listen to our customers, we plan ahead for situations that we've faced, and for those that we know that others have faced, and we look to the lessons learned by others to help guide our planning” (Respondent D, personal communication, August 12, 2014).

Since best practices seems to be a matter of opinion, the other ideas discussed will also be discussed here. The common themes throughout the interviews prove more similarities than



## BEST PRACTICES IN EMERGENCY MANAGEMENT

diversity. Although some things differed clearly with responses and understanding of the questions. All those I talked to agreed that planning, communication and networking were key components for a successful EM.

Individuals also pursued different priorities. Certain individuals' whole lives seemed devoted to emergency management while other acted as a cog in the machine. Individual motivation should be studied further. Some at the conference were very clear that they were not being paid to attend the conference while others joked of "putting in a full day's work" (Respondent G, personal communication, August 14, 2014).

Most often disaster is described as local, yet many of those who participated seemed dependent on federal government for definitions and guidance. Whether this was tied to funding or to specific grant guidelines or in an effort to appear credible for this research is all speculation. Perhaps their answers would have been different if they were fully anonymous within this study. It was also if they wanted this research to be a report on the information already available many participants asked if what the federal government said was already checked prior to asking a question, as if the research questions could be answered by what a federal pamphlet says.

FEMA has an abundance of information and free training guides available, but when exactly asked it seemed as though the EMs stated they used everything. There is so much data available that it would be impossible to actually use everything that is available. Although during the interviews, most EMs acknowledged that they spend at least two hours a week reading.

It appears that best practices are the responsibility of the individual EM. When asked where EMs obtain information on best practices, it became clear that finding best practices is up to the individual EM.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

“We review various periodicals, journals, we join various organizations either state or national ones... to make sure we are getting constant information”  
(Respondent K, personal communication, August 14, 2014).

Others cited that there were plenty of best practices available free online and that information on best practices was constantly available.

“We rely on after action reporting LLIS. gov (Lessons Learned Information Sharing) - there’s a lot of reporting on best practices there, the implementation, varies agency from agency to agency, but the information itself is pretty available” another way to gather information is to go to conferences, this is one example, but there are national ones; there is the IAEM and other conferences, like the Preparedness Summit, focused on public health preparedness. We go to these and hear about lessons learned from other incidents and some from exercises or disaster response in other areas of the country or the world”  
(Respondent G, personal communication, August 14, 2014).

When asked where EMs specifically get their best practices, there was a wide variety of advice during the focus group.

“talking about after action reporting, there’s a couple other things that are included within after action reporting, and that a lot of emergency management look at , when they are trying to define best practices or look at what works for them, in certain situations, there’s two other things that go into after action reporting, one is lessons learned, and sometimes best practices are extracted from lessons learned, uh and uh good stories, and you will see a lot of after action reporting with good stories, so I think those three things, lessons learned, best

## BEST PRACTICES IN EMERGENCY MANAGEMENT

practices, and good stories are all other things that emergency managers pay attention too, sometimes they get ideas and they form their own best practices from looking at those other things, - lessons learned and best stories” (Respondent I, personal communication, August 14, 2014).

However, not all EMs agreed that After Action Reports were the best thing to use.

“in addition to that if you review after action reports critically and go a little bit deeper, I have found a lot that are very sanitized the author either looked out for a contractor or where being contracted for a particular agency, if you look at radio tapes and listen to radio, look at, talking to people that were actually there, the Los Conchas Fire AAR is an example of that, it was a completely sanitized document, H1N1 AAR, another sanitized document ... Aurora is interesting because you hear the radio tapes on the fire side, and the tapes on the police side, you look at what the media, I mean the media really went after the fire department, yet you read the after action report they fully implement ICS” (Respondent K, personal communication, August 14, 2014).

**Planning as an example of Best Practices.** Planning seems to be an agreed upon starting place. The field seems to frown upon a reactionary approach due to past failures. Most EMs acknowledge they plan for planned events (like the International Balloon Fiesta) and unexpected events (like a terrorist attack). As stated in the literature review, plans need to be multi-faceted and have one plan for all events because there would be an infinite number of disasters that could potentially occur.

In Emergency management, it is often the goal of the EM to convince the right people of the importance of planning and that the community needs to be prepared for disaster. EM

## BEST PRACTICES IN EMERGENCY MANAGEMENT

departments often battle to receive adequate funding in the first place since emergency planning is not always seen as needed, unless a catastrophe occurred recently. Administrators and other public bureaucrats in situations where hard choices must be made are represented unfairly for conflicts and tensions within the public or among the political institutions of government (Wenger, O'Toole & Meier, 2008). While public management is a field characterized by planning and programmed activities (Putra, 2009), it is also often a political battlefield. This is especially true for EM programs.

Community is critical for a successful EM. EMs care about the people they are trying to help. An EMs job becomes much easier when the community feels connected and supports the efforts of disaster planning. In terms of safety, "Make sure everyone is accounted for, everyone who comes to the university goes home safely, preventing injury or death". The most important thing was cited as "The people, most important is people, saving peoples' lives, protecting lives and property"(Respondent D, personal communication, July 31, 2014).

The hierarchy of authority is often already in place. Often cities share resources between departments as part of standard operating procedures, so the plan should make sense with what is currently in place. Public emergency services include fire departments, which also provides rescue, hazardous materials handling and emergency medical services. However, if these services are not provided by the local fire department, they may be provided by another department, agency or even a private contractor. Plans should contain an easy to set up device for working with the private sector. The ability to reach out to local law enforcement and other agencies to coordinate planning for security related threats is critical.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Once external resources are documented, this information should be continuously updated. If it is not, protocol must be in place to determine what information is required and be sure to document that information in your plan. Emergency procedures must be prepared for all possible foreseeable hazards and threats.

**Communication as an Example of Best Practices.** When communication was first discussed during the focus group, it was almost laughed at. Communication with whom and for what needed to be specified. Communication is important between agencies and with constituencies for effective coordination and management of an emergency. However it's so broad and diverse, no one really wanted to talk about it. Although it's continually cited as one of the most important things to have, it's also cited as one of the hardest things to get right. Most After Action reports will cite communication as going wrong.

Types of communication used by EMs range from Twitter to community boards at post offices. Some EMs really love the twitter platform because it is quick and precise. Others argued that the real way to get to their constituents was to use slower forms, like flyers posting where community members would be more likely to see them. Perhaps the question could have been better phrased to be asked about coordination instead of communication. The literature parallels that coordination is effective when communication was effective.

Here is a list of best practices in communication according to International City/County Management Association: To address current communication needs, local agencies will need to rely on a hybrid approach of leveraging both commercial and private networks by utilizing landline, wireless, and potentially satellite communications. Communication systems your organization currently utilizes may include the following components: Traditional landline telephone service, Private branch exchange (PBX), Voice-over-IP (VoIP), Land mobile radios

## BEST PRACTICES IN EMERGENCY MANAGEMENT

(LMR) and network infrastructure, Wireless cell phones, smart phones, tablets, and modems, Interoperability gateways, Various types of data or Internet circuits (ICMA, 2013).

In addition, a trend is emerging toward utilizing applications that provide real-time actionable intelligence and provide a common operating picture. Some of these applications may include: Computer aided dispatch (CAD), Automated vehicle location (AVL) and global positioning systems (GPS), Video surveillance and Special purpose HazMat or emergency management software (ICMA, 2013).

The use of communication systems like PBX allows a phone system to be set up and hosted by a data center like a ICS so that first responders can correspond in real time with the EOC (ICMA, 2013). Throughout the recent influx of emergencies, however, there has been a failure in almost every type of communication system. Often cell phones will not work if there is any damage to cell tower. Internet connections may be useless without a power source. This is why transistor radios are still in use(ICMA, 2013).

“it also depends a bit on what the consensus is, because sure I can just implement improvements in my area, granted in my level, I just have a smaller area, but for best practice for my organization, best practices would be something we all come to a consensus about or if I am like that a uh, a larger multi agency, type of a ah, meeting, or, organization, then we would all have to agree you know state wide how are we going to implement NIMS and ICS, I mean its not up to just one agency (17:56) in the state, everyone always has to kind of agree, and we always have this conversation what type of, uh, information platform are we going to use. and we can't seem to all be using the same type of information sharing or

## BEST PRACTICES IN EMERGENCY MANAGEMENT

communication platform, so how do we do that, you know it's a consensus, you know we don't all agree on the best practice for those kind of platforms are, but we all have to come to some sort of consensus to find it" (Respondent K, personal communication, August 14, 2014).

Even in the area of communication, the diverse options available under the umbrella of best practices can be diverse and contradictory. Problems in interoperability concern the need to create common languages, develop interoperable technical infrastructure, clarify expected outcomes, and lead by example. Interoperability for an EM simply means the ability of making systems and organizations work together (Brumgarner, 2008). Often EMs must coordinate with other departments and organizations to provide rescue services. Often within a crisis, the issues involve communication between the varying entities making interoperability challenging (Schneider, 2013). In terms of emergency response, governments should always be trying to improve since it's such an important aspect of ensuring that people will stay safe (Newcomer & Claudle, 2011).

### **Networking as a Best Practice**

The ambition to write a network map for this research was quickly defeated due to the fact that I could not obtain an actual data to piece one together. EMs were very secretive not only about how they formed a network but also who was in theirs. A traditional anonymous survey based method would be more efficient for collecting that type of data. The understanding of networking provided by this research is that networks do matter. Almost every EM who participated cited connections as being critical to carrying out their duties. The networks formed seemed to be by department, whether an EM was federal, state or local determined who they grouped with.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

When asked whether EMs operate within a network, the response was usually a resounding “Yes, we want to work with everyone ” (Respondent A, personal communication, July 25, 2014). Many agreed that this was an important aspect of their position.

"I have been working toward increasing this; MMRS; Our job to find networks, draw them together; And to create networks; Facilitate communications, looking for improvement and more efficient coordination; 20 different emergency support functions within; [the city's] Plan, fire fighting, mass care, all 20 will create ; Creating - Multi agency threat information exchange - we Meet regularly to discuss how to train, operate, communicate, etc.” (Respondent A, personal communication, July 25, 2014).

When asked which network they operated in, no EM gave a clear answer. “We work with the Washington office to run testing like running drills, and COOP. [we also have] Contingency meetings [where we] network. I create Points of contact [with the] city, state; federal agencies like FEMA, and obviously tribal We have been increasing [the] number of [our] network- and expanding [our] network. ” (Respondent E, personal communication, July 28, 2014). When probed to understand the exact individuals within an EMs network the response was "Since we are a federal agencies , we network closely with tribal and cities employees. It's important that we have face-to-face contact. In that way [you] create resources through networks. I [also]networking with other safety agencies” (Respondent E, personal communication, July 28, 2014). “We network quite often NMEMA, FEMA, and homeland security. We [also] network frequently with other EMs. ” (Respondent C, personal communication, August 6, 2014). “ We Every minute, every day -emailing, networking People job, must work in teams; More



## BEST PRACTICES IN EMERGENCY MANAGEMENT

networking with continuity professionals - local regional and national” (Respondent G, personal communication, August 14, 2014).

### **Discussion of the Results**

Personalities matter, individuals matter. After meeting and talking with those in this profession, it must be realized that there is so much more that goes into this area than simply an individual EM. EMs work with all types of people from all across the intergovernmental overlap. If an emergency management department exists in isolation, it will rarely be successful.

Emergency response planning and management at the municipal level has increasingly become a more complex task (Alexander, 2005). The issues are often compounded by social, technical, and political developments including jurisdictional confusion among the varying levels of government. Federal, regional, state, county, and municipal authorities all have interests in ensuring emergency response is adequate (FEMA 2011). Often, the economic burden of maintaining adequately staffed and trained emergency response teams is difficult for local municipalities to maintain in times of financial strain. Another burden for municipalities is their sheer size and complexity, often public opinion initiates widespread anxiety because of recent terrorist attacks (Erickson, 2006). It is crucial that administrators and EMs utilize their time effectively in responding to crisis and should realize that the public response to warning is not a simple stimulus-response reaction (Drennan & McConell, 2007). Humans are complicated. Public complacency is a complex psychological state of human beings that is augmented during repeated threat warnings. The public has to be convinced that they are in immediate, personal danger to take action (Wang & Kapucu, 2007). It is crucial that EMs secure funding when the public is concerned from recent events, like infrastructure investment after Hurricane Sandy (Haras & Brasley, 2011).

## BEST PRACTICES IN EMERGENCY MANAGEMENT

While many were positive of the future of this field, some had become very cynical of the process. There was a frustration of the slowness of policy and the apparent apathy from the public. Emergency management is most popular right after a disaster strikes. In a state like New Mexico, our level of disasters appear quite low.

The dependency of different agencies and departments on each other's resources to complete tasks and provides services is becoming the norm. The network environments accumulated complexity greatly varies due to the various goals different members strive for in trying to achieve an outcome (Silva, 2011). In combating crisis, government has even more reason to utilize networks.

A variety of coordination mechanisms are needed that link local responses to federal capabilities for intelligence gathering and incidence response (Drennan& McConnell, 2007). There has been a focus on developing threat assessment strategies, incident reporting, vertical and horizontal communication and information sharing, training and exercising, mitigation strategies, organizing and planning to mobilize resources at different levels, response and recovery activities, and safety of personnel and the population. Recently there has been a push for updated assessment strategies, incident reporting, vertical and horizontal communication and information sharing, training and simulation, mitigation strategies, organization and planning to mobilize resources at different levels, response and recovery activities, and securing the safety of personnel and the population (Kapucu, 2001).

Emergency management appears to be on the back burner for most local governments. The fact that many EMs had multiple jobs made it difficult for them to focus on some of the things mandatory according to the National Response Framework (NRF). It was also apparent that while federal funding and matching funding exists for EM positions, it just isn't enough of a

priority for local municipalities.

### **Limitations of the Study**

This research was done on a very small scale, the data gathered is informative but it cannot be applied to the whole profession within New Mexico. Many of those interviewed were passionate and willing to talk and contribute to the data. Those who were not willing to participate in this study may have a much different perspective. 20 emails were sent requesting interviews, only 12 responded and only eight ultimately led to interviews. 15 people were approached about participation in a focus group; while all seemed somewhat interested, only 4 were able to attend the designated meeting time. Also Some Department of Homeland Security officials were not allowed to talk about their job or position without permission or approval. Participant G agreed to talk to me, but his comments had to be approved and sent to a federal office. These types of roadblocks were not expected by the Researcher and this may have also influenced the information and data obtained in this study.

### **Implications for Future Research**

This study lacked scientific basics like independent variables, however it did allow for more information about where gaps in knowledge exist. Also, the easy identification of individuals based on their titles may have influenced their responses and made them reluctant to be truthful about the actual success and downsides of their specific agencies. Originally this research was going to use first and last names, but a coding system was developed instead. This is so the information gathered isn't directly associated with an individual, but so it is identified with the thoughts and ideas of local EMs instead.

Network communication is a complex topic, but in the setting of emergency and disaster management it is interesting that on a local level there wasn't much there. And the reluctance of

## BEST PRACTICES IN EMERGENCY MANAGEMENT

individuals to divulge information should be explored further. The emergency management network on a local individual scale is illusive; a study that specifically dives into this would be very beneficial for further knowledge.

There are also many unanswered questions about who is involved in the volunteer process. Many that were interviewed recommended that individuals who want to go into this field should volunteer to get their foot in the door. A study on volunteers and the career course of a volunteer would be interesting, many of those interviewed volunteered frequently before they gained their employment.

As emergency management gains traction as a solidified professional area, higher education and specialty emergency management degree programs ought not just to be viewed as serving those who wish to be full-time EM professionals. In addition, EMHIED also can serve students who will enter a host of other professions, e. g., public administration, law, natural resources and environmental management, business administration, nonprofit administration, social work, public health practice, hospital administration, and engineering, that undertake a diverse array of EM related tasks and activities before, during, and after events occur.

This disjointed path to become an EM makes it a diverse field of individuals but those individuals are concentrated from a specific background, like EMS or Fire. Emergency management professionals are employed at each level of government, e. g., city, county, state, tribal, and federal, and within various governmental agencies at each level, as well as Departments of Emergency Management, Departments of Public Health, Departments of Transportation, Departments of Public Works, domestic and international nongovernmental organizations, and businesses. The focus group acknowledged that degree program graduates who choose to pursue an emergency management career will be most successful if they choose

## BEST PRACTICES IN EMERGENCY MANAGEMENT

to complement their higher education experience with significant training and one or more internships.

### CONCLUSIONS AND RECOMMENDATIONS

The broad purpose of this research was to understand how EMs within New Mexico employ best practices on a local level for better knowledge and understanding for students wanting to go into this career field in New Mexico. Emergency Management is still taking shape locally. Emergency Management as a solidified concept has been developing and taking shape more rapidly. The youngness of this profession is clear based on the diverse opinion and the differences of how the future should be handled.

More research needs to be done into best practices within New Mexico. From the data collected it is not apparent exactly what the best practices in New Mexico are. The profession of emergency management is still being formed. Here in New Mexico, emergency management is amalgamation of many different careers. The different backgrounds that individuals have determine how they approach emergency management. While diverse perspectives can be beneficial, it has led to a hodgepodge of different applications of best practices.

Government's quintessential role is to protect citizens from harm (Comfort, 2005). The policies in place are designed to anticipate risk, prepare citizens to manage risk, and to assist them in recovering from damaging events, this is all under the assumption that the government will remain intact and citizens will be the unintended victims of destructive events. Government can pool resources from the wider society to help smaller regions hit with difficulty (Collins & Peerbolte, 2012). In the United States, there has been a constant emphasis on creating an emergency plan as a document, but not an emphasis on the planning process (Perry & Lindell, 2003). Emergency preparedness requires that it takes place through a process of planning and

## BEST PRACTICES IN EMERGENCY MANAGEMENT

exercising, along with training and the acquisition of equipment and apparatus to support emergency action (Perry & Lindell, 2003).

Many interviewed agreed that emergency management has been successful in New Mexico, it just needs to be taken more seriously by agency department heads. It also needs to be taken more seriously as a definable component of local management. EMs should focus on mitigation and planning strategies, not have several jobs or wear many hats.

For the future of Emergency Management, there needs to be more diversity within the profession, it seems to be an “old boys club”. While EMS and military backgrounds are the norm for emergency management it would be beneficial for the profession as a whole to be more welcoming of other backgrounds, innovative solutions are difficult to find if the *same old thing* is done constantly.

Each of those interviewed cited the importance of human life and community resilience as something that motivated their desire to be within this profession. When asked about the most important thing that individuals deal with, six of the eight of those interviewed specifically cited people and saving lives.

In a sprawling state like New Mexico, this is a common occurrence and a trend that is growing. There has been an increase in the Wildland Urban Interface (WUI) threat and it is becoming steeper because of continued development and the continued exposure. The WUI is simply the area where fire occurs naturally within the ecosystem, however as population expands people have build houses and townships in these areas. These areas exist all over the U.S. but they are particularly a problem for New Mexico. WUI's can appear complicated due to the variability in terminology. Depending on the area of the state, fire departments might refer to

## BEST PRACTICES IN EMERGENCY MANAGEMENT

wildland fires as brush fires, forest fires, rangeland fires, or something else; however, they are all part of the WUI and all pose the same threat to local assets (Gebert & Black, 2012).

According to the Department of Homeland Security and Emergency Management New Mexicans should prepare for wildfire, earthquakes, floods, tornados, extreme temperatures, terrorist activity, and active shooters. Since New Mexico is often recognized as being a poor state, many small counties and municipalities lack the resources to face a disaster alone. Pursuant to the Intrastate Mutual Aid Act, the state (New Mexico Department of Homeland Security and Emergency Management) and every political subdivision of the state is automatically part of the Intrastate Mutual Aid System (IMAS) (NMDHSEM, 2014).

The WUI would be a great case study for further research. The WUIs exists in every state in the country. In New Mexico, the Santa Fe Fire Department is the only fire department to have two full-time positions dedicated to Wildland Urban Interface issues and wildfire prevention. The Santa Fe WUI program affords information, assistance, and recommendations to homeowners and landowners with property in areas where forest fires are a danger. Since 2010 the Fire Department has had a seasonal wildland firefighting hand crew sponsored by the Youth Conservation Corps to assist with fuels management in the Wildland Urban Interface and respond to wildland fires (Weinrah, 2000).

There have been significant improvements in fire behavior models to provide computer simulations to direct fire response. New Mexico has many public lands so coordination with federal agencies is crucial when resources are limited. And the risk of fire can expand rapidly once a fire breaks out. Northern New Mexico has incorporated “Lessons Learned” from the 2000 Cerro Grande Fire. These include more aggressive Fuels Management, Pre-Event

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Planning, and better Inter-agency coordination during an event. Fuels management includes reducing the fuels inventory by preventative prescribed/proscribed burns, creating defensible space around structures, and creating enhancing natural fire breaks by tree removal. Evidence of the effectiveness of fuels management was seen during the 2011 Los Conches Fire that threatened the Los Alamos National Laboratory and the town of Los Alamos. Ultimately, no structures were lost due to aggressive fuels management after the Cerro Grande Fire.

Another area that would provide valuable research in New Mexico best practices for EMs is active shooter protocol and planning. This is a relatively new thing within emergency management, but with the 2014 event where a 12-year-old New Mexico boy in Roswell who drew a shotgun from a band-instrument case and shot and wounded two classmates at his middle school raises the need for preparedness.

## CONCLUSIONS

The decade from 2004 to 2014 has changed the way Americans perceive and respond to sudden, urgent, and destructive events. More importantly, it has changed citizen expectations of the government's capacity to anticipate and respond during these events (Comfort, 2005). The greatest example is the tragic events of September 11, 2001, which began an era of critical review of government performance and generated new policies, procedures, and a reorganization of governmental entities (Comfort, 2005). The result of the September 11, 2001 attacks have been a blurring of existing emergency management policies and practices which have shifted toward mitigation and recovery. The topic of emergency management encompasses everything from natural disasters and technical failures with new policy developed to prevent deliberate crises initiated by human intent to do harm.



## BEST PRACTICES IN EMERGENCY MANAGEMENT

Emergency Management is a complex topic, the best practices available vary quite a bit, the best practices for the profession as a whole come down to proper planning, effective networking and communication. On a local level, this study may not have been large and in-depth enough to pinpoint specific best practices. Emergency management as a field relies on a network that spreads across the whole country. The one thing that an EM really needs to be successful, is to care:

“what's the difference between crisis management and emergency management? .... really what it comes down to for me is, that's merely terminology that we adapted over time, but I said really what it comes down to is, we don't want to lose focus as EMs , complex environments, we are trying to prevent or lessen the consequences, to individuals, because it all comes down to the individual [many voices in agreement] the loved one that's left after their loved one is involved with a plane crash or some other type of disaster, crisis, disaster, emergency, does it matter what we call it? I don't think so, as you recall when we met, it comes down to the individual; all these things, whatever we call them, it's an individual personal crisis at one moment, and that we can never lose sight of, or I think, we lose the entire purpose of what we're trying to do,” Emergency, disaster, incident planning, whatever you want to call it, it is about caring for your community and the people within it” (Respondent A, personal communication, July 25, 2014).

Emergency management in New Mexico is still solidifying as a profession and it will continue to change and evolve. Realistic plans allow EMs to coordinate with every piece of the emergency response team effectively. Updated technology allows first responders to coordinate with EMs to effectively implement federally mandated Incident command systems (ICS).

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Personal networks enable emergency managers to secure resources in times of funding shortages.

Whatever crisis is called government can apply the best practice of actually caring for the community and the individuals within it. Emergency management is about people.

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## Appendix

Table 1  
Concepts and Themes within the Literature Review

<u>Authors</u>	<u>Title</u>	<u>Study Focus</u>	<u>Theme</u>	<u>Summary</u>
(Drennan & McConnell, 2007)	Risk and crisis management in the public sector	The Nature of Risk and Crisis, Drivers for Risk and Crisis Management, Assessing Risks, Responding to Risk, Contingency Planning Crisis Preparedness, Managing Crisis, Decision making	Preparedness	This book's main theme is therefore the context, concepts and practice of risk and crisis management in the public sector in Western, notably European, and Asia Pacific countries.
(Wyatt-Nichol & Abel, 2007)	A critical analysis of emergency management	examining effective framework for thinking through, talking about, evaluating, and engaging with emergencies	Development of Emergency Management	This article examines assumptions, imagery, and ideology of the discourse on emergency management that emerge among politicians, the media, and political appointees following Hurricane Katrina.
(Kapucu, 2001)	Collaborative emergency management: better community organizing, better public preparedness and response	Community coordination, communication and planning of precautions, severe threat of disaster.	Preparedness, collaboration	Collaborative emergency management: better community organizing, better public preparedness and response
(Schneider, 2013)	Emergency management and sustainability: Defining a profession	linking emergency management profession to sustainability - the connections between hazard threats, disaster resilience, and sustainability	Development of Emergency Management	complexity of problems is more than matched by the complexity of the physical and social systems that emergency managers are expected to understand as they offer solutions for the recurring disaster problems that are presented to them in the normal course of their work
(McEntire & Myers, 2004)	Preparing Communities for Disaster: Issues and Processes for Local Government, Disaster Prevention and Management	identifies the process of establishing local ordinances, assessing risk, creating emergency operations plans, acquiring resources, instituting mutual aid agreements, training, exercising and educating the public.	Preparedness, mitigation	This paper discusses what local governments must do to prepare for various disasters
(Augustine, 1995)	Managing the crisis you tried to prevent	business crisis	Response	Private sector tactics for handling crisis
(Rahm & Reddick, 2011)	US City Managers' Perceptions of Disaster Risks: Consequences for Urban Emergency Management.	this paper analyzes the role of CAO risk perception.	Risk Perception	Drawing on survey data collected from chief administrative officers (CAOs) from the largest US cities, this paper analyzes the role of CAO risk perception.
(Jaques, 2010)	Reshaping crisis management: The challenge for organizational design.	builds on a nonlinear model to explore how crisis management activities can be clustered together and integrated to optimize organizational effectiveness	Development of Emergency Management	This paper outlines the traditional event approach to crisis management, which focuses on preparing for and responding to a major adverse occurrence, and discusses the new process approach, which reshapes crisis management within a broader continuum of management activity.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

<u>Authors</u>	<u>Title</u>	<u>Study Focus</u>	<u>Theme</u>	<u>Summary</u>
(Waugh & Streib, 2006)	Collaboration and Leadership for Effective Emergency Management	Collaboration is a necessary foundation for dealing with both natural and technological hazards and disasters and the consequences of terrorism.	Development of Emergency Management, collaboration	Describes the structure of the American emergency management system, the charts development of the Federal Emergency Management Agency, and identifies conflicts arising from the creation of the Department of Homeland Security and the attempt to impose a command and control system on a very collaborative organizational culture in a very collaborative sociopolitical and legal context.
(Comfort, 2005)	Risk, security and disaster management.	Connecting crisis management with Risk and public governance	Risk Perception	examines policies and practices that address the evolving conditions of risk, security and disaster management in US society
(Sullivan, 1993 )	Strategical Disasters: Some Significant Trends in US Emergency Planning and Mitigation.	authors found Us appears to be spending more on emergencies, yet have not been able to mitigate them as well as we could a decade ago	mitigation	This paper examines some apparent trends in various types of emergencies, both human and natural.
(Perry & Lindell, 2003)	Preparedness for Emergency Response: Guidelines for the Emergency Planning Process, Disasters.	This emphasis on the written plan tends to draw attention away from the process of planning itself and the original objective of achieving community emergency preparedness. This paper reviews the concepts of community preparedness and emergency planning, and their relationships with training, exercises and the written plan.	Preparedness	governments worldwide have invested considerable resources in the writing of terrorism emergency response plans. Particularly in the United States, the federal government has created new homeland security organizations and urged state and local governments to draw up plans.
(Henstra, 2010)	Evaluating Local Government Emergency Management Programs: What Framework Should Public Managers Adopt?	emergency measures in most jurisdictions are rarely, if ever, activated, public managers find it difficult to evaluate and assess the quality of existing emergency management programs	Development of Emergency Management	Local governments play a key role in emergency management by developing the necessary policies and concrete procedures for responding effectively to community emergencies and their aftermath.
(Alexander, 2005)	Towards the development of a standard in emergency planning'	Standards may be viewed as unnecessarily restrictive and overly prescriptive. However, they can instead be regarded as a useful means of helping to guarantee the quality, content and relevance of plans.	Preparedness	The paper considers some definitions of the term "standard" and discussing the utility of the concept with respect to emergency planning. The subsequent analysis is based on the application of logical and observational criteria to the process of systematically building a framework on which to base a planning standard.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

<u>Authors</u>	<u>Title</u>	<u>Study Focus</u>	<u>Theme</u>	<u>Summary</u>
(Silva, 2011)	Collaborative Governance Concepts for Successful Network Leadership	differences between hierarchical leadership and network leadership, important aspects of collaborative leadership, and the leadership best practices for collaborative leadership, including the formation of joint commitment, the identification of resources, the creation of a shared understanding, the achievement of stakeholder support, and the establishment of trust.	Collaboration	State and local governments across the United States have increasingly utilized collaborative, inter-organizational approaches to the delivery of public services. This shift in governance structure often necessitates that public managers not only lead the agency in which they are employed, but also work within, and often lead, a network.

Table 2  
Definitions and Concepts

<u>Term</u>	<u>Definition</u>
Standard	Standard is a. "an object or quality or measure serving the basis or example or principle to which conform or by which accuracy or quality of other is judged" b. "the degree of excellence etc. required for a particular purpose" c. "a thing recognized as a model for imitation" (Alexander, 2005)
Crisis	"a situation or episode in which different actors and groups seek to attribute meaning to a particular set of circumstances which pose extraordinary threats to an individual, institution and/or society," (Drennan & McConnell, 2007).
Risk	"the chance of something happening that will have an impact on objectives; often specified as an event or set of circumstances and the consequences (both positive and negative) that flow from this," (Drennan & McConnell, 2007).
Uncertainty	The "variation around the mean; extent to which both the likelihood of an event and its impact may vary; where there is no certainty of knowledge," (Drennan & McConnell, 2007).
Ignorance	The "unknown' impacts and therefore 'unknown' probabilities. ," (Drennan & McConnell, 2007).
Incident	The Forest Service defines Incident as "An occurrence, either human caused or by natural phenomena, that requires action by emergency service personnel to prevent or minimize loss of life or damage to property and/or resources." (FEMA, 2014).
Warning	FEMA defines warning as "the alerting of emergency response personnel and

<u>Term</u>	<u>Definition</u>
	the public to the threat of extraordinary danger issued by the NWS for a defined area indicates that the particular type of severe weather is imminent in that area." (FEMA, 2014).
Contingency	"a threat that may arise, but will not necessarily do so," (Drennan & McConnell, 2007).
Mitigation	FEMA defines Mitigation as "the effort to reduce loss of life and property by lessening the impact of disasters. Mitigation is taking action <i>now</i> —before the next disaster—to reduce human and financial consequences later (analyzing risk, reducing risk, insuring against risk). Effective mitigation requires that we <i>all</i> understand local risks, address the hard choices, and invest in long-term community well-being. Without mitigation actions, we jeopardize our safety, financial security, and self-reliance." (FEMA, 2014).
Hazard	Hazard. A natural, technological or social phenomenon that threatens human lives, livelihoods, land use, property or activities. (FEMA, 2014).
Emergency	““Emergency” is a broader term that includes disasters, catastrophes (which some would define as major disasters) and smaller disruptive events. It can be defined as an imminent or actual event that threatens people, property or the environment and which requires a coordinated and rapid response. Emergencies are usually unanticipated, at least in terms of exactly what happens and when and where they take place.” (Alexander, 2005)
Coordination	The Forest Service defines coordination as "The process of systematically analyzing a situation, developing relevant information, and informing appropriate command authority of viable alternatives for selection of the most effective combination of available resources to meet specific objectives. The coordination process does not involve dispatch actions.." (FEMA, 2014).
<b><i>The “disaster cycle”</i></b>	Given that most catastrophic impacts in any particular area tend to be repetitive, disaster is conceptualized in terms of a cycle, which broadly distinguishes times of quiescence, in which preparations are made for the next event, and times of action, in which emergencies are managed, (FEMA, 2014).
<b><i>Emergency Response</i></b>	"Diverse regulations from every level of government make emergency response an integral component of routine corporate management a. obligations imposed by corporate insurance policies b. corporate and stakeholder concerns over tort liability c. the demands of both as hoc and formal in-plant safety committees "(FEMA, 2014).

Table 2. Key Terminology found in Emergency Management.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Table 3

## Crisis versus Emergency

<u>Crisis</u>	<u>Emergency</u>
<p><b>Crisis:</b> "...a decisive or critical moment or turning point when things can take a dramatic turn, normally for the worse..." (Allinson 1993, 93; based upon <i>Webster's New International Dictionary, Unabridged, 2<sup>nd</sup> ed.</i>)</p>	<p><b>Emergency:</b> Any hurricane, tornado, storm, flood, highwater, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, drought, fire, explosion, nuclear accident, or other natural or manmade catastrophe in any part of the United States. Any occasion or instance for which, in the determination of the President, Federal assistance is needed to supplement State and local efforts and capabilities to save lives and to protect property and public health and safety or to lessen the threat of a catastrophe in any part of the United States. (FEMA, <i>Definitions of Terms, 1990</i>)</p>
<p><b>Crisis:</b> "Definition of a Crisis: Normal operational procedures are severely impacted, Traumatic events or situations occur. The lives and the well-being of employees are directly impacted." (DOJ, <i>CMP, 2002, p. 3</i>)</p>	<p><b>Emergency:</b> "Any occasion or instance--such as a any other natural or man-made catastrophe--that warrants action to save lives and to protect property, public health, and safety." (FEMA, <i>Guide For All-Hazard Emergency Operations Planning (SLG 101), 1996, p. GLO-2</i>)</p>
<p><b>Crisis:</b> "A collective crisis can be conceptualized as having three interrelated features: (1) a threat of some kind, involving something that the group values; (2) when the occasion occurs it is relatively unexpected, being abrupt, at least in social time; and (3) the need to collectively react for otherwise the effects are seen as likely to be even more negative if nothing is done sooner or later..." (Quarantelli 1998, 257).</p>	<p><b>Emergency:</b> "Emergencies include acts of terrorism, hurricanes and severe storms." (FEMA, <i>Strategic Plan (Draft), October 10, 2007, p. 1</i>)</p>
<p><b>Crisis:</b> "...a situation that, left unaddressed, will jeopardize the organization's ability to do business." (Ziaukas 2001, 246; citing other sources)</p>	<p><b>Emergency:</b> "Sudden, urgent, usually unexpected occurrence or event requiring immediate action." (ISO 22399, <i>Societal Security..., 2007, 2</i>)</p>

Table 3. Emergency as a Concept versus Crisis as a Concept within Relevant Sources.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Table 4

<u>Interview Participants</u>	
<u>Title, Level of Government</u>	<u>Code Letter</u>
Director of EM, City	A
Safety and Emergency Coordinator, Federal	B
University EM, State	C
Director of Emergency Management Programs, City and Private	D
EM, Federal	E
Warning Coordination Meteorologist, Federal	F
Emergency Preparedness Specialist, State and Federal	G

Table 4. Code Key for Interview Participants arranged by Title and Level of Government.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Table 5

General Questions asked during Interviews

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<u>Interview Questions</u>
How would you describe your job?
What is the most important thing that you deal with?
How do you define crisis?
What got you into crisis management?
How has your job changed?
What is most difficult?
What has surprised you the most about this field?
What are the main crisis in NM? What are you preparing for now?
How large is an "emergency" within New Mexico?
How can emergency be better handled in New Mexico?
Where is your organization successful?
Do you operate within a network?
Is crisis worse today?
Why is crisis management important?
What advice do you have for those going into this field?

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Table 5. Lists interview Question including probing questions.

Table 6

<u>Focus Group Participants</u>	
<u>Title, Level of Government</u>	<b>Code Letter</b>
Director of the Office of Emergency Management, City	H
Specific Planner for the New Mexico Department of Health, State	I
Planning Manager for the New Mexico Department of Health, State	J
County Assistant Fire Chief OEM Director, City	K

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Table 6. Code Key for Focus Group Participants arranged by Title and Level of Government.

Table 7

## Specific Examples of Best Practices

<u>Area</u>	<u>Examples</u>
Planning	Plans, response plans, recovery plans, standardization, official definition of terminology, EOC, NIMS, running regular drills and tests to ensure plans work and to identify flaws in plans
Communication	Handheld radio, SICWG, NECP, Traditional landline telephone service, Private branch exchange (PBX), Voice-over-IP (VoIP), Land mobile radios (LMR) and network infrastructure, Wireless cell phones, smartphones, tablets, and modems, Interoperability gateways, Various types of data or Internet circuits; Computer aided dispatch (CAD), Automated vehicle location (AVL) and global positioning systems (GPS), Video surveillance, Special purpose HazMat or emergency management software.
Networking	Creating relationships, sharing resources, Learning how others accomplish similar work or tasks. Sharing ideas on how to do tasks and projects better. Building stronger bonds with other staff and organizations. Providing staff development for participants. Providing an attractive workplace in order to recruit and retain talent.

Table 7. Lists specific examples of the Best Practices categories highlighted by this Research.



Table 8

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Lack of Resources Allocation Issues within Emergency Management


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Funding Issues

“Emergency management is underfunded often, under staffed... an elected official does not want to put money for something we are not sure is going to happen, when we need money for school buses, or the big issues here in Albuquerque like homeless;” (Respondent A, personal communication, July 25, 2014).

“[it’s about] Funding justification - planning for something that the city manager is going to say " this is never going to happen” (Respondent E, personal communication, July 28, 2014). .

Indifference

“What has surprised me [is a] Lack of urgency - on the part of officials and others, other agencies even and a lack of funding and resources” (Respondent D, personal communication, July 29, 2014).

“The degree of apathy and the amount competition of scarce resources [is surprising], [there are] city ordinance that give agencies broad powers, my department has been given goals and objectives yet we still must work collaborative corporately, many of organizations [in charge of emergency management] are short staff and underfunded; crisis management pushed back to lower priority,” (Respondent A, personal communication, July 25, 2014).

Increasing Awareness

“Increasing awareness / preparedness; the next step is to broker that into increased funding” (Respondent G, personal communication, August 14, 2014). .

“This is Important - keeping up with changes; [you have to do your] research; Finding money to do what you need to do” (Respondent B, personal communication, July 28, 2014). .

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Table 8. Lists inadequate resource allocation issues from the Interviews.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Table 9

## Personal Account of the Influence of Politics

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Hazards of Politics

“There's actually like the real liabilities there, that certainly the political leaders are concerned about if things don't go well and this is a difficult thing, and I am relatively new to the field but it does seem like there is this tension in the field, in that we want to do everything that we can and we want to well document our efforts but at the same time we know that the worst disaster are unexpected and there are always going to be outcomes that nobody was able to plan for, like specific cascading events, fire, flood, tornado, all happening at once and inevitably there are going to be things we don't want, loss of life etc, so how can we document our data to improve on those thing without creating an environment that creates a paralysis of fear of failure, especially at the higher level a fear of failure,” (Respondent I, personal communication, August 15, 2014).

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Table 9. Quote from Focus Group Describing Issues Politics Presents for EMs.

Table 10

## Emergency Management a Changing Profession

Increasing Complexity

“There have been significant increases in complexity, increases in federal involvements, there are more rules, more policies and more regulations. [These are] increasing burdensome and beneficial,” (Respondent A, personal communication, July 25, 2014).

Changing Times

"[There have been] changes in risk, we define it and understand it different[ly] than we did ten years ago. [There have been] changes in demographics. The population is aging, there needs are different. More and more, the younger populations are leaving this town. [There have been] changes in technological, [we have] new vehicles. And unfortunately, [there has been] Decreasing funding,” (Respondent D, personal communication, July 29, 2014).

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Table 10. Examples of how Emergency Management has Evolved.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Table 11

Leadership discussed by emergency professionals

<u>Evolution of Position</u>	<u>Individualistic</u>
<p>“[ EMs need the ] ability to internalize and learn, change your own behavior, and gain others respect, We all have our own area, and we have to learn how to maximize our strengths and work on Emergency management on a career field- now all these degree [available], what is the value of that discussion how does it contribute to the field as a whole, we need tot talk about this more, and credibility – [ most people ] originally started in Fire/EMS, its evolving [ not everyone started in EMS anymore, [ these] issues in credibility, what do each of us bring?” (Respondent I, personal communication, August 15, 2014).</p>	<p>“it's even to an individual, my point is that individuals come from various backgrounds and have various experiences in their life, when you talk to different agencies and agency leaders, often there is a big difference and how a program is developed and implemented, and we don't all agree! we don't all agree.” (Respondent H, personal communication, August 15, 2014).</p>

Table 11. Competing Leadership ideas within Emergency Planning.

Table 12

Partisan Political Restraints

<u>Examples from the Interviews</u>	<u>Examples from Focus group</u>
<p>“Need to get politics out of this, disaster doesn't care what your political party is,” (Respondent D, personal communication, July 31, 2014).</p>	<p>“and this is, I think there is... a conflict between the emergency management [as a] professional and the political and policy level [management], sometimes those two conflict because the professional wants to get the best data to make the best decision for improvement , but the political and policy level doesn’t want to be embarrassed, so they become concerned more about the image that a report might create, if it makes government, you know look bad to the media, and I think we have all been through a process where our documents got sanitized, for certain things that were just too critical, I have even been told to write some AARs (After Action Reports) where I have been told “look you guys know what you need to fix you don’t have to put it on paper alright” (I, Focus Group)</p>

Table 12. Partisan Politic Issues within Emergency Management.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Table 13

## Crisis versus Emergency Terminology

Crisis Only

“Look at FEMA Crisis is not a term that is used- Crisis standard of care altered standards of care – Katrina” (Respondent G, personal communication, August 14, 2014).

“[I’ve] always used the term emergency and disaster, [I] don’t use term crisis; EMs in NM probably don’t use term crisis; Throw the words, emergency and disaster around frequently ; Disaster declaration - What HSD doesn’t really respond to crisis; Crisis is a medical word? -appears in department of health; Emergency and disaster similar; How it evolves and response depends on preparedness training; EMs reluctant to use term emergency” (Respondent E, personal communication, July 28, 2014).

“Doesn’t know where the term crisis came from; In emergency management we don’t talk about crisis; Crisis is panic; Emergency management is about planning for an incident; We look at what could happen and create a plan to mitigate; Looking for potential hazards; Finding where we are vulnerable; What type of measures needs to be in place” (C, Personal Interviews)

“Always used the term emergency and disaster, don’t use term crisis; EMs in NM probably don’t use term crisis; Throw the words, emergency and disaster around frequently ; Disaster declaration - What HSD doesn’t really respond to crisis; Crisis is a medical word? -appears in department of health; Emergency and disaster similar; How it evolves and response depends on preparedness training; EMs reluctant to use term emergency” (Respondent G, personal communication August 10, 2014).

“I don’t use this term” (Respondent F, personal communication, August 18, 2014).

Willing to use Crisis

“Crisis - immediacy, response required - hopefully training has prepared you - example power outage; Emergency and disaster similar; How it evolves and response depends on preparedness training; EMs reluctant to use term emergency”(Respondent D, personal communication, August 12, 2014).

Crisis = a situation outside of the norm, that could cause threat or loss to individual or the environment; And emergency is a short lived, short response, a risk is a vulnerability or threat, natural or man made; Incident when a term actually occurs- the term event when its planned (Boston bombing, Event then changed to incident because of the bombing)” (Respondent D, personal communication, July 31, 2014).

“Crisis is unexpected - impacted employees, safety and work; People in this field - Care more about recovery 1. Prevention / analysis 2. Crisis- 3. Response; Don’t wait around to prepare for crisis, because it will make recovery worse to not prepare for it; is the prevention measure - where you perform analysis to ensure you are prepared; Safety is done a prior of” (Respondent B, personal communication, July 28, 2014).

“Crisis is not being prepared to handle something when it occurs. three part scheme: incident, normally managed by department standard operating procedures, Emergency: an event or occurrence requiring action by emergency personnel to prevent or minimize loss of life Disaster, FEMA uses similar, new proposed emergency management plan; Crisis is somewhere between that scale between incident and disaster; Differences between different; trying to standardize terms, how do you define crisis, emergency management side, scale of increasing severity. Types of crisis:: technological (human caused), meteorological, anthropological,” (Respondent A, personal communication, July 25, 2014).

Table 13. Illustrates the disagreement in terminology.

## BEST PRACTICES IN EMERGENCY MANAGEMENT

Table 14

## Importance of Community in the best Practices Context

Best Practice Example - Community Matters

“[EMs need to] keep everyone involved and everyone informed” (Respondent C, personal communication, August 6, 2014).

“[EMs] have the task of making [our] constituents understand what [they] need to do in an emergency” (Respondent E, personal communication, July 28, 2014).

“[I have spent a good deal of time] educating staff not to make assumptions during events/incidents and to always verify things”(Respondent G, personal communication, August 14, 2014).

“Since the current focus is awareness and training, [the] use of indirect and hosted training in the Clovis / Portales area help connect with residents ” (Respondent D, personal communication, July 31, 2014).

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Table 14. Illustrates how EMs are dependent upon their communities