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MONTEREY, CALIFORNIA

THESIS

**EFFECTIVE MUNICIPAL EMERGENCY PLANNING FOR
PEOPLE WITH DISABILITIES AND OTHERS WITH
ACCESS AND FUNCTIONAL NEEDS**

by

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September 2012

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ABSTRACT

The objective of this thesis is to examine the role of municipal government with regard to disaster planning for individuals with access and functional needs. Oftentimes, a heavy reliance on county and higher levels of government occurs. The purpose herein is to identify why municipalities should create innovative policy solutions for their jurisdictions as part of a collaborative, synthesized approach within their counties. As the first responders in a major disaster, both municipal and county governments play the critical 'local' role within Homeland Security. Conclusively, recommendations are made regarding application for supplementing and integrating planning and preparedness efforts for the best possible outcome.

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TABLE OF CONTENTS

I.	PROBLEM SPACE	1
A.	OVERVIEW	1
B.	PLANNING FOR THE WHOLE COMMUNITY	3
C.	LOCAL GOVERNMENT ROLE	4
D.	A STORY OF CASCADING IMPACTS.....	5
E.	METHOD OF INQUIRY TO IDENTIFY PROMISING PRACTICES WITHIN CASE STUDIES.....	9
II.	LITERATURE REVIEW	11
A.	INTRODUCTION.....	11
1.	National Strategy and Policy Documents	11
a.	<i>Presidential Policy Directive (PPD) 8, National Preparedness</i>	<i>11</i>
b.	<i>Americans with Disabilities Act of 1990 (ADA) Best Practices Tool Kit for State and Local Governments, Chapter 7, Emergency Management Under Title II of the ADA</i>	<i>15</i>
c.	<i>Teaching and Empowering Local Communities: Learning How to Include and Respond to People with Disabilities.....</i>	<i>16</i>
d.	<i>Washington State Emergency Management Division.....</i>	<i>16</i>
e.	<i>Canada.....</i>	<i>17</i>
2.	The Legal Foundation and Corresponding Legal Cases Introduction.....	18
a.	<i>Background.....</i>	<i>19</i>
b.	<i>How Local Government Is Impacted—A County and Municipal Perspective.....</i>	<i>21</i>
3.	Academic Studies	23
B.	CONCLUSION	24
III.	CASE STUDY ANALYSIS: THE EMERGENCE OF PROMISING PRACTICES	25
A.	THE CITY OF LOS ANGELES	26
1.	Question 1. Collaboration	26
2.	Question 2. Identification and Communication	31
3.	Question 3. Leveraging Resources.....	36
4.	Conclusion: Promising Practices in Collaboration, Communication and Maximizing Resources.....	37
B.	CASE STUDY—CITY OF JOPLIN, MISSOURI.....	38
1.	Question 1. Collaboration	40
2.	Question 2. Identification and Communication	41
3.	Question 3. Leveraging Resources.....	42
4.	Conclusion	44
C.	BROWARD COUNTY	45

1.	Question 1. Collaboration	47
2.	Question 2. Identification and Communication	50
3.	Question 3. Leveraging Resources.....	53
4.	Conclusion	55
IV.	FINDINGS AND RECOMMENDATIONS FOR IMPLEMENTATION: THE EMERGENCE OF PROMISING PRACTICES.....	59
A.	OVERVIEW	59
B.	FINDINGS	60
C.	GENERAL AWARENESS AND TRAINING	62
D.	COLLABORATION THROUGH BUILDING AND SUSTAINING AN INTERAGENCY STRATEGIC PLANNING COMMITTEE	62
E.	CONTINUING REVIEW AND REVISION OF EMERGENCY PLANS	64
F.	EFFECTIVE COMMUNICATION.....	65
G.	ADDITIONAL RESEARCH	67
H.	CONCLUSION	67
	LIST OF REFERENCES	71
	INITIAL DISTRIBUTION LIST	77

LIST OF FIGURES

Figure 1.	The “Core Cities and Counties”	28
Figure 2.	Regional Catastrophic Planning Process	29
Figure 3.	Storm Track and Intensities for May 22, 2011, Joplin Tornado.....	39
Figure 4.	Presidential Disaster Declarations for Broward County (1965–September 30, 2011)	46

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LIST OF ACRONYMS AND ABBREVIATIONS

ADA	Americans with Disabilities Act
AFN	Access and Functional Needs
CEMA	California Emergency Management Agency
CEMP/CEOP	Comprehensive Emergency Management and/or Operations Plans
CERT	Community Emergency Response Team
CHP	California Highway Patrol
COAD	Community Organizations Active in Disaster
COOP	Continuity of Operations Planning
COPD	Chronic obstructive pulmonary disease
CPAP	Continuous Positive Airway Pressure
CVCA	Community-wide Vulnerability and Capacity Assessment
DMH	Los Angeles County Department of Mental Health
DOJ	Department of Justice
DOT	Department of Transportation
DPH	Los Angeles County Department of Public Health
DPSS	Los Angeles County Department of Public Social Services
EAS	Emergency Alert System
ECC	Emergency Coordinating Council
EMD	Emergency Management Department
EMS	Emergency Medical Services
EOC	Emergency Operations Center
FEMA	Federal Emergency Management Agency
FHA	Fair Housing Act
FNSS	Functional Needs Support Services
GIS	Geographic Information System
HASC	Hospital Association of Southern California
HSPD	Homeland Security Directive
HUD	Housing and Urban Development
LACDACC	Los Angeles County Department of Animal Care and Control
LACDCFS	Los Angeles County Department of Children and Family Services
LAFD	Los Angeles Fire Department
LAOA	Los Angeles Operational Area

MARC	Multi-Agency Resource Center
MOA	Memorandums of Agreement
MTA	Metropolitan Transportation Authority
NCIL	National Center for Independent Living
NGO	Nongovernmental Organization
NPR	National Preparedness Report
NWS	National Weather Service
OAFN	Office for Access and Functional Needs
OEM	Office of Emergency Management
PKEMRA	Post-Katrina Emergency Management Reform Act
PPD	Presidential Policy Directive
RA	Rehabilitation Act of 1973
RCPGP	Regional Catastrophic Preparedness Grant Program
RCPT	Regional Catastrophic Planning Team
ROI	Return on Investment
SEMA	State Emergency Management Agency
SNAP	Specific Needs Disaster Voluntary Registry
VPR	Vulnerable Population Registry
YMCA	Young Men's Club of America
YWCA	Young Women's Club of America

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I. PROBLEM SPACE

A. OVERVIEW

When communities integrate the needs of children and adults with disabilities and others with access and functional needs into their community-wide planning initiatives, they maximize resources, meet their obligations and strengthen their ability to prepare for, protect against, respond to, recover from and mitigate all hazards.¹

Natural and manmade disasters have become more frequent and widespread as all levels of government struggle with the realization that their capabilities are limited.² Simultaneously, the nation is seeing a substantial increase of people with disabilities and chronic health conditions living on their own, rather than in institutions.³ According to the U.S. Census Bureau report for 2010, more than 56 million Americans have a disability that requires some form of functional and access need support services,⁴ which accounts for 19% of the population or almost one out of five people.

In August 2005, Hurricane Katrina struck the gulf coast shining light on some of this nation's greatest inadequacies with regard to disaster preparedness. Many were in disbelief as the media showed the dead floating in the streets and others succumbing to needless and prolonged pain and suffering. Many asked, how could this happen..... in America? America again became confronted with the "vast divide between policy

¹ FEMA, Office of Disability Integration & Coordination, (n.d.), <http://www.fema.gov/office-disability-integration-coordination/office-disability-integration-coordination/office-1>.

² Intergovernmental Panel on Climate Change, "Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation," November 2011.

³ Strategic Foresight Initiative, "Government Budgets: Long-term Trends and Drivers and Their Implications for Emergency Management," May 2011.

⁴ U.S. Census Bureau, Report, "Americans With Disabilities," 2010, <http://www.census.gov/newsroom/releases/archives/miscellaneous/cb12-134.html>; "Prevalence of Disability for Selected Age Groups: 2005 and 2010," (n.d.), http://www.census.gov/hhes/www/disability/sipp/disab10/table_1.pdf.

creation and policy implementation-with the life-and-death difference between theory and practice.”⁵

What many do not realize is that in the final hearings from Congress Governor Blanco testified that of the 1.3 million people living in southeastern Louisiana, only 100,000 people, including first responders, remained in the area when Katrina made landfall. This number equates to more than 90% of the population being evacuated. In the field of emergency management, this number is considered a significant accomplishment.⁶

Notably, since Hurricane Katrina, much attention has been given to what went wrong. One of the primary issues addressed was evacuation. The final hearings did not agree with the suggestion that Louisiana state and local officials were responsible for “the failure of complete evacuations,” and that this failure “led to deaths, thousands of dangerous rescues.”⁷ However, emphasis should be noted on the word “general.” Evacuation of the general population went well. The same cannot be said for the vulnerable population, those with access and functional needs. Despite adequate warning 56 hours before landfall, Governor Blanco and Mayor Nagin did not order a mandatory evacuation in New Orleans until 19 hours before landfall. New Orleans was unprepared to provide evacuations and medical care for its special needs population and dialysis patients, and Louisiana officials lacked a common definition of “special needs.” The failure of complete evacuations led to preventable deaths, great suffering, and further delays in relief.⁸ Why were all residents, especially the most helpless and vulnerable, not evacuated more quickly—or at all? What can cities do to better prepare for their vulnerable populations?

⁵ Quoted in Report: Failure of Initiative, Former Speaker of the House, Newt Gingrich at Government Reform subcommittee about the need to move the government to an “entrepreneurial” model and away from its current “bureaucratic” model, so that we can get government to move with Information Age speed and effectiveness.

⁶ U.S. House, *Hearings on Hurricane Katrina: Preparedness and Response by the State of Louisiana*, “House Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina,” in 109th Cong., December 14, 2005, http://katrina.house.gov/full_katrina_report.htm.

⁷ Ibid.

⁸ Congress, House United States, “Failure of Initiative: Select Bipartisan Committee to Investigate the Preparation for Response to Hurricane Katrina,” (n.d.), <https://www.hsdl.org/?view&did=460325>.

However, the definition of who is ‘vulnerable’ can be broad, far reaching, and consistent agreement about the definition does not exist. Who is vulnerable? The answers are as broad and wide as there are jurisdictions and agencies. As emergency planning and subsequent policy has evolved concerning vulnerable populations, so has the terminology. The purpose of this thesis revolved around emergency preparedness, response, and recovery for children and adults with disabilities, and others with access and functional needs (AFN) before, during and after a disaster.⁹

It is evident that while government will continue to work to meet the needs of a community after a disaster, it will also need to adapt to its ever-changing environment. To foster the building of a resilient community, it should be recognized that a “government-centric approach to disaster management will not be enough to meet the challenges posed by a catastrophic incident.”¹⁰ For this reason, it is critical for all stakeholders within the emergency management community to collaborate on community-centric approaches.

B. PLANNING FOR THE WHOLE COMMUNITY

The objective of this thesis is to provide recommendations for municipal governments with regard to inclusive disaster planning for people with disabilities and individuals with access and functional needs. Inclusive disaster planning removes the “government-centric” focus to a more “community-centric” approach that integrates non-governmental partners from within the community into the emergency management process. Historically, municipalities have relied heavily on county and higher levels of government to fulfill their community’s resource needs. However, all levels of government have resource constraints with limited capabilities. By integrating non-governmental partners and stakeholders within the emergency planning process, specific needs can be pre-identified and planned for within and by the whole community. As

⁹ Department of Homeland Security, Federal Emergency Management Agency, “Office of Disability Integration & Coordination,” (n.d.), <http://www.fema.gov/office-disability-integration-coordination/office-disability-integration-coordination/office-1>.

¹⁰ Administrator Craig Fugate, Federal Emergency Management Agency, before the United States House Transportation and Infrastructure Committee, Subcommittee on Economic Development, Public Buildings, and Emergency Management at the Rayburn House Office Building, March 30, 2011.

described within the National Preparedness Goal, national preparedness is a shared responsibility with contributions from the whole community including individuals, the private and nonprofit sectors, faith-based organizations, and federal, state, and local governments.¹¹ The “*whole community*” approach involves participation in preparedness activities to include leaders from the private and nonprofit sectors, as well as nongovernmental organizations and the public to foster better coordination and working relationships.¹² By integrating the “whole community” concept, emergency planning efforts will be enhanced and will allow limited resources to be appropriately prioritized and matched to the specific needs of the community. Additionally, the base of available resources and capability levels are broadened that can help alleviate the burden placed on government in disaster situations.

C. LOCAL GOVERNMENT ROLE

This thesis identifies why and how municipalities can create innovative policy solutions for their jurisdictions as part of a collaborative, synthesized approach within their counties to plan for and meet the needs of individuals with disabilities. As the first responders in a major disaster, both municipal and county governments play critical roles within the homeland security enterprise and must identify efficient and effective ways to meet the needs of the community during times of disaster. Local law enforcement, fire and emergency medical services, emergency management, public health providers, public works, and utility professionals are usually the first to arrive and the last to leave an incident. When a community is overwhelmed by an incident, a local responsibility and obligation remains to coordinate with federal, state and community partners including the private and nonprofit sectors, and faith-based organizations. Local officials, such as the Mayor, City Manager, or county officials, have the overarching responsibility for ensuring the public safety and welfare of their residents. In coordination with local officials, building an effective emergency management foundation is paramount to public safety. Therefore, every level of government has a duty for its own emergency

¹¹ Department of Homeland Security, Federal Emergency Management Agency, “National Preparedness Goal,” First Edition, September 2011, 1, <http://www.fema.gov/pdf/prepared/ngp.pdf>.

¹² *Ibid.*, A-2.

management responsibilities. Emergency management is the coordination and integration of all activities necessary to build, sustain, and improve the capability to prepare for, protect against, respond to, recover from, or mitigate against the threats or actual natural disasters, acts of terrorism, or other manmade disasters. However, one of the most critical components of a resilient community will always begin and remain with the level of personal preparedness.

D. A STORY OF CASCADING IMPACTS

Much of the current literature addressing AFN populations pertains to sheltering. While sheltering is a primary concern, another primary concern for emergency management concerns people with AFN who “do not” go to a shelter. As experience has shown, many people with AFN may not go to shelters and may become “shut-ins.”¹³ As a hypothetical, yet common example, suppose a category 2 hurricane is approaching an area where a frail, elderly man in his eighties lives in a high-rise condominium. He is not in an evacuation zone, and has decided to ride out the storm in his home. His medical past includes a triple bypass heart surgery but he is stable now and considered healthy for all accounts. He takes a daily walk around the lake and takes his medicine as prescribed. He is not considered to have a disability. In fact, to tell him he is vulnerable would be personally insulting to him. He functions fine on a day-to-day basis. Yet, he depends on the condominium elevator to get to his condo on the 12th floor because walking up and down multiple flights of stairs would jeopardize his health—either from a fall, his weak heart condition, or other. When the elevator is not functioning for an extended amount of time, it is usually due to a power outage, which can be caused by a hurricane (or other natural or manmade event).

Now, attempt to estimate how many others are in the same situation, some for better, some for worse. During the peak of the storm, first responders went into lockdown for their safety. 911 calls begin to back up. The storm passes and first responders spend the initial hours attempting to respond to the 911 calls that had backed up (212 calls for this municipality). The city is almost completely without power that includes most high-

¹³ City of Pompano Beach, Hurricane Wilma, 2005. Based on personal experience.

rise apartments (222 for this municipality). Elevators are not operational without the power to operate them. Some have generators but fuel to run them is beginning to diminish, even when using the plan for partial operation hours. Emergency calls to 911 have not subsided. They have actually grown considerably. First responder resources have become strained and will need to be replenished soon. Some first responder injuries have been reported. As the demand for first responder resources remains high, the capacity to respond to them is jeopardized.

For the man in the condominium, the building did not sustain much damage. However, his problems have just multiplied because not only is the elevator not operational, but there is no power for air conditioning and the temperatures outside are reaching 90 degrees. He can no longer stay in his condominium for long periods of time, but he is unable to get out of or back to his condo with ease. He will have to find a place to shelter until the building's electric problem is resolved or fuel for the elevator's generator is attained. Others with AFN within the building face the same dilemma. Now think. How many more are there like him? There are many. This situation becomes a cascading issue for emergency management and first responder agencies after an event. Unfortunately, many stories like this abound.

In September 2011, at FEMA's 'Getting Real' Conference in Washington, DC, Marcie Roth, Director of FEMA's Office of Disability Integration and Coordination, tells a similar, yet true and tragic story about how she came to her life's work:¹⁴

Many of you have heard it before, but this time there's a little twist. So, on August 29 of 2005, I got a phone call from a friend of mine here in Washington, DC, who said that her sister-in-law who happened to be quadriplegic had been trying to evacuate from the upper ninth ward in New Orleans for 3 days. She'd been unsuccessful in evacuating, and they didn't know what to do. What could they do? Hurricane Katrina was already making landfall by that point, and there really wasn't much that

¹⁴ Federal Emergency Management Agency, Office of Disability Integration and Coordination, "Getting Real II, Promising Practices in Inclusive Emergency Management for the Whole Community, September 12–14, 2011," (n.d.), <http://GettingReal-II.WebCastOn.TV!>; Federal Emergency Management Agency, Office of Disability Integration and Coordination, "Getting Real II, Promising Practices in Inclusive Emergency Management for the Whole Community, Transcript From Event: Getting Real II, Date: 9/12/2011–9/14/2011, Section: Opening Plenary—Marcie Rothwebcast," (n.d.), <http://itsallon.tv/media/transcripts/11-09-12-grii-tr-roth.pdf>, 1.

could be done. So, as many of you have heard, I stayed on the phone with her sister-in-law, Benilda Caixeta, for most of that day, and I kept assuring her that people knew she was there and once Hurricane Katrina passed, that somebody was going to come and assist her, and I gave her regular updates, and at a certain point, it looked, and you will remember, it looked like Hurricane Katrina, as bad a storm as it was, was passing, and then Benilda said to me, “The water is rushing in,” and then her phone went dead, and Benilda did not survive Hurricane Katrina... I’ve often said that I believe that even though some people were going to die in disasters, I didn’t think Benilda should have been one of them.

Ms. Roth believes that promising practices across the country are making a difference but often wonders, had Benilda survived Hurricane Katrina, how would she fare today in another disaster? She contemplates the effectiveness of current emergency management programs and asks the following questions:¹⁵

Would she be adequately notified? Would she have prepared differently? Would Para transit or some other evacuation transportation arrive? Would her ride be accessible? Would they bring her durable medical equipment when she evacuated? Would she have been brought to a general population shelter? Would she have been turned away? If she needed assistance with using the bathroom, eating a meal, transferring, taking medicine, would personal assistance services be provided? If she had a service animal, would her service animal be allowed in and provided food and a place to relieve itself? If she had chemical sensitivities, would she be accommodated? If she had autism, mental health, or behavioral health support needs, would programs be flexible to provide a quiet area to assist her, to obtain medication, to maintain her ability to function? If she had an intellectual disability or like many people, simply needed information, would it be available in plain language so she could participate in maintaining her own health, safety, and independence? In another situation, if Benilda could have stayed at home and sheltered in place, if it would have been safe, would personal assistance services be allowed in? Would she be able to let local government know she was there? Would a registry have offered empty or bona fide value? Would a registry have assisted or hindered her ability to get her access and functional needs met? If she was deaf, would the information on the television been accessible to her? In the shelter, would it have been accessible? In registering for

¹⁵ Federal Emergency Management Agency, Office of Disability Integration and Coordination, “Getting Real II, Promising Practices in Inclusive Emergency Management for the Whole Community, September 12–14, 2011”; Federal Emergency Management Agency, Office of Disability Integration and Coordination, “Getting Real II, Promising Practices in Inclusive Emergency Management for the Whole Community, Transcript From Event: Getting Real II, Date: 9/12/2011–9/14/2011, Section: Opening Plenary—Marcie Rothwebcast,” 2.

assistance? Would evacuation maps be described for her if she was blind so she would know where to go? Would she have access to printed disaster related information in alternate formats? Would press conferences include sign language interpreters? Would the media keep those interpreters in the camera shot? Would she be assisted to obtain accessible housing? Would the transportation and other key community services be accessible, or would she wait in a shelter while everyone else returns home? If Benilda was a child with a disability, would she be able to participate in the activities and assistance being offered to other children? Would she return to school at the same time as the other children, or would she have to wait for disability accommodations to be added as an afterthought? When I think about Benilda, I think about these things a lot.”

Experiences from the field of emergency management and stories like Ms. Marcie Roth’s bring into view the focus of this thesis and its magnitude. From a municipal perspective, how can emergency management practitioners effectively plan for, and assist, individuals with AFN before disaster strikes? What promising practices exist and how are they implemented effectively and efficiently? The outcome of this thesis endeavors to highlight promising practices using three case studies that address the challenges stated previously and potential solutions for effective emergency management programs.

The methodology applied to the research question involves the collection and analysis of data using case studies to analyze promising practices for inclusive emergency management planning for the vulnerable populations. Case studies include promising practices from a county and municipal perspective. However, a broad review of international, national and state strategy is required to gain a full understanding of the framework for the scope of the issues. Current policy is examined as it has critical components required for the analysis and subsequent recommendations. Additionally, while the definition of the term vulnerable can be far reaching and broad, the focus of this thesis concentrates on individuals with disabilities and others with AFN.

E. METHOD OF INQUIRY TO IDENTIFY PROMISING PRACTICES WITHIN CASE STUDIES

- **Collaboration:** As all communities have unique characteristics and challenges, what promising practices exist with regard to collaboration when planning for individuals with disabilities and others with access and functional needs?
- **Identification and Communication:** How are people with disabilities and others with access and functional needs identified within the community? And what communication methods are used?
- **Leveraging Resources:** How can municipalities maximize and leverage existing, yet limited, resources? What resources are utilized to accomplish this? Are they cost effective and sustainable?

Ultimately, this thesis provides recommendations that will empower municipal governments to create and implement promising practices within emergency management that leverage limited resources to help meet the needs of the AFN community, and include 1) general awareness training with respect to individuals with disabilities, access and functional needs, 2) collaboration through the creation of an “interagency strategic planning committee,” 3) continuing review and revision of emergency plans for inclusive “whole of community” planning, 4) effective identification and communication methods inclusive of the AFN community, 5) and finally, 6) opportunities for additional future research and analysis with regard to after action reports.

To accomplish these practices, Chapter I gives an introduction and summary of the opportunities and challenges facing emergency management practitioners in addition to the thesis’ methodology. The literature review, in Chapter II, provides an analysis of national directives, strategies and initiatives, as well as the legal foundation with corresponding legal cases. Chapter III provides the case study analysis of smart and promising practices, with approaches utilized nationwide. With a municipal perspective, some of the emerging promising practices examined are described through the case study analysis of 1) City of Los Angeles and Los Angeles Area of California, 2) City of Joplin, Missouri, and 3) Broward County, Florida and its municipalities. Lastly, through the utilization of the case study data analysis, Chapter IV delivers findings and conclusions with recommendations for inclusive emergency preparedness planning that bridges national policy directives with practical approaches for implementation at the local level.

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II. LITERATURE REVIEW

A. INTRODUCTION

This literature examined evaluates a collective body of knowledge regarding inclusive “whole of community” emergency planning. The categories of the literature examined include 1) national strategies, policy and initiatives, 2) legal actions and court cases, and 3) academic research.

1. National Strategy and Policy Documents

a. Presidential Policy Directive (PPD) 8, National Preparedness

PPD-8 went into effect on March 30, 2011, and replaces Homeland Security Directive (HSPD) 8 (National Preparedness) and HSPD-8 Annex I (National Planning). The “National Preparedness” directive utilizes lessons learned from national disasters, as well as stakeholder input to direct the development and maintenance of a National Preparedness Goal. The goal defines core capabilities necessary to prepare for specific types of incidents posing the greatest risk to the security of the nation. Identified as one of the major goals of the directive, the PPD is “designed to facilitate an integrated, all-of-nation/whole community, capabilities-based approach to preparedness.” Within the directive, four steps are outlined with aggressive timelines for completion.

1. The National Preparedness Goal
2. The National Preparedness System—guidance, programs and processes established to meet the National Preparedness Goal
3. Campaign to Build and Sustain Preparedness
4. The first annual National Preparedness Report (March 30, 2012)—This report to the President is based on progress toward achieving the National Preparedness Goal and serves as a tool to inform the President’s budget annually.
5. While not specifically noted as a fifth step, the directive describes key national planning frameworks discussing prevention, protection, mitigation, response and recovery that will be constructed upon scalable, flexible and adaptable coordinating structures.

PPD-8 is a directive intended to prepare the country for the threats and hazards it may encounter and requires progress reports for the 31 core capabilities described in the National Preparedness Goal. This approach includes involving federal partners, state, local and tribal leaders, the private sector, non-governmental organizations, faith based and community organizations, and the public.¹⁶

(1) PPD 8 National Preparedness Goal (September 30, 2011). Describes the nation's first-ever National Preparedness Goal that acts as the first deliverable of PPD 8. It will be maintained as a living document that will undergo regular reviews that evaluate its integrity and progress against new policies, existing conditions and the National Incident Management system, which is critical for the goal's success, and most importantly, incorporates individual and community preparedness as a fundamental cornerstone of its success. The core capabilities are defined as the following.¹⁷

- Preventing, avoiding, or stopping a threatened or an actual act of terrorism.
- Protecting American citizens, residents, visitors, and assets against the greatest threats and hazards in a manner that allows U.S. interests, aspirations, and way of life to thrive.
- Mitigating the loss of life and property by lessening the impact of future disasters.
- Responding quickly to save lives, protect property and the environment, and meet basic human needs in the aftermath of a catastrophic incident.
- Recovering through a focus on the timely restoration, strengthening, and revitalization of infrastructure, housing, and a sustainable economy, as well as the health, social, cultural, historic, and environmental fabric of communities affected by a catastrophic incident.

One of the most beneficial aspects of this goal is that it recognizes that the capabilities are highly interdependent. It requires the use of existing preparedness networks and activities, improved training and exercise programs, innovation and strives to ensure that the administrative, finance, and logistics systems are in place to support

¹⁶ Intergovernmental panel on Climate Change, "Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation"

¹⁷ Department of Homeland Security, Federal Emergency Management Agency, "National Preparedness Goal."

these capabilities. This goal will help provide the foundation necessary to move forward with community planning and collaboration with all levels of government to build upon municipal, county, state and federal partnerships. Specifically noted within the goal for inclusive planning for the whole community are children, individuals with disabilities and others with access and functional needs, diverse communities, and people with limited English proficiency. Their needs and contributions should be integrated with emergency management that will, in turn, guide community-planning efforts and strengthen the nation's resiliency.

From a municipal aspect, this goal supports inclusive emergency management planning at the community level to include individuals with disabilities or functional needs. PPD-8 takes into consideration how disasters severely tax collective capabilities and resources. Furthermore, it takes into account that each community can contribute to the goal by assessing and preparing for the risks most relevant and urgent for them individually and uniquely.

(2) National Preparedness System. This document summarizes the components of the National Preparedness System, including identifying and assessing risk, estimating the level of capabilities needed to address those risks, building or sustaining the required levels of capability, developing and implementing plans to deliver those capabilities, validating and monitoring progress, and reviewing and updating efforts to promote continuous improvement.¹⁸ This national framework is intended to provide an integrated set of guidance, programs and processes that will enable the nation to meet the National Preparedness Goal. It is designed to guide domestic efforts of all levels of government, the private and nonprofit sectors and the public.

It is especially important from the author's research perspective, as it will provide guidance for planning, organization, equipment, training and exercises needed to build and maintain domestic capabilities in support of the National Preparedness Goal. Additionally, it provides critical and necessary components that

¹⁸ Department of Homeland Security, Federal Emergency Management Agency, "National Preparedness System," November 2011, 5, (n.d.), http://www.fema.gov/pdf/prepared/nps_description.pdf.

support inclusive emergency planning with regard to people with disabilities and individuals with access and functional needs, including the following.¹⁹

- Resource guidance, including arrangements enabling the ability to share personnel
- Equipment guidance, aimed at nationwide interoperability
- National training and exercise program guidance
- Recommendations and guidance for businesses, communities, families and individuals

(3) National Preparedness Report. The 2012 National Preparedness Report (NPR) summarizes the nation's preparedness level by focusing on the five mission areas: prevention, protection, mitigation, response, and recovery. The NPR demonstrates the progress made toward building a secure and resilient nation while acknowledging that key areas for improvement remain.²⁰ The report found that while some progress has been made, integrating people with disabilities and other access and functional needs into preparedness activities requires more national attention across all mission areas.²¹ The report builds on the need for communities to work together with everyone playing a role in preparedness. Future NPRs are intended to build on existing efforts, as well as establish a routine, repeatable process that engages whole community partners and provides meaningful, consistent input to show progress annually.²²

(4) Inclusive Planning Document: "A Whole Community Approach to Emergency Management: Principles, Concepts, and Pathways for Action." This effort was spearheaded by the Federal Emergency Management Agency (FEMA) and strives to include all stakeholders. The document is a valuable first step toward inclusive planning for emergency management. Furthermore, the document illustrates the foundations of "Whole Community" as an approach to the practice of emergency

¹⁹ Department of Homeland Security, Federal Emergency Management Agency, "National Preparedness System," 5.

²⁰ Department of Homeland Security, Federal Emergency Management Agency, "National Preparedness Report," March 30, 2012, 60.

²¹ Ibid.

²² Department of Homeland Security, Federal Emergency Management Agency, "National Preparedness Fact Sheet," (n.d.), <http://www.fema.gov/library/viewRecord.do?fromSearch=fromsearch&id=5902>.

management, and explores key “Whole Community” principles and themes through the use of specific, practical and real world case scenarios. While it takes into account the uniqueness of every community, the document is not intended to be all encompassing or focused on any specific phase of emergency management or level of government. Furthermore, it does not offer specific, prescriptive actions that require communities or emergency managers to adopt certain protocols. However, it does provide a list of questions and ideas for emergency management practitioners to refer to when incorporating “Whole Community” concepts into their emergency management and resiliency efforts, which is beneficial as each community is different with its own unique capabilities, and will enable the emergency management community to work within their capability and plan for the unique characteristics of their community. The document is defined as one “intended to promote a greater understanding and a starting point to begin more operational-based discussions on the implementation of “Whole Community.””

b. Americans with Disabilities Act of 1990 (ADA)²³ Best Practices Tool Kit for State and Local Governments, Chapter 7, Emergency Management Under Title II of the ADA²⁴

This document provides a summation of best practices that may be utilized as part of an application solution for collaboration between municipalities and counties to assist people with disabilities. However, the document does not provide specific recommendations for emergency management to include modifications for policies,

²³ The Americans with Disabilities Act of 1990 (ADA), the Rehabilitation Act of 1973 (RA), and the Fair Housing Act (FHA), their regulations and agency guidance, as well as State counterparts, among others, define the scope of Functional Needs Support Services (FNSS). These hallmarks of equal opportunity for people with disabilities include the implementation and execution of a general policy of nondiscrimination on the basis of disability, sheltering persons with disabilities in the most integrated setting appropriate to the needs of the person, which in most cases is the same setting people without disabilities enjoy, reasonable modifications of policies, practices, and procedures to ensure nondiscrimination, with reasonableness judged in light of nondiscrimination principles applied in emergent circumstances, the provision of auxiliary aids and services to ensure effective communication, with primary consideration of the aid or service given to the person with a disability, elimination of eligibility criteria, discriminatory administrative methods, paternalistic safety requirements, and surcharges where discrimination results, the selection of accessible sites for the location of general population emergency shelters, the construction of architecturally compliant mass care shelters and elements, and required physical modifications to ensure program accessibility in existing facilities.

²⁴ U.S. Department of Justice, Americans with Disabilities Act, “ADA Best Practices Tool Kit for State and Local Governments, Chapter 7, Emergency Management Under Title II of the ADA,” (n.d.), <http://www.ada.gov/pcatoolkit/chap7emergencygmt.htm>.

practices, and procedures to avoid discrimination against a person with a disability and take steps necessary to ensure effective communication with people with disabilities.²⁵

This document provides a thorough background for the need to collaborate at the local level. Furthermore, the document illustrates the need and justification to recommend that municipalities, in collaboration with their respective counties, move toward advancing disaster preparedness planning that would include policy models that incorporate planning for the “whole community,” rather than what has historically been known as the general population.

c. Teaching and Empowering Local Communities: Learning How to Include and Respond to People with Disabilities²⁶

This document discusses a case study utilized by the Town of Amherst, New York. It describes an innovative approach on how to engage citizens with disabilities in the local community. While much of the document is focused on educating its citizens on their legal rights and how to initiate the grievance process, it also provides a good model for the creation of a “Committee on Disabilities” that studies and offers recommendations to improve objectives of the federal Americans with Disabilities Act (ADA). This model not only assists those in the community with disabilities, but also engages them as an inclusive “part” of the process. While this case study is beneficial, a gap exists in the knowledge in that it does not specifically address emergency management and disaster planning.

d. Washington State Emergency Management Division

An additional case study that highlights helping those who may not be able to help themselves is called “Map Your Neighborhood”²⁷ by the Washington State

²⁵ U.S. Dept. of Justice, 28 C.F.R. 35.190, “Technical Assistance Issued By Department of Justice For Compliance with the ADA and Section 504 In Emergency Management Programs, Services”; U.S. Department of Justice, Americans with Disabilities Act, “ADA Best Practices Tool Kit for State and Local Governments,” 2010, www.ada.gov/pcatoolkit/toolkitmain.htm#pcatoolkit7/.

²⁶ David V. Whalen, “Teaching and Empowering Local Communities: Learning How to Include and Respond to People with Disabilities,” Town of Amherst, September 2010.

²⁷ Washington Military Department, Emergency Management Division, (n.d.), <http://www.emd.wa.gov/myn/index.shtml>.

Emergency Management Division. This program leverages citizen preparedness to identify needs and resources within communities, including the elderly, children and individuals with disabilities who may require additional assistance. The program illustrates how neighbors engage neighbors in emergency preparedness by physically drawing a diagram of neighborhood homes to include gas shut-offs, water shut-offs, and so forth. They also identify and leverage existing resources throughout the neighborhood. Examples of resources include ladders, chain saws, ropes, and skill sets, such as muscular strength or neighbors who can provide childcare so others can go to the aid of surrounding neighbors. It is a simple program to understand and does not rely on a large group to participate. It teaches basic preparedness and provides some insight as to what may be needed in a disaster, and who, within the neighborhood, is able to provide it.

e. Canada

As another example of a case study, Canada created a Community-wide Vulnerability and Capacity Assessment (CVCA) with the aim of the CVCA model to help emergency managers and municipal planners to “better understand and therefore, be able to meet the needs of their vulnerable populations, particularly in an emergency situation.”²⁸ This document illustrates various models to provide a clearer understanding of the vulnerability confronted by a community with pre-identified hazards. While the models do not illustrate how they have been tested, some validity can be given within context and portions herein may be useful.

The review of current and relevant national strategies, policies and initiatives is critical for providing the foundation of what the direction of the country is. PPD 8 recognizes that the nation’s capabilities are interdependent and requires the support of administrative, finance, and logistics systems to support these capabilities. The “National Preparedness” directive utilizes lessons learned from national disasters, as well as stakeholder input to direct the development and maintenance of a National

²⁸ Ron Kuban and Heather MacKenzie-Carey, Office of Government of Canada, Office of Infrastructure Protection and Emergency Preparedness, , “Community-wide Vulnerability and Capacity Assessment (CVCA),” *Pegasus Emergency Management Consortium Corp*, (n.d.), <http://www.pegasusemc.com/pdf/CVCAreport.pdf>.

Preparedness Goal. The goal defines core capabilities necessary to prepare for specific types of incidents posing the greatest risk to the security of the nation. One of the most pertinent major goals of the directive to this thesis is that PPD 8 is “designed to facilitate an integrated, all-of-nation/whole community, capabilities-based approach to preparedness.” The “Whole Community Approach to Emergency Management: Principles, Concepts, and Pathways for Action” planning document is in response to the Presidential Directive (PPD 8) and is defined as one “intended to promote a greater understanding and a starting point to begin more operational-based discussions on the implementation of “Whole Community.””²⁹

Gaining a better understanding through the directives, initiatives and policies, such as the “ADA, Best Practices Tool Kit for State and Local Governments, Chapter 7, Emergency Management Under Title II of the ADA,”³⁰ provide a basis from which to analyze emerging nationally and internationally promising practices that may be utilized as part of a solution for collaboration between municipalities and counties to assist people with access and functional needs better. National directives along with ADA requirements segment into a legal foundation in which the analysis of legal cases are relevant to how local governments are addressing these opportunities and challenges to ensure they are effectively and inclusively planning for, and “with,” the AFN community before disaster strikes.

2. The Legal Foundation and Corresponding Legal Cases Introduction

This section of the literature review takes into account the legal realization that county and municipal governments are facing with regard to emergency management planning for individuals with disabilities and people with access and functional needs. After Hurricane Katrina made landfall in 2005, and caused devastating losses to life and property, the Post-Katrina Emergency Management Reform Act of 2006 went into place

²⁹ Department of Homeland Security, Federal Emergency Management Agency, “A Whole Community Approach to Emergency Management: Principles, Concepts, and Pathways for Action,” December 2011.

³⁰ U.S. Department of Justice, Americans with Disabilities Act, “ADA Best Practices Tool Kit for State and Local Governments, Chapter 7, Emergency Management Under Title II of the ADA.”

that amended the Homeland Security Act of 2002. Local governments are facing the opportunity and challenge of ensuring emergency plans follow key nondiscrimination concepts described herein including: self-determination, no “one-size-fits-all,” equal opportunity, inclusion, integration, physical access, equal access, effective communications, program modifications and “fee-free.” The City of Los Angeles, California and Broward County, Florida are the two cases reviewed to illustrate the impact on local government.

a. Background

The Stafford Act, the Post-Katrina Emergency Management Reform Act (PKEMRA), as well as federal civil rights laws³¹ mandate integration and equal opportunity for people with disabilities. Emergency management practitioners should understand the concepts of accessibility and nondiscrimination, and how they apply in emergencies.³²

The following are key nondiscrimination concepts that illustrate examples of how these concepts apply to “all” phases of emergency management.³³

- Self-Determination—People with disabilities are the most knowledgeable about their own needs.
- No “One-Size-Fits-All”—People with disabilities do not all require the same assistance and do not all have the same needs.
- Many different types of disabilities affect people in different ways. Preparations should be made for people with a variety of functional needs, including people who use mobility aids, require medication or portable medical equipment, use service animals, need information in alternate formats, or rely on a caregiver.

³¹ Department of Homeland Security, Federal Emergency Management Agency, Office of Equal Rights, “VI Laws with Summaries,” (n.d.), <http://www.fema.gov/oer/reference/laws.shtm>.

³² Department of Homeland Security, Federal Emergency Management Agency, “Guidance on Planning for Integration of Functional Needs Support Services in General Population Shelters,” Guidance created for FEMA by BCFS Health and Human Services, San Antonio, Texas, 10.

³³ Department of Homeland Security, Federal Emergency Management Agency, Office of Equal Rights, “IV Non-discrimination Principles of the Law,” (n.d.), <http://www.fema.gov/oer/reference/principles.shtm>.

- Equal Opportunity—People with disabilities must have the same opportunities to benefit from emergency programs, services, and activities as people without disabilities.
 - Emergency recovery services and programs should be designed to provide equivalent choices for people with disabilities as they do for people without disabilities to include choices relating to short-term housing or other short- and long-term disaster support services.
- Inclusion—People with disabilities have the right to participate in and receive the benefits of emergency programs, services, and activities provided by governments, private businesses, and nonprofit organizations.
 - Inclusion of people with various types of disabilities in planning, training, and evaluation of programs and services will ensure that all people are given appropriate consideration during emergencies.
- Integration—Emergency programs, services, and activities typically must be provided in an integrated setting.
 - The provision of services, such as sheltering, information intake for disaster services, and short-term housing in integrated settings, keeps people connected to their support system and caregivers, and avoids the need for disparate services facilities.
- Physical Access—Emergency programs, services, and activities must be provided at locations that all people can access, including people with disabilities.
 - People with disabilities should be able to enter and use emergency facilities and access the programs, services, and activities provided. Facilities typically required to be accessible include parking, drop-off areas, entrances and exits, security screening areas, toilet rooms, bathing facilities, sleeping areas, dining facilities, areas in which medical care or human services are provided, and paths of travel to and from and between these areas.
- Equal Access—People with disabilities must be able to access and benefit from emergency programs, services, and activities equal to the general population. Equal access applies to emergency preparedness, notification of emergencies, evacuation, transportation, communication, shelter, distribution of supplies, food, first aid, medical care, housing, and application for and distribution of benefits.
- Effective Communication—People with disabilities must be given information comparable in content and detail to that given to the general public. It must also be accessible, understandable and timely.

- Auxiliary aids and services may be needed to ensure effective communication. These resources may include pen and paper; sign language interpreters through on-site or video; and interpretation aids for people who are deaf, deaf-blind, hard of hearing or have speech impairments. People who are blind, deaf-blind, have low vision, or have cognitive disabilities may need large print information or people to assist with reading and filling out forms.
- Program Modifications—People with disabilities must have equal access to emergency programs and services, which may entail modifications to rules, policies, practices, and procedures.
- Service staff may need to change the way questions are asked, provide reader assistance to complete forms, or provide assistance in a more accessible location.
- No Charge—People with disabilities may not be charged to cover the costs of measures necessary to ensure equal access and nondiscriminatory treatment.
- Examples of accommodations provided without charge to the individual may include ramps; cots modified to address disability-related needs; a visual alarm; grab bars; additional storage space for medical equipment; lowered counters or shelves; Braille and raised letter signage; a sign language interpreter; a message board; assistance in completing forms or documents in Braille, large print or audio recording.

b. How Local Government Is Impacted—A County and Municipal Perspective

Some municipalities may be relying too heavily on the county or higher levels of government regarding preparedness and response for their jurisdiction's vulnerable population. While the county must adhere to legal responsibilities, municipalities may also have legal ramifications of which they may not be aware. As an example, legal actions have been pursued by the Department of Justice (DOJ) alleging that the County and City of Los Angeles, California discriminate against individuals with disabilities in their emergency management programs and are in violation of federal law, the Americans with Disabilities Act of 1990. The suits state that evidence exists that both counties and the city have not performed the advance planning and preparations necessary to provide individuals with disabilities an equal opportunity to access and

benefit from its emergency management programs, services, and activities.³⁴ While the counties and the city do have a plan to provide for individuals with disabilities, the claim is that it is not sufficient. Specifically for the city, the Motion for Summary Judgment requested that the City amend and supplement its planning preparations, and take all other steps necessary, to ensure individuals with disabilities are afforded an equal opportunity to survive and recover from emergencies.³⁵ In Florida, Broward County experienced a similar case.³⁶ In August 2007, the DOJ began a Project Civic Access Review of the County's Emergency Management Program (the "Program"), as well as the Broward County schools used as emergency shelters. The DOJ conducts Project Civic Access reviews to assess whether the operations of state and local governments are in compliance with the ADA. The DOJ has conducted Project Civic Access reviews of more than 40 emergency management programs throughout the country. The DOJ's review of Broward County's program is the first such review conducted in Florida.³⁷ Where possible, the county has made and continues to make program improvements. However, within four areas of service, county officials identified the following with regard to specific concerns.³⁸

1. Provision of medication and medical equipment in mass care shelters
2. Providing assistance in activities of daily living and medical care
3. Evacuation of persons with disabilities
4. Provision of back-up continuous air conditioning

³⁴ "United States District Court -Central District of California (Case No. CV 09-0287 CBM (RZx)," *Plaintiffs: Communities Actively Living Independently and Free, Defendants: City of Los Angeles and County of Los Angeles held in Central District of California, October 12, 2010*, ed. Statement of Interest of the United States.

³⁵ Ibid.

³⁶ United States Department of Justice, under the Americans with Disabilities Act, Case Nos. DJ 204-18-91 and DJ 204-18-199.

³⁷ Broward County Commission Regular Meeting, 02/22/2011, AL-7545 Meeting Minutes, (n.d.), http://205.166.161.204/agenda_publish.cfm?mt=ALL&get_month=2&get_year=2011&dsp=agm&ag=231&seq=7545&rev=0&ln=39102#ReturnTo39102.

³⁸ Broward County Commission Regular Meeting, 02/22/11, AL-7545, Commission Meeting Document: Exhibit 4, (n.d.), http://205.166.161.204/docs/2011/CCCM/20110222_232/7545_DOJ-ADA%20-%20Exhibit%204.pdf.

Concerns stated within the document referenced included the county's lack of "experience, expertise or resources" as critical challenges that could jeopardize an individual's safety.³⁹

3. Academic Studies

One thesis that places focus on the vulnerable population was by author, Wendy K. Cameron entitled, "Public Health Planning for Vulnerable Populations and Pandemic Influenza."⁴⁰ Its primary focus is on the health aspect of the vulnerable from a pandemic influenza perspective. The literature is valuable with a great deal of knowledge and insight. However, it is more scenario-based for a pandemic influenza as it was intended and accentuates the public health planning perspective mainly.

In December 2008, a conference paper entitled, "The Ethics of Vulnerability: Risk Sliding into Disaster,"⁴¹ Naomi Zack analyzes abstract and general issues concerning ethics and vulnerable populations in disasters. Zack utilizes a good example that emergency management practitioners consistently face during disasters regarding the ethical questions of whether "we should plan to save the greatest number or plan to save all who can be saved."⁴² While the author reveals an argument that centers on women in disasters as it relates to their simultaneous vulnerability and resilience, the author's international perspective of disasters, and how the vulnerable populations are impacted, make this literature credible and valuable.

In the Human Rights in the Gulf Coast document entitled "Un-Natural Disaster,"⁴³ arguments are made for human issue rights with regard to disasters. While

³⁹ Broward County Commission Regular Meeting, 02/22/11, AL-7545, Commission Meeting Document: Exhibit 4, 2.

⁴⁰ Wendy K. Cameron, "Public Health Planning for Vulnerable Populations and Pandemic Influenza," (master's thesis, Naval Postgraduate School, 2008).

⁴¹ Naomi Zack, "The Ethics of Vulnerability: Risk Sliding into Disaster," University of Oregon, Conference: UNESCO, Division of Ethics of Science and Technology, Paris, Fr. July 4, 2011.

⁴² Naomi Zack, "Ethics of Disaster Planning," *Philosophy of Management, Ethics of Crisis*, Special Issue, Per Sandin, ed., 8, no. 2 (2009): 53–64.

⁴³ Amnesty International, "Un-Natural Disaster, Human Rights in the Gulf Coast," April 2010, <http://www.amnestyusa.org/sites/default/files/pdfs/unnaturaldisaster.pdf>.

some arguments provide value, the majority of the document is focused almost solely on the economically vulnerable with regard to health and housing issues in the post disaster environment.

B. CONCLUSION

In summary, the literature review provides an analysis of national directives, strategies and initiatives, as well as legal considerations and some examples of academic research. In the next chapter, current approaches and best practices are examined to demonstrate how certain jurisdictions are demonstrating the benefits of planning for, and with, the access and functional needs community as part of their inclusive emergency management planning. The thesis highlights promising practices for municipal levels of government for inclusive emergency preparedness planning as it pertains to those with functional and access needs within the vulnerable population.

The national strategy and policy documents provide the foundation and framework needed to bridge federal mandates and guidelines with promising practices within a rapidly changing environment. However, what is lacking from some of the literature is practical approaches specifically related to inclusive, whole community planning from a “municipal” perspective when planning for high risk, high concern incidents, such as large natural disasters or manmade terrorist events. The case study analysis, utilizing this framework, reveals recommendations for promising practices that may be implemented at a local, municipal level nationwide.

III. CASE STUDY ANALYSIS: THE EMERGENCE OF PROMISING PRACTICES

While Chapter II provided the review of relevant national directives, strategies and initiatives, it also provided insight into legal considerations for local levels of government pertaining to inclusive emergency management with regard to disaster planning for the “whole community.” These national directives, strategies and initiatives provide the background and framework for emergency management practitioners to utilize in creating subsequent strategy and policy. To address challenges identified in the documents, analysis of promising practices, with approaches utilized nationwide, help make recommendations for practical approaches for implementation nationwide. The bridging of these national policy directives with practical approaches and recommendations for implementation at the local level is the intent of this thesis. With a municipal perspective, some of the emerging promising practices examined are described through the case study analysis of 1) City of Los Angeles and Los Angeles Area of California, 2) City of Joplin, Missouri, and 3) Broward County, Florida and its municipalities.

While every community has unique challenges and characteristics, analyzing smart practices utilized by other jurisdictions can be a smart practice in itself. This analysis brought visibility into promising promises, as well as identified their challenges, and what opportunities lay ahead for progress. Through this analysis, promising practices surface that enabled the formation of recommendations in Chapter IV that may be used nationwide.

- Method of Inquiry to identify promising practices within Case Studies
 - **Collaboration:** As all communities have unique characteristics and challenges, what promising practices exist with regard to collaboration when planning for individuals with disabilities and others with access and functional needs?
 - **Identification and Communication:** How are people with disabilities and others with access and functional needs identified within the community? And what communication methods are used?

- **Leveraging Resources:** How can municipalities maximize and leverage existing, yet limited, resources? What resources are utilized to accomplish this? Are they cost effective and sustainable?

A. THE CITY OF LOS ANGELES

The City of Los Angeles lies within the county of Los Angeles (referred to as the Los Angeles Operational Area (LAOA)), and encompasses over 4,800 square miles with a population of more than 10 million people and 88 individual cities. A major portion of the Los Angeles County is unincorporated and contains approximately 8% of the population.⁴⁴

1. Question 1. Collaboration

As all communities have unique characteristics and challenges, what promising practices exist with regard to collaboration when planning for individuals with disabilities and others with access and functional needs?

In recent years, the City of Los Angeles (within the LAOA) has made great efforts to improve its emergency management program, especially with regard to inclusion of individuals with AFN.⁴⁵ In July 2012, the city signed into a contract with a non-profit firm to “improve the City’s emergency management program with the aim of strengthening Functional Needs Support Services (“FNSS”), planning against risks identified in the City.”⁴⁶ Additionally, the California Emergency Management Agency (CEMA) created the Office for Access and Functional Needs (OAFN) to “support local jurisdictions in planning for the emergency needs of people with access and functional needs, and to integrate disability needs and resources into all aspects of emergency management systems in the state of California.”⁴⁷

⁴⁴ Regional Catastrophic Preparedness Planning, “Mass Care & Shelter Guide and Plan Template,” December 15, 2010, <http://www.catastrophicplanning.org/shelter.html>.

⁴⁵ City of Los Angeles, “Professional Contract Agreement with BCFS Health and Human Services,” July 2012, 1.

⁴⁶ *Ibid.*, 6 .

⁴⁷ Los Angeles Operational Area, “Mass Care Guidance for Emergency Planners, Annex D: Transportation Management,” December 15, 2010.

Through a FEMA funded initiative called the “Regional Catastrophic Preparedness Grant Program (RCPGP),” the emergency management planning process for mass care functions was modified with the intent of strengthening programs within five areas including sheltering, feeding, bulk distribution, basic first aid, and disaster welfare information.

The RCPGP is a program that empowers a multi-jurisdiction, multi-agency collaboration through a joint planning effort. Intended to enhance regional catastrophic preparedness and continuity of operations efforts, the program is aimed at strengthening the nation against risks associated with catastrophic events. The RCPGP centers on the highest risk urban areas and surrounding regions, where its impact will have the most significant effect on collective security and resilience.

Additionally, the Regional Catastrophic Planning Team (RCPT) acts as the mechanism to facilitate administration and direction with a mission of increasing the emergency management capabilities of government, nonprofit, and community stakeholders within the Los Angeles—Long Beach and Riverside Urban Area.⁴⁸ An Executive Committee is comprised of agency representatives from the “Core Cities and Counties (Figure 1). The “Core Counties” are Los Angeles, Orange, Riverside, San Bernardino, and Ventura. The “Core Cities” are Los Angeles, Long Beach, and Riverside.⁴⁹

⁴⁸ Regional Catastrophic Preparedness Planning, “RCPT, (n.d.), <http://www.catastrophicplanning.org/rcpt.html>.

⁴⁹ Ibid.



Figure 1. The “Core Cities and Counties”⁵⁰

A promising practice that the LAOA has developed is an active website that promotes the engagement of local jurisdictions and regional partners. It is simply entitled, “How Do I Get My Jurisdiction Involved?” and illustrates a step-by-step process by which a jurisdiction can become involved with the Regional Catastrophic Preparedness Initiative.⁵¹ As illustrated in Figure 2, the Regional Catastrophic Planning Process involves a collaborative group referred to as the “Alliance.”

⁵⁰ Regional Catastrophic Preparedness Planning, “RCPT.”

⁵¹ Regional Catastrophic Preparedness Planning, “The Process: ‘How Do I Get My Jurisdiction Involved?’” (n.d.), <http://www.catastrophicplanning.org/theprocess.html>.

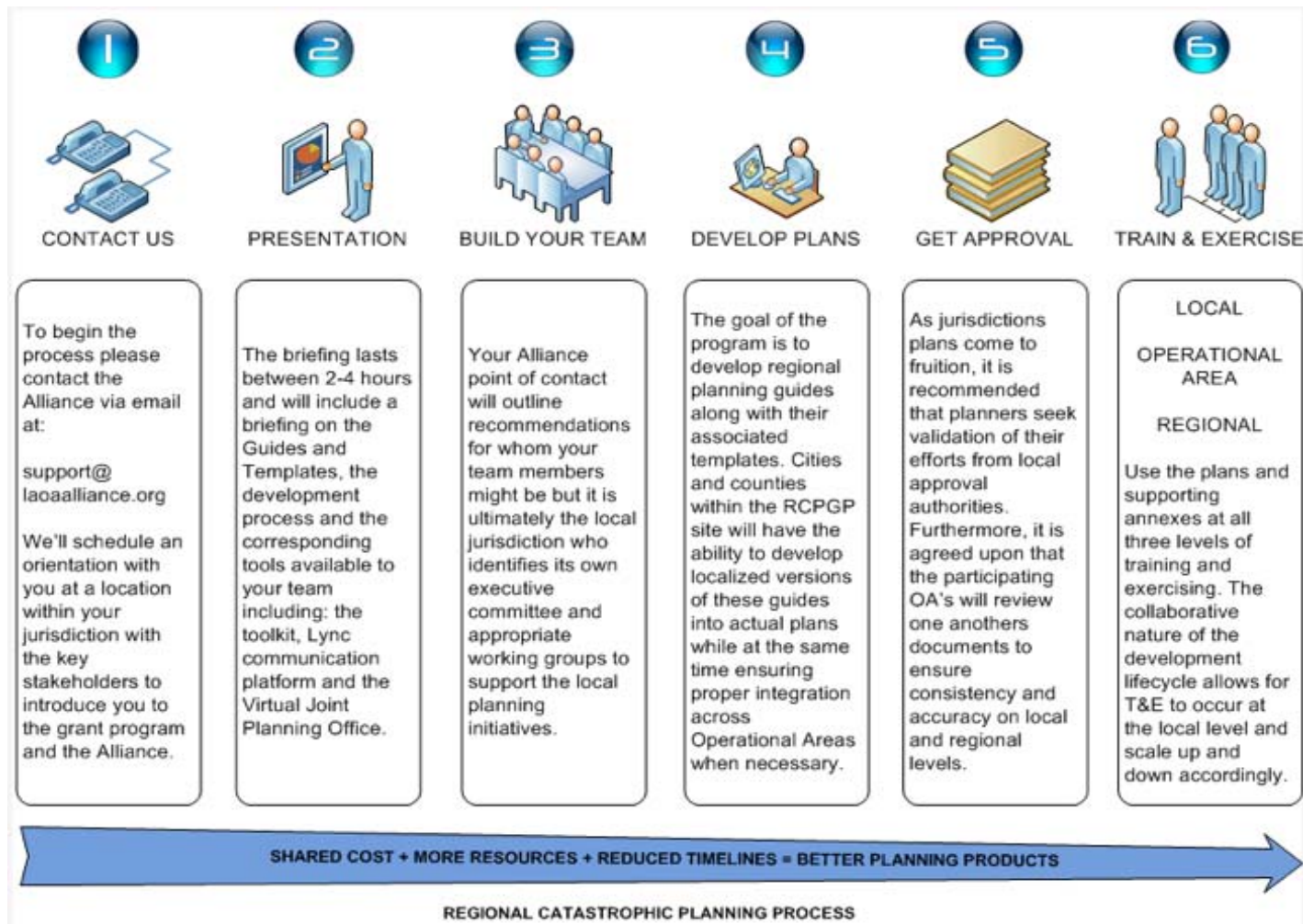


Figure 2. Regional Catastrophic Planning Process⁵²

⁵² Regional Catastrophic Preparedness Planning, "The Process: 'How Do I Get My Jurisdiction Involved?'"

The alliance is a multi-jurisdictional and multi-disciplinary partnership consisting of law enforcement, fire, emergency management, recreation and parks, and health agencies with a purpose of facilitating strategic regional catastrophic disaster planning among all disciplines and jurisdictions within the LAOA.⁵³ Contributing agencies included the following.

1. American Red Cross (Red Cross)
2. California Department of Transportation (DOT)
3. California Highway Patrol (CHP)
4. Hospital Association of Southern California (HASC)
5. Long Beach Department of Health and Human Services
6. Los Angeles Animal Services
7. Los Angeles County Department of Animal Care and Control (LACDACC)
8. Los Angeles County Department of Children and Family Services (LACDCFS)
9. Los Angeles County Department of Mental Health (DMH)
10. Los Angeles County Department of Public Health (DPH)
11. Los Angeles County Department of Public Social Services (DPSS)
12. Los Angeles County Emergency Medical Services (EMS) Agency
13. Los Angeles County Fire Department
14. Los Angeles County Metropolitan Transportation Authority (MTA)
15. Los Angeles County Office of Education
16. Los Angeles County Office of Emergency Management (OEM)
17. Los Angeles County Sheriff's Department
18. Los Angeles Department of Transportation
19. Los Angeles Emergency Management Department (EMD)
20. Los Angeles Fire Department (LAFD)
21. Los Angeles Housing Department
22. Los Angeles Police Department
23. Los Angeles Port Police

⁵³ Los Angeles Operational Area, "Mass Care Guidance for Emergency Planners," 32 (MCG I-3), n.d.

24. Pasadena Public Health Department
25. Riverside County Office of Emergency Services
26. San Bernardino Police Department
27. Simi Valley Office of Emergency Services

While the RCPP describes the over-arching structure that engages collaboration with stakeholders, two notable documents highlighted within this initiative; the “City/County Operational Area Mass Care Guide” and “Annex Template” encompass four areas that have been enhanced for mass care to be inclusive of individuals with disabilities and others with access and functional needs. The enhanced areas include 1) household pet sheltering, 2) medical and Health, 3) Non-Traditional Sheltering, and 4) Transportation Management.⁵⁴ What is especially unique and valuable about the guide and template is that they may be used by states/territories, operational areas, and their constituent local jurisdictions—including cities, as well as other organizations including emergency planners in business and industry and by nongovernmental organizations (NGOs).⁵⁵ The creation of a template that can be utilized as a multi-jurisdiction and multi-agency tool promotes standardization and engages partners with a common tool.

2. Question 2. Identification and Communication

How are people with disabilities and others with access and functional needs identified within the community? And what communication methods are used?

The “Office of Access and Functional Needs” recommends a wide breath of communication capabilities to ensure the state is capturing its entire population including people with disabilities and the AFN community. However, while the office makes recommendations, it ultimately relies on its jurisdictions to execute them as described as follows.⁵⁶

⁵⁴ Regional Catastrophic Preparedness Planning, “Mass Care & Shelter Guide and Plan Template.”

⁵⁵ Ibid., 1.

⁵⁶ California Emergency Management Agency, Office of Access and Functional Needs, “Identification of People with Access and Functional Needs,” (n.d.), <http://rimsinland.oes.ca.gov/WebPage/oeswebsite.nsf/Content/710D9E2F73772B8B8825749B00808615?OpenDocument>.

In determining the most appropriate system or procedures for your jurisdiction, it is essential that you involve individuals with diverse disability and older adult expertise and advocacy backgrounds in the planning for emergency communication. Individuals who are deaf/hard of hearing/deaf-blind and blind/low vision must be part of the decision-making process. Without the involvement of these groups of people, efforts to enhance communication for people with access and functional needs will be far from successful. To ensure redundancy in communication, partner with community-based organizations and local partners to provide emergency and evacuation information to their clientele.

Communication methods recommended include the following.⁵⁷

1. Early Warning Notification Systems
2. Emergency Alert Systems
3. Evacuations
4. Press Conferences
5. Websites
6. Press Releases

The LAOA utilizes the methods above, as well as expanded methods to ensure it is capturing individuals with disabilities and others with AFN. The LAOA and the OAFN define their access and functional needs population (formerly special needs population) as individuals who may have additional needs before, during and after an incident in functional areas, including but not limited to the following.⁵⁸

- Maintaining independence
- Communication
- Transportation
- Supervision and/or medical care

Individuals with AFN needs include the following.

- People who have a physical disability, such as limited mobility or a hearing or vision impairment

⁵⁷ California Emergency Management Agency, Office of Access and Functional Needs, “Communication,” (n.d.), <http://rimsinland.oes.ca.gov/WebPage/oeswebsite.nsf/Content/CF550341643F892B8825749B0080867F?OpenDocument>.

⁵⁸ California Emergency Management Agency, Office of Access and Functional Needs, “Identification of People with Access and Functional Needs.”

- People who are dependent on electricity and/or durable medical equipment for survival (e.g., dialysis, oxygen, etc.)
- People with mental impairment necessitating caregiver support (e.g., those with Alzheimer’s disease, mental illness, or a cognitive disability)
- Unaccompanied minors
- People who are medically fragile, recovering from a medical procedure
- People who have limited English proficiency or are non-English speaking
- The frail
- People who are transportation dependent

Planning efforts to identify who and where the AFN community is before disaster strikes is imperative for the most successful outcome. The LAOA stresses how the importance of effective pre-planning with the AFN community will address the challenge of locating individuals and determining the needs of the individual. Recommended methods to accomplish this include the following.⁵⁹

- Cataloging and coordinating with care facilities “within the jurisdiction” that serve people with AFN that include:
 - independent living centers
 - congregate care facilities
 - assisted living facilities
 - community and residential-type housing facilities
- LAOA also has a voluntary registry called the ‘SNAP’ that encourages individuals to provide information voluntarily to assist emergency response officials in planning and responding to the requirements of people with AFN. During a disaster, the information is used by integrating database and mapping technology together.^{60,61}

⁵⁹ Regional Catastrophic Preparedness Planning, “Mass Evacuation Process Guide, September 27, 2011,” MEPG-42, (n.d.), http://catastrophicplanning.org/products/LAOA_Mass_Evacuation_Guide_SEP2011.pdf.

⁶⁰ County of Los Angeles, Snap Voluntary Registry, “Specific Needs Disaster Voluntary Registry,” (n.d.), <http://snap.lacounty.gov/index.cfm?fuseaction=app.registryLogin&CFID=64513&CFTOKEN=26837073>.

⁶¹ The SNAP registry is an Internet-based system that allows residents to provide information, which will be kept confidential, to public safety officials about their access or functional needs. SNAP does not guarantee priority response to registrants; it assists emergency response officials in planning and responding to the requirements of people with access and functional needs during a disaster by integrating database and mapping technology together. Registrations can be made on an individual basis or as a group at <http://snap.lacounty.gov>. See also: County of Los Angeles, Office of Emergency Management, (n.d.), <http://www.lacounty.gov>.

- Working with NGOs to attain knowledge regarding resource needs and capabilities.
 - Call center coordination planning for public hotlines and media resources in which the public can learn what resources are available and report specific known challenges or locations of at risk populations

Communication planning for individuals with AFN is a potentially lifesaving necessity when a disaster threatens or strikes. LAOA postures with a comprehensive and expansive consideration for planning with the AFN community, involving all stakeholders. Within its planning guide, the following considerations are recommended for jurisdictional planning.⁶²

- **Involving** qualified people within the AFN community as part of the decision-making process to determine the most effective and appropriate communication procedures
- **Engaging** service providers, trusted community leaders, and representatives who can communicate effectively with the AFN community
- **Partnering** with service agencies to develop formal agreements to provide messaging
- **Collaborating** with organizations involved in emergency preparedness planning and service delivery to the community to coordinate efforts and provide training

Furthermore, LAOA proposes some unique and non-traditional methods for identifying and communicating with the AFN community to include as follows..⁶³

- Non-institutional or non-group settings, such as home hospice care, home healthcare, and personal-assistant care at home through private vendors.
- Community-based organizations
 - Senior civic organizations
 - Recreation groups
 - Homeowner associations
 - Cultural organizations

⁶² Los Angeles Regional Catastrophic Preparedness Planning, “Mass Evacuation Process Guide, September 27, 2011.”

⁶³ Los Angeles Operational Area, “Mass Care Guidance for Emergency Planners,” December 15, 2010, 32, MCG IV-26, as defined in “Guidelines for Accessing Alternative Format Educational Materials,” National Library Service for the Blind and Physically Handicapped (NLS), *The Library of Congress*, 44.

- Young Men’s Club of America and Young Women’s Club of America (YMCA, YWCA)
- Professional associations
- School-affiliated groups
- Private companies
 - Places of worship (e.g., churches, synagogues, mosques)
 - Health insurance companies
 - Utility companies
 - Ethnic media outlets
 - Transportation providers
 - Employers
- Private, philanthropic, and benevolent organizations
 - Kiwanis
 - Lions Club
 - Rotary Club
 - Elks, Moose, and Eagle clubs
 - Private foundations

Lastly, specific communication methods identified within the Los Angeles Operational Area document “Mass Care Guidance for Emergency Planners” include the following.⁶⁴

- Picture boards and talk boards that are manual or electronic devices using viewable pictures and/or letters to communicate in situations in which speech, auditory impairment, or limited language proficiency hinder communication.
- Alternative format materials that include materials, such as Braille, audio cassette, large print, computer diskette, CD-ROM, or human readers to assist those with disabilities.

⁶⁴ Los Angeles Operational Area, “Mass Care Guidance for Emergency Planners,” December 15, 2010, 32, MCG IV-26, as defined in “Guidelines for Accessing Alternative Format Educational Materials,” National Library Service for the Blind and Physically Handicapped (NLS), *The Library of Congress*.

3. Question 3. Leveraging Resources

How can municipalities maximize and leverage existing, yet limited, resources? What resources are utilized to accomplish this? Are they cost effective and sustainable?

Leveraging limited resources when a disaster strikes is critical to maximizing the success of response and recovery efforts. According to California's Office of Access and Functional Needs, local jurisdictions are encouraged to "leverage existing disability and older adult service systems, such as in-Home Supportive Services, Meals-on-Wheels and Para transit, as opposed to creating new registries."

Information can be attained from a variety of sources to provide the comprehensive information necessary to inform emergency planning and response. This information can be utilized to maximize the best use of resources. One example of how LAOA accomplishes this goal is illustrated using "Evacuation Intelligence." Evacuation intelligence utilizes information it collects on where individuals with access and functional needs live and work for evacuation planning. Guidance for jurisdictions to develop this intelligence includes the following.⁶⁵

- Plan with ADA mandated transportation providers, health professionals, and service organizations to identify existing databases of individuals within your jurisdiction likely to require evacuation assistance.
- Identify and map licensed care facilities and congregate senior housing complexes.
 - Consider voluntary registries as a possible resource.
 - Identification of accessible transportation resources is important to speeding deployment of resources that meet the particular needs of vulnerable populations. Fleets that can be particularly helpful where access and functional needs populations are concerned include as follows:
 - Access services
 - Regional center vendors
 - Medicaid transportation providers

⁶⁵ Los Angeles Operational Area, "Mass Care Guidance for Emergency Planners," December 15, 2010, MCG D-174, referencing, Department of Homeland Security, Federal Emergency Management Agency, "After-Action Report—October 2007 Wildfires City of San Diego Response," City of San Diego, October 1, 2007, <https://www.llis.dhs.gov/docdetails/details.do?contentID=30685> (Login required).

- Senior centers
- School district transportation systems
- Airport car rentals and shuttle buses/vans
- Healthcare center vendors
- NGO transportation providers (e.g., United Cerebral Palsy, regional and developmental centers and their vendors, adult day healthcare, senior centers, etc.)

Notably, LAOA warns that during a catastrophic evacuation, when resources become scarce, the overseeing organization, in conjunction with the operational area's emergency management department, should review and identify agreements that promise the same resource to multiple sources. Resource providers should be required to maintain or develop COOP plans to ensure no gap in service occurs.⁶⁶

4. Conclusion: Promising Practices in Collaboration, Communication and Maximizing Resources

LAOA's "Alliance" is an exemplary example of a promising practice that illustrates the inclusive definition and value of collaboration. It promotes a network for relationship building that flourishes within this collaborative environment. Additionally, it stimulates and leverages resources by working together toward common goals that equate to budget savings. By utilizing shared resources within and outside of the regional area, the initiative is also able to reduce timelines.

The City of Los Angeles, through an order of the U.S. District Court, has engaged a consultant to revise the city's emergency plans to make the plans compliant with the ADA.⁶⁷ The scope of work includes a multi-phased project to enhance integrated planning as it pertains to FNSS. It is intended to identify gaps in existing FNSS planning, revise emergency plans and make recommendations to identify resources to achieve solutions, train stakeholders and make recommendations for the implementation of new

⁶⁶ Regional Catastrophic Preparedness Planning, "Mass Evacuation Process Guide, September 27, 2011," MEPG-46, (n.d.), http://catastrophicplanning.org/products/LAOA_Mass_Evacuation_Guide_SEP2011.pdf.

⁶⁷ City of Los Angeles, "Professional Contract Agreement with BCFS Health and Human Services," 1.

FNSS procedures into the city's emergency plans.⁶⁸ The outcome of this project may provide a great value to other local governments nationally and the people they serve.

Additionally, the city's emergency management programs reveal emerging promising practices inclusive of individuals with disabilities and others with access and functional needs through the creation of the following.

- The LAOA's "Alliance"
- The "City/County Operational Area Mass Care Guide" and "Annex Template"
- Specific Needs Disaster Voluntary Registry (SNAP)
- The pending outcome of the project to evaluate current emergency plans

The City of Los Angeles provides a tremendous benefit as a case study for all levels of government. On a national and local level, this case study helps answer the main questions posed in this thesis that identify promising practices for inclusive emergency management pertaining to collaboration, identification and communication, and leveraging of existing resources.

B. CASE STUDY—CITY OF JOPLIN, MISSOURI

All communities are unique and no two disasters are the same. Through the pain and suffering experienced with every disaster, this nation is taught new lessons on how to mitigate the impacts of future disasters.

On May 22, 2011, the single deadliest tornado known in U.S. history (since record keeping began in 1950), struck Joplin, Missouri.⁶⁹ Joplin is a city with a population of over 50,000 with approximately 1,500 people per square mile.⁷⁰ According to National Weather Service Director, Jack Hayes, PhD., 159 people died and more than

⁶⁸ City of Los Angeles, "Professional Contract Agreement with BCFS Health and Human Services," 10.

⁶⁹ U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, "NWS Central Region Service Assessment Joplin, Missouri, Tornado—May 22, 2011" Central Region Headquarters Kansas City, MO, July 2011, ii.

⁷⁰ Ibid.

1,000 were injured despite advance tornado outlooks, watches and warnings.⁷¹ The tornado rated EF-5, the highest category on the Enhanced Fujita Scale, with winds exceeding 200 mph. Its path of devastation crossed twenty-two (22) miles on the ground. The lead time given by the National Weather Service was twenty-four (24) minutes. Mercy St. Johns Hospital incurred a direct impact that lasted 45 seconds.

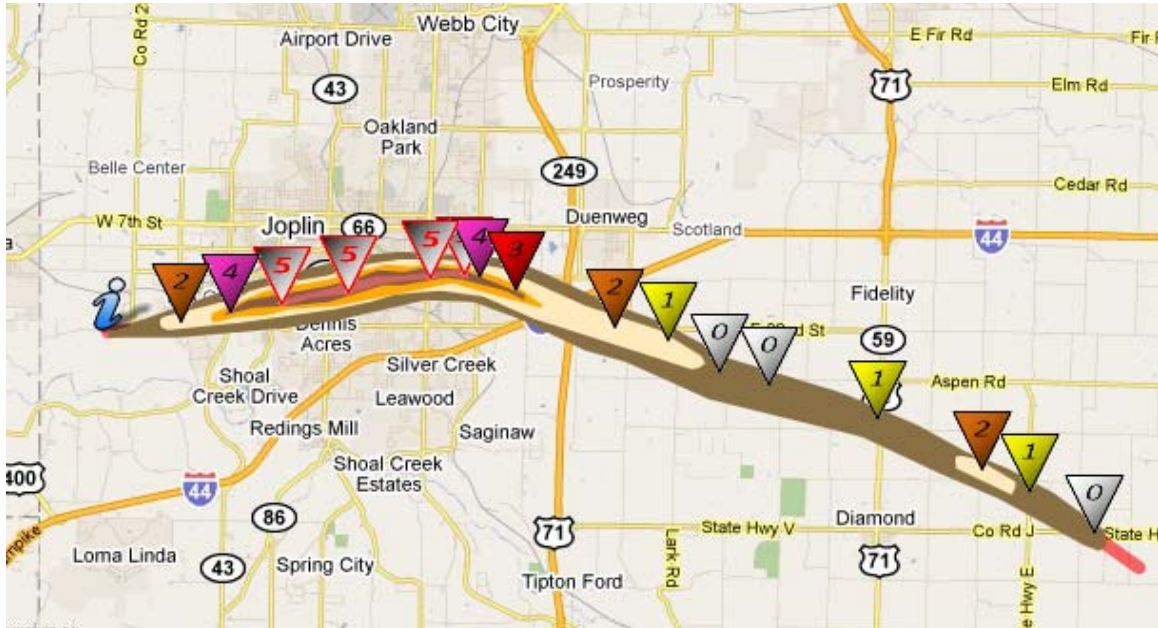


Figure 3. Storm Track and Intensities for May 22, 2011, Joplin Tornado⁷²

The community impacted within the path of the tornado suffered catastrophic damage to lives and property. Recovery will take months and possibly years before normalcy is fully restored. This case study was used to determine how individuals with AFN were impacted and what, if any, promising practices emerged from this devastating disaster with respect to collaboration, identification and communication, as well as how resources were leveraged.

⁷¹ National Oceanic and Atmospheric Administration, National Weather Service, "Joplin Tornado Offers Important Lessons for Disaster Preparedness," September 20, 2011, http://www.noaanews.noaa.gov/stories2011/20110920_joplin.html.

⁷² Ibid., 7.

In a document evaluating the medical response to the Joplin Tornado,⁷³ the EMS community provided an after action report with considerations for those with disabilities or other functional medical needs impacted by a disaster. Since no one was in a shelter before the tornado occurred, an analysis of what occurred before, during and after the tornado struck provides an ideal case study in which to analyze the considerations made or not made for individuals with AFN.

1. Question 1. Collaboration

As all communities have unique characteristics and challenges, what promising practices exist with regard to collaboration when planning for individuals with disabilities and others with access and functional needs?

From the National Weather Service's (NWS) perspective, this tornado was considered a "warned event" meaning that advance notice of the tornado was given, critical information was communicated and received, and most people sought the best shelter available to them. It is the belief that the timely actions of a collaborative team called the "weather enterprise" (NWS, media, emergency management), and the eventual response of local businesses, churches, schools, and the general public undoubtedly saved many lives.⁷⁴ The leaders of the community who work with people with disabilities and individuals with AFN echoed this belief. The Independent Living Center in Joplin, Missouri said that one of the key reasons that recovery went as smooth as possible was because of the collaboration within the community that had started long before the tornado devastated the community.⁷⁵ Additionally, a "Memorandum of Understanding for Collaboration" between the National Center for Independent Living (NCIL) and FEMA proved to pave the way for better relations on the ground.⁷⁶

⁷³ Medical Response (August 2, 2011), Joplin Tornado, May 22, 2011.

⁷⁴ U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, "NWS Central Region Service Assessment Joplin, Missouri, Tornado—May 22, 2011," iii.

⁷⁵ FEMA 'Think Tank,' "Joplin TILC Post-Tornado Thoughts and Suggestions," July 2012, 1.

⁷⁶ Ibid.

Due to the magnitude of the tornado and high loss of life, the NWS developed an assessment team to review and evaluate what could be learned from this event.

- An assessment team conducted a collaborative analysis in an effort to learn what could be done to reduce future fatalities from tornadoes. The team examined relevant issues including internal NWS warning operations, dissemination strategies and public warning response. To accomplish this effort, almost 100 interviews were conducted involving survivors, local businesses, media, emergency management, NWS staff, city officials, and other stakeholders.⁷⁷

2. Question 2. Identification and Communication

How are people with disabilities and others with access and functional needs identified within the community? And what communication methods are used?

In no-notice, no-warning disasters, people with disabilities and others with access or functional needs are especially at a disadvantage, as they typically require additional time and/or assistance when seeking shelter from a tornado, as an example. Joplin, Missouri realized a significant number of fatalities within vulnerable populations, such as the elderly, infirm, or disabled.⁷⁸ However, prior to the disaster, Joplin's TILC had been diligent about creating and maintaining good disaster plans with their consumers including their location, as well as their emergency needs lists, which helped in tracking consumers after the tornado.⁷⁹ However, with regard to the FEMA application/assistance process, it was identified that outreach could be improved with the AFN community. Two of the main reasons identified included⁸⁰ 1) individuals feared that if the "government" knew the conditions in which they were living, they would be placed in a nursing home, and 2) deaf people were initially advised to use a TTY machine at the disaster recovery center to apply for assistance over the phone rather than through an interpreter.

⁷⁷ U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, "NWS Central Region Service Assessment Joplin, Missouri, Tornado—May 22, 2011," iii.

⁷⁸ Ibid., 10.

⁷⁹ FEMA 'Think Tank,' "Joplin TILC Post-Tornado Thoughts and Suggestions, 1, in coordination with Joplin, Missouri, The Independent Living Center, Inc., (n.d.), <http://www.ilcenter.org/>.

⁸⁰ Ibid., 2.

The NWS identified a best practice stating that NWS outreach and severe weather safety education programs should continue to broaden, emphasize and assist area businesses with severe weather safety action plans via the “StormReady: program or other similar mechanisms and that pre-planning and outreach should also be extended to vulnerable populations in nursing homes, group homes, hospitals, and so forth.⁸¹ Expanding the utilization of the “StormReady” program would enhance outreach and integrating with vulnerable populations in nursing homes, groups homes, hospitals, and forth. “StormReady” is a program that prepares communities with the communication and safety skills needed to save lives and property before and during the event while also assisting community leaders and emergency managers with strengthening local safety programs.⁸²

3. Question 3. Leveraging Resources

How can municipalities maximize and leverage existing, yet limited, resources? What resources are utilized to accomplish this? Are they cost effective and sustainable?

Joplin, Missouri is an example of how a community collaborated before and after disaster struck. The agencies that worked together after the disaster knew each other before the disaster and had pre-established relationships that “paved the way for better relations on the ground.”⁸³ According to FEMA’s Office of Disability and Coordination, TILC acted as an instrumental player in coordinating the long-term recovery efforts of Joplin for people with disabilities and individuals with access and functional needs. Some of the agencies working together included Community Organizations Active in Disaster (COAD), the Emergency Healthcare Coalition, the City Housing Department, and the Community Alliance, the American Red Cross, as well as numerous others. Several members belonged to several boards simultaneously which is thought to have fostered a

⁸¹ U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, “NWS Central Region Service Assessment Joplin, Missouri, Tornado—May 22, 2011,” 10.

⁸² NOAA, National Weather Service, “StormReady!,” (n.d.), <http://www.stormready.noaa.gov/>.

⁸³ FEMA ‘Think Tank’ “Joplin TILC Post-Tornado Thoughts and Suggestions, 1, in coordination with Joplin, Missouri, The Independent Living Center, Inc.

network to properly prioritize and assign resources.⁸⁴ Another key to resource assignments was the early development of the Multi-Agency Resource Center (MARC). During the first three or four weeks, agencies worked together out of the same space, which was one large building to provide a one-stop-shop center for resource requests. Additionally, the building (or center) provided a space for agencies to set up if their building no longer existed.⁸⁵

Once the MARC and shelter were established, intake booths acted as a way to connect with people and provide access resources to individuals and other agencies. Therefore, the intake booths acted as force-multipliers to supply information and resources throughout the community. For long-term recovery, a Disability/Senior Disaster Committee was established to ensure people with disabilities and AFN have their needs met. The development of a Housing Task Force was also instrumental for the long-term housing needs of people with disabilities and access and functional needs. The task force was comprised of personnel from the City of Joplin, FEMA, State Emergency Management Agency (SEMA), Housing and Urban Development (HUD), and other entities to determine temporary housing priorities. Once a disaster occurs, one of the critical tools for monitoring individuals becomes their emergency kits. These kits help them maintain important emergency contact and medical information for themselves. St. John's hospital had normally provided that service but was unable to due to the damage. Volunteers were utilized to help create and maintain the kits.⁸⁶

An important resource in most weather related incidents is the NWS. As a service that the described "weather enterprise" relies on to bestow storm-based warnings through local dissemination systems. However, what occurs when these systems become outdated or do not work according to planned? While the weather enterprise was generally successful in communicating the threat in a timely manner for the Joplin tornado, current communication and dissemination mechanisms are not seamless and are somewhat

⁸⁴ FEMA 'Think Tank' "Joplin TILC Post-Tornado Thoughts and Suggestions, 1, in coordination with Joplin, Missouri, The Independent Living Center, Inc.

⁸⁵ Ibid.

⁸⁶ Ibid., 3.

antiquated, which can lead to untimely gaps and confusion during dissemination.⁸⁷ Many of the current warning dissemination systems are not fully compatible with specific warning information provided by storm-based, warning polygons. Upon this finding, the NWS plans to continue to collaborate with partners who disseminate weather information using technologies, such as compatible advance GPS-based warning dissemination systems. Additionally, NWS anticipates cultivating the use of mobile and social communications technologies such as the following.⁸⁸

- Text messaging
- Smart phone apps
- Commercial Mobile Alert System
- Technological upgrades of the Emergency Alert System (EAS) and NWR.
- Social Media outlets such as Facebook (utilized by both the public and the media)

4. Conclusion

Responding to warnings is not a simple act of stimulus-response; rather it is a non-linear, multi-step, complex process. Relationships between false alarms, public complacency, and warning credibility are highly complex as well. While residents of Joplin addressed these in terms of local warning siren systems, they also relate directly to the content and skill of NWS warnings and the weather enterprise as a whole.⁸⁹ Many of the key findings within the report involved societal aspects of warning response and risk perception. Responding to warnings is not a simple act of stimulus-response; rather it is a non-linear, multi-step, complex process. Relationships between false alarms, public complacency, and warning credibility are highly complex as well.⁹⁰ The NWS will strive to collaborate with partners throughout the weather enterprise to provide a better-coordinated warning message. Guidance should be developed to assist partners in the

⁸⁷ U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Weather Service, “NWS Central Region Service Assessment Joplin, Missouri, Tornado—May 22, 2011,” 11.

⁸⁸ Ibid., 12.

⁸⁹ Ibid., 10.

⁹⁰ Ibid.

development of local warning system and siren strategies that work in conjunction with NWS warnings rather than independent of them. Inclusive planning for individuals with disabilities and others with AFN will need to be part of collaboration team that strengthens communication tools.

By developing the collaboration team to include people with disabilities and others with AFN, warning systems will receive the needed input to advance the technologies appropriately to save more lives. As indicated, during the Joplin Tornado, many who lost their lives were those with disabilities and/or AFN. Integrating these individuals within the collaboration process will enhance these technologies so that the “whole-community” is integrated. Enough cannot be said regarding the value of collaboration. Throughout this case study, relationship-building, establishment of networks and agreements created a dividend in returns as it relates to mitigation, preparedness, response and recovery. Additionally, the evolvement of mobile and social media communication tools is evident. As technology evolves and public use increases, these methods will transcend as invaluable communication tools. Only building on these successes will ensure continued success that, ultimately, pays a return on the investment made and acts as a force multiplier within the community.

C. BROWARD COUNTY

Broward County is vulnerable to a wide range of natural and manmade hazards that threaten life, property and the environment. Between 1965 and 2011, Broward County received 16 presidential disaster declarations due to the impacts caused by hurricane, flood, wildfire, tornado, and freeze events.⁹¹

⁹¹ Broward County Enhanced Local Mitigation Strategy, July 2012, 60.

Event	Declaration Date	Declaration Number
Hurricane Betsy	09/14/1965	FEMA-209-DR
Freeze	03/15/1971	FEMA-304-DR
Hurricane Andrew	08/24/1992	FEMA-955-DR
Tornadoes, Flooding, High Winds & Tides, Freezing	03/22/1993	FEMA-982-DR
Severe Storms, High Winds, Tornadoes, and	02/20/1998	FEMA-1204-DR
Severe Storms, High Winds, Tornadoes, and	03/09/1998	FEMA-1195-DR
Extreme Fire Hazard	06/18/1998	FEMA-1223-DR
Hurricane Irene	10/20/1999	FEMA-1306-DR
Heavy Rains and Flooding	10/04/2000	FEMA-1345-DR
Severe Freeze	02/06/2001	FEMA-1359-DR
Hurricane Charley and Tropical Storm Bonnie	08/13/2004	FEMA-1539-DR
Hurricane Frances	09/04/2004	FEMA-1545-DR
Hurricane Jeanne	09/26/2004	FEMA-1561-DR
Hurricane Katrina	08/28/2005	FEMA-1602-DR
Hurricane Wilma	10/24/2005	FEMA-1609-DR
Tropical Storm Fay	8/	FEMA-3288-DR

Figure 4. Presidential Disaster Declarations for Broward County (1965–September 30, 2011)⁹²

Emergency management must face a number planning challenges when planning inclusively for the whole community. In addition to being in a high threat area for disasters, Broward County is also the second most populous county in the state of Florida with a population of 1,748,066 people.⁹³ According to the Florida Department of Health, when considering individuals with AFN, 14% (243,998) of Broward County’s population is 65 years or older and 6% (104,570) have one or more disabilities.⁹⁴ Additionally, senior citizens account for a significant number of individuals living in hurricane evacuation areas. The 2000 Census revealed that some 45,520 residents living in hurricane evacuation zones were age 65 and older, which equates to approximately 30.6% of all persons living in evacuation zones.⁹⁵

⁹² Federal Emergency Management Agency through the Broward County Enhanced Local Mitigation Strategy, 61.

⁹³ 2010 Census.

⁹⁴ Florida Department of Health, “Vulnerable Population Profile, Broward County, Florida, 2010–2011,” (n.d.), http://www.doh.state.fl.us/demo/bpr/PDFs/Broward_2011.pdf.

⁹⁵ Broward County Enhanced Local Mitigation Strategy, July 2012, 21.

Since Broward County and its encompassing municipalities have a significant number of individuals with disabilities and others with access and functional needs, it is important that emergency managers assess and plan for their community's needs. As in the two previous case studies, three questions of inquiry were used, pertaining to Broward County and its encompassing municipalities, to determine what promising practices exist for effective emergency management planning for individuals with disabilities and others with AFN.

1. Question 1. Collaboration

As all communities have unique characteristics and challenges, what promising practices exist with regard to collaboration when planning for individuals with disabilities and others with access and functional needs?

Within Broward County, efforts are being made that will empower municipalities to plan effectively for the individuals with disabilities and others with AFN, as part of a collaborative approach within the county. After Hurricane Wilma (in 2005), one of the primary initiatives created to identify the vulnerable population (now known as AFN) in Broward County, Florida is called the "Vulnerable Population Registry" (VPR). The registry is a voluntary system initially developed to capture information such as the following.⁹⁶

- Individuals who require routine treatments administered by a physician's office, clinic or hospital (such as dialysis), are a home healthcare client, or require oxygen supplies.
- Requirements for service animals
- Emergency contact information inside and/or outside the area.
- Location Information (utilizing geographic information system (GIS) technology) with regard to mapping evacuation areas and decisions to evacuate or stay.
- Mobility—Example: Dependence on elevator, wheelchair, etc.
- Hearing or site impaired

⁹⁶ Broward County, "Emergency Preparedness for Vulnerable Residents," (n.d.), <http://www.broward.org/atrisk>.

However, the definition of who is ‘vulnerable’ can be broad, far reaching and consistent agreement about the definition does not exist. Who is vulnerable? The answers are as broad and wide as there are jurisdictions and agencies. For purposes of this case study for Broward County, Florida and its municipalities, the VPR definition is referenced and described as follows.

Vulnerable Population Registry Definition:

The registry allows people who are disabled, frail or have health issues to register in advance with their city so that emergency workers may plan a better response to vulnerable residents in a recovery effort following a hurricane or other emergency. **Each city** may use the Vulnerable Population Registry list in a different way, based on their city’s recovery effort. The Vulnerable Population Registration was designed as a **joint partnership** between all municipalities and Broward County to assist emergency responders to better plan for future recoveries from hurricanes and other disasters. Registering into the database should not be considered as a guarantee that you will be provided services or be placed on a priority list for emergency responders; however, it will help us to be better prepared to respond after a disaster.⁹⁷

While the VPR initiative was created with the best of intention and is evolving to be a useful planning tool, a number of issues raise concern. Outstanding questions regarding who should register and what services may be provided exist. Additionally, individuals may ask, what value is there in providing one’s health and personal information in a registry that does not guarantee assistance or give a priority? Why does each city use the information in its own way? And “how,” specifically, will health and personal information be used? Furthermore, the county has a “Special Medical Needs Registry” that adds an additional level of confusion. An individual may ask, Should I register for both? The answers regarding how the county and its municipalities utilize these registries is not standardized, and thus, varies from city to city, which presents challenges for emergency management practitioners and may lend itself to the reasoning why the vulnerable population registry is not being utilized by the AFN community as much as emergency management practitioners had anticipated.

⁹⁷ Broward County, “Emergency Preparedness for Vulnerable Residents.”

In accordance with recommendations of Emergency Management chapter of the ADA Best Practices Tool Kit for State and Local Governments, Broward County's initiative to create the 'VPR was basically a first step, first-phase approach to inclusive, mass care planning. At this time, the tool kit does not provide the authority nor the guidelines for implementation. However, in 2011, the Broward County Emergency Coordinating Council (ECC) revived the 'VPR sub-committee, which had been previously sunset. This action produced a collaboration group that consists of stakeholders including Broward County and its thirty-one (31) municipalities with representatives from housing, planning, emergency management, fire rescue, law enforcement, the health department, advocacy leaders, health and human services and others.

Recently proposed is the idea of broadening the scope of the committee beyond the VPR registry to include more aspects of mass care planning for those with disabilities. As the VPR is only one aspect or one tool that can be utilized for inclusive mass care planning, it does not currently address other needs required for inclusive mass care planning. The recent proposal was made within the sub-committee to change the name of the "Vulnerable Population Subcommittee" to "Functional Needs Support Services Subcommittee" to begin to match the national direction better as the nation moves away from using terms, such as "vulnerable" and "special needs."⁹⁸ Broadening the scope of the sub-committee would address emergency management planning challenges for municipalities related to people with disabilities and individuals with access and functional needs. Ideas discussed to broaden the scope of the subcommittee included, 1) promising practices for inclusive emergency management including approaches for identification of individuals with functional and access needs or disabilities, 2) effective communication methods, 3) interim (post-storm) sheltering guidelines, and 4) efficient utilization of resources.

However, while the group agreed the need exists to address the above- mentioned approaches, challenges have arisen. As a relatively new sub-committee that reports to the

⁹⁸ Broward County, Vulnerable Population Registry Sub-Committee of the Emergency Coordinating Council (ECC), Meeting Minutes, May 2012.

over-arching ECC, it was determined that the group needed to first establish its mission and goals with approval from the ECC before expanding its scope. It was agreed that approval from the overarching council would be required.

The points discussed included the following.⁹⁹

- What is the mission of the VPR subcommittee?
- Should the subcommittee focus solely on the VPR application?
- If the focus of the sub-committee included AFN, the makeup of the group could change, requiring more appropriate representation from the municipalities.
- Should the subcommittee incorporate a goal of getting all the municipalities on board with using the VPR application, or just proceed, as representation is limited?

The subcommittee decided to develop a current mission statement and goals for the group and agreed upon the following.¹⁰⁰

Mission Statement: “To establish, evaluate and maintain a registry of the Broward County Vulnerable Population, in preparation for, during or after a community emergency.”

Ultimately, the subcommittee determined not to broaden the scope at this time but agreed upon the following goals.

- Develop a resource to cities to utilize within their response plans
- Ensure the database is effective and efficient
- Encourage municipality and county participation
- To regularly evaluate the effectiveness of the current registry and report the findings back to the ECC annually.
- Best practice sharing

2. Question 2. Identification and Communication

How are people with disabilities and others with access and functional needs identified within the community? And what communication methods are used?

⁹⁹ Broward County, VPR Sub-Committee Meeting, June 4, 2012 Meeting Minutes, Government Center.

¹⁰⁰ Ibid.

Recognizing the Broward County VPR as an evolving and promising practice within the county, identification and communication involve ongoing outreach and awareness education within each of the communities.

As stated within the county definition, the VPR is for residents at risk due to disability, frailty or health issues, regardless of age, *who elect to stay at home* in the event of a hurricane or other emergency.¹⁰¹ After a disaster, many individuals may not have the ability to leave their apartments or receive the assistance they need. The VPR is a database of individuals who voluntarily register themselves in an effort to give municipalities a planning tool to assist individuals with AFN and disabilities better before a disaster strikes.

Recently, the VPR sub-committee determined that the category options listed as follows would be used with the registration process to identify individuals with disabilities and others with AFN to reduce the category list from thirty-four (34) down to ten (10) for the purpose of enhancing emergency planning capability levels for municipalities.¹⁰²

1. Mental Health Issues
(Alzheimer's, Dementia, Behavior or Emotional issues, Developmental disabilities, Autism)
2. Respiratory/Oxygen Dependent
(Chronic obstructive pulmonary disease (COPD), Pulmonary disease)
3. Dialysis Performed In House
4. Dialysis Performed At Dialysis Facility
5. Electrically Dependent
(Electric wheelchair, continuous positive airway pressure (CPAP) apnea monitor, Nebulizer, Oxygen concentrator, Ventilator/Respirator)
6. Debilitating Heart Condition
7. Ice/Cooling Method for Medications
8. Vision Impaired

¹⁰¹ Broward County, "Vulnerable Population Registry," (n.d.), <http://www.broward.org/registry/>.

¹⁰² Vulnerable Population Registry Sub-Committee, VPR Categories for Registration, as discussed at VPR sub-committee meeting, April 9, 2012.

9. Hearing Impaired
10. Mobility Issues
(Walker, Wheelchair Or Need Assistance With Moving)

The VPR was designed as a joint partnership between all municipalities and Broward County to assist emergency responders to plan for future recoveries from hurricanes and other emergencies better. However, “how” a municipality utilizes this information, or “if” they utilize the information, varies. Thirty-one (31) municipalities each have varying capability levels and unique processes for communicating and planning with their registrants. Therefore, while the registry is listed on the county website, it may give the perception that the county is responsible for the database. Only at a technical level for the registry’s application is the county responsible, which includes technical maintenance and enhancements, such as agreed upon software changes. The responsibility remains with each municipality and the way each uses the database varies. The county’s VPR website states, “depending on the city, the information may be requested for use by emergency responders for the purpose of evaluating your needs.” A statement advising registrants that registering in the database should not be perceived as a guarantee that services will be provided nor should prioritization be expected also exists. Furthermore, the VPR is not a method to register for a special needs shelter nor for evacuation transportation.

The VPR is used by municipalities as a planning tool to help them better prepare for an emergency. Identification of the individuals with disabilities and others with AFN is important for emergency planning. Once identified, some municipalities are utilizing this information as a tool for communicating and performing outreach as follows.

- Outreach through phone communication and/or personal visits.
 - For program awareness and education
 - To verify registry information and gather additional information regarding disaster preparedness planning (evacuation, medical needs, etc.)
 - To make a personal connection between the registrant and municipal representative (emergency management, fire rescue, law enforcement, volunteer, etc.)

- Sharing promising practices regarding communication methods for:
 - Warning procedures (alerts and the “all clear”) are timely and in appropriate languages/formats.
 - Communication with media outlets (newspapers, radio, community groups)
 - Appropriate language/translation services
 - Signage

3. Question 3. Leveraging Resources

How can municipalities maximize and leverage existing, yet limited, resources? What resources are utilized to accomplish this? Are they cost effective and sustainable?

A topic of continued concern for emergency management regards how to best leverage existing, yet limited, resources. The collaboration of the VPR sub-committee acts as a valuable resource for municipalities and other stakeholders to collaborate on how best to utilize and/or share resources. Information gained through the sub-committee allows for the sharing of best practices and approaches. Some municipalities are utilizing the registry to gain information about existing resources outside of the limited resources of government as described below.

- Resource Identification
 - Determining what services the AFN community uses on a regular basis. For example, meals-on-wheels, in home health care, health care providers AFN community affiliations, faith based organizations.
 - Collaborate—By identifying the daily or regular services and providers used, emergency management can include these providers as part of their ‘whole-of-community’ network planning.
 - Utilizing this network of existing providers, emergency management can help ensure resources are maintained and prioritized to continue as much as possible.
 - This practice enables emergency management to prioritize resource needs to maintain the services needed, the potential for cascading effects can be mitigated.

Furthermore, a developing idea with the registry, in use by some of municipalities already, is to pre-register their communities' partners and resource providers, such as the following.

- Advocacy leaders
- Independent Living Centers
- Nursing homes
- Dialysis Centers or health care providers
- AFN service providers.

In a "Select Bipartisan Committee to Investigate the Preparation for Response to Hurricane Katrina," Former Speaker of the House, Newt Gingrich, spoke about the need to move the government to an "entrepreneurial" model and away from its current "bureaucratic" model to cause the government to move with Information Age speed and effectiveness.¹⁰³ By including these partners and providers with locations within the VPR, emergency management is able to pre-identify these partners, providers and locations that may require a potentially higher level of assistance when an incident occurs. Performing this "needs assessment," in advance of an incident, will enable the most effective response possible.

Moreover, the municipal partnership with the county enhances this effectiveness. Proposed goals of the county and municipal partnerships include the following.¹⁰⁴

- Teaching and empowering local communities in creating and implementing inclusive emergency management plans
- Ensuring that the community is prepared and resources are available by providing tools such as:
 - FNSS resource needs checklist
 - Communications procedures for diverse communication needs

¹⁰³ Naval Postgraduate School Center for Homeland Defense and Security, Homeland Security Digital Library, Newt Gingrich Former Speaker of the House, "Government Reform Subcommittee," in *House Select Committee* (Failure of Initiative: Select Bipartisan Committee to Investigate the Preparation for Response to Hurricane Katrina), (n.d.), <https://www.hsdl.org/?view&did=460325>.

¹⁰⁴ Broward County VPR Sub-Committee Meeting, June 4, 2012.

- VPR support
- FAST for shelter support
- Encouraging community preparedness and empowerment

Procedures pertaining to these goals are progressing and evolving as municipalities ask familiar resource questions regarding what resources are available? How are these resources requested? And how quickly can they be expected?

4. Conclusion

Within Broward County, including its municipalities, much progress has been made and continues to be made with regard to planning for individuals with disabilities and others with AFN. It is evident that associated initiatives, such as the VPR, are continuing to evolve. To continue the progress, a continued effort will need to address the mass care short-term and long-term goals outlined, and can most effectively be achieved through an Interagency Committee responsible for addressing mass care emergency planning issues that incorporate individuals with disabilities and others with AFN. The committee will need to have the appropriate, responsible representation with decision-making authority at a policy level. However, the committee should include all affected or interested stakeholders. In a “Select Bipartisan Committee to Investigate the Preparation for Response to Hurricane Katrina,” Former Speaker of the House, Newt Gingrich, stated, “Implementing policy effectively is ultimately as important as making the right policy.”¹⁰⁵

Another challenge lies with the lines of authority and responsibility that often become blurred when speaking of “local government.” What does local mean? In most cases, higher national and state level perspectives and plans refer to local government as the county, not the municipality, which leads to blurred lines of responsibility. That situation may work for rural areas. In rural areas, it is normal that the county has the primary responsibility for all phases of emergency management. However, the more populous an urban area becomes, the more the county must rely on their municipalities to

¹⁰⁵ Broward County VPR Sub-Committee Meeting, June 4, 2012.

plan for and integrate all phases of emergency preparedness, which is especially true in southeast Florida, Broward County that has a population of over 1.7 million and thirty-one (31) municipalities.¹⁰⁶

Within Broward County, lies the City of Pompano Beach that is the author's jurisdiction. By itself, it holds a population of approximately 100,000. Within the city, there are 222 high-rise buildings. According to the 2000 census data for the city, over 19,000 (estimate 19%) have a disability that is a staggering number for which emergency management to plan. Additionally, due to privacy laws, the city is not able to attain detailed information pertaining to those 19%, which creates an additional challenge for planning and was the impetus for the creation of the VPR. Although a large percent of this number is not registered in the VPR, a large number of these individuals may be considered or become vulnerable and may require additional assistance before and after a disaster. After Hurricane Wilma came through South Florida in October 2005, many individuals were left without electric power and were unable to use the elevator or their medical devices or medicine that depended on it, which caused them to become isolated to their condominiums, also commonly referred to as "shut-ins." The city was not able to track the number of individuals who required this assistance due to the efforts of multiple agencies that did not coordinate through the City's Emergency Operations Center (EOC). Many required food and water delivery and many others required frequent medical attention. Only a small percent pre-register at a special needs shelter and less than 1% register with the vulnerable population registry.¹⁰⁷ In advance, the planning and preparedness process needs to incorporate all stakeholders to not only avoid duplication but also to allow the prioritization of needs to target those that need assistance first better that will allow the maximization of limited resources.

¹⁰⁶ U.S. Census Bureau, Census Data 2010, "U.S. Census Data (2005–2009 American Survey Data), (n.d.), http://factfinder.census.gov/servlet/ACSSAFFacts?_event=Search&geo_id=&_geoContext=&_street=&_county=pompano+beach&_cityTown=pompano+beach&_state=04000US12&_zip=&_lang=en&_sse=on&pctxt=fph&pgsl=010.

¹⁰⁷ City of Pompano Beach, Broward County Vulnerable Population Registry, Secured database due to privacy issues, Voluntary database that registers those who may require additional assistance after a disaster. While it does not guarantee assistance, it provides municipal and county emergency management officials with data to assist in planning efforts.

Some municipalities may be relying too heavily on the county or higher levels of government regarding preparedness and response for their jurisdiction's vulnerable population. While the county must adhere to legal responsibilities, city integration in planning efforts is crucial and may also have legal ramifications of which many may not be aware. As an example, two class action cases were previously referenced in the literature review that asserted that the County and City of Los Angeles, California, as well as the County of Broward, Florida discriminated against individuals with disabilities in their emergency management programs and are in violation of federal law, the Americans with Disabilities Act of 1990. The cases state that evidence exists that both counties and the City of Los Angeles have not performed the advance planning and preparations necessary to provide individuals with disabilities an equal opportunity to access and benefit from its emergency management programs, services, and activities,¹⁰⁸ (Broward Case Reference¹⁰⁹). While the counties and the city do have a plan to provide for individuals with disabilities, the claim is that it was not sufficient. Specifically for the city, the Motion for Summary Judgment requested that the city amend and supplement its planning preparations, and take all other steps necessary, to ensure individuals with disabilities are afforded an equal opportunity to survive and recover from emergencies.¹¹⁰

This thesis contained the analysis of both jurisdictions as case studies. The analysis found that each of the jurisdictions made abundant advances in improving and continuing to improve their planning methods for individuals with disabilities and others with AFN in each phase of emergency management; mitigation, preparedness, response and recovery.

¹⁰⁸ "United States District Court -Central District of California (Case No. CV 09-0287 CBM (RZx)).

¹⁰⁹ United States Department of Justice, under the Americans with Disabilities Act; Case Nos. DJ 204-18-91 and DJ 204-18-199.

¹¹⁰ "United States District Court -Central District of California (Case No. CV 09-0287 CBM (RZx))."

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IV. FINDINGS AND RECOMMENDATIONS FOR IMPLEMENTATION: THE EMERGENCE OF PROMISING PRACTICES

A. OVERVIEW

History has proven how critically important it is to have effective emergency management programs that include planning for individuals with disabilities and others with access and functional needs. Much has been done to improve disaster planning for the AFN community; yet more can be done. The focus of this thesis was to examine how municipalities could be empowered to share a stronger role within their county jurisdictions.

The method of inquiry used to identify promising practices through case studies addressed three primary questions pertaining to collaboration, identification and communication, and leveraging limited resources. The questions were used to analyze the case studies were the following.

- **Collaboration:** As all communities have unique characteristics and challenges, what promising practices exist with regard to collaboration when planning for individuals with disabilities and others with access and functional needs?
- **Identification and Communication:** How are people with disabilities and others with access and functional needs identified within the community? And what communication methods are used?
- **Leveraging Resources:** How can municipalities maximize and leverage existing, yet limited, resources? What resources are utilized to accomplish this? Are they cost effective and sustainable?

Three case study analyses, in addition to a literature review, were conducted to conclude what best approaches might be recommended to bridge national directives, strategies and initiatives with local strategy and policy. With a municipal perspective, emerging promising practices were examined through the case study analysis of: 1) City of Los Angeles and Los Angeles Area of California 2) City of Joplin, Missouri, and 3) Broward County, Florida and its municipalities.

B. FINDINGS

While important for all levels of government, the case studies' analysis revealed a critical need for municipalities to review and modify emergency plans on a continual basis to ensure they are capturing the needs of the "Whole Community." The research indicated that emergency plans should reflect the unique needs of each community according to its ever-changing demographics to demonstrate the strong role municipalities share with county levels of local government in this process in addition to other stakeholders. In addition, to capture the needs of the community, people with disabilities and individuals with AFN need be at the planning table along with other community leaders and stakeholders, which can be achieved through the formation of a collaborative Interagency Committee as illustrated through Los Angeles' "LAOA Alliance," Joplin's "Weather Enterprise," and Broward County's "VPR Sub-Committee." Creating a Strategic Interagency Committee enables a community to not only collaborate by building valuable relationships to share resources, but provides the venue for addressing mass care emergency planning issues inclusive of individuals with disabilities and others with AFN. Ideally, the committee will have appropriate and responsible representation with decision-making authority at a policy level.

Effective collaboration proved to be the key element of success in each of the case studies. By developing the collaboration team to include people with disabilities and others with AFN, it was revealed that relationship-building, the establishment of networks, and agreements, created a dividend in returns as it relates to all phases of emergency management: mitigation, preparedness, response and recovery. Each of the case studies showed the value of collaboration through inclusive, or a "Whole of Community." approach to emergency planning. Various methods are being utilized but each is continuing to evolve.

With respect to communications, analysis revealed the importance of collaboration through alliances, such as the "Weather Enterprise" that encompasses weather, emergency management and media partners. Research showed that responding to warnings is not a simple act of stimulus-response, but rather, a non-linear, multi-step, complex process. Many of the key findings involved societal aspects of warning response

and risk perception where residents of Joplin, Missouri did not solely rely on the NWC warnings but also on secondary warnings through other trusted sources, such as local officials, the media and social networks, which revealed the importance of the development of local warning system and siren strategies that work in conjunction with NWS warnings rather than independent of them. In addition to highlighting the social aspect of how people respond to warnings, the research also indicated the importance of utilizing a wide breadth of technologies to meet the needs of people with disabilities and individuals with AFN. Technology is giving expanded options to people by which to receive emergency messages. Although the NWS was not able to quantify fully the impacts for the case of the tornadoes in Joplin, Missouri, the multiple technologies used is thought to have saved many lives. The evolvement of mobile and social media communication tools is evident. As technology evolves and public use increases, these methods will transcend as invaluable communication tools that will save lives.

Lastly, it became evident through the analysis of the case studies that collaboration was also a successful method for maximizing and leveraging existing, yet limited, resources. By building inclusive emergency management alliances, governments have promoted a network for relationship building that flourishes within this collaborative environment. It stimulates and leverages resources by alliances working together toward common goals that equates to budget savings. By maximizing shared resources within and outside of the regional area, as in LAOA's case study, the alliance is also able to reduce timelines.

These findings highlight some of the emerging promising practices inclusive of individuals with disabilities and others with access and functional needs.

In summary, this chapter provides recommendations that will strive to empower municipal governments to create and implement promising practices within emergency management that leverage resources to help meet the needs of the AFN community. They include 1) general awareness training with respect to individuals with disabilities, access and functional needs, 2) collaboration through the creation of an "interagency strategic planning committee," 3) continuing review and revision of emergency plans for inclusive

“whole of community” planning, 4) effective identification and communication methods inclusive of the AFN community, and finally, 5) opportunities for additional future research and analysis using after action reports.

C. GENERAL AWARENESS AND TRAINING

As demographics change, emergency plans will need to adapt with those changes on a continuous basis. Historically, the nation conducted mass care planning with an emphasis on the general population. However, the general population was not adequately defined and people who did not fit the general category were included within the “annex” of an emergency plan, as an add-on. Through past disasters, it is better known now, and demographics have changed dramatically, as revealed in this thesis. As demographics continue to change, the emergency planning methods and approaches will need to evolve with these changes, which has become especially evident for inclusive emergency management planning for individuals with disabilities, functional, and access needs.

Furthermore, with change comes the need for general awareness training regarding what the needs are for people within the AFN community, which involves the “whole community” including emergency management practitioners and first responders, as well as all other stakeholders. In the recent past, terminology has changed quickly and, at times, become confusing to some. Awareness training will become a critical component of ensuring the needs of individuals with disabilities and functional and access needs are met.

D. COLLABORATION THROUGH BUILDING AND SUSTAINING AN INTERAGENCY STRATEGIC PLANNING COMMITTEE

Through analysis of each of the case studies, it became evident that a lack of standardization exists regarding how local levels of government create and implement emergency plans as it pertains to people with disabilities, access and functional needs. However, as each community is unique, so may be its emergency plan. Each jurisdiction researched as a case study had a strong belief in collaboration. Yet, collaboration teams seem to be evolving in that new stakeholders are continuously being identified and brought to the planning table, which is making collaboration a valuable tool that enables

government to leverage its local existing resources. Having disability advocates at the planning table to describe needs with potential solutions is invaluable. It makes one wonder, why was this not learned sooner? Additionally, engaging private sector, faith-based or non-profit partners who already provide social services on a daily basis is another efficient and effective way of leverage existing resources. Engaging these partners alleviates the ‘government-centric’ focus and adds existing resources that will benefit all stakeholders.

Disasters can be catastrophic despite the best planning efforts. It is during these times where the leadership of emergency management is critical. Decision making can be difficult, especially when resources are limited. Resources are assigned to the disaster and how they are assigned becomes the most critical issue. How are the resources prioritized? No easy answers exist to these questions. However, if pre-planning has been a priority, then the collaborative network of stakeholders that was built will clearly reveal a return on this investment. The pre-planning stages will have produced a greater insight into what the community needs will be. In fact, advance planning with all stakeholders (the “Whole Community”) in advance may thwart some of the negative impacts a disaster can cause. Emergency managers will be in a better position to assign resources appropriately to prevent or mitigate the potential for the cascading impacts a disaster can create that will produce the best possible outcome.

In summary, the findings clearly illustrate the value of collaboration and how it provides a return on investment (ROI) by leveraging resources through services that already exist and through building partnerships. By supporting service providers of the AFN community, emergency management practitioners are able to develop and sustain these partnerships using Memorandums of Agreements (MOAs) to support continuity of operations planning (COOP). By helping to support the continuance of service by the providers, the effects of a disaster on a community can, subsequently, be mitigated. Furthermore, recovery efforts will be more effective and mitigate the potential for cascading effects throughout the community.

As reflected in each of the case studies, the benefits of collaboration are numerous. Conclusively, through the creation of an “interagency strategic planning

committee,” communities become fully engaged with their county and municipal governments. The committee will be able to develop a strategy to achieve short and long-term goals relating to emergency planning for people with disabilities and access and functional needs to produce the highest return on investment with the ultimate goal being the safety of the “whole community.”

E. CONTINUING REVIEW AND REVISION OF EMERGENCY PLANS

As described in the City of Los Angeles case study, the city has initiated a project to identify gaps and revise emergency plans to ensure adequate planning for people with disabilities, functional and access needs has been conducted.

Local county and municipal levels of governments would ideally conduct similar comprehensive reviews of their own respective emergency plans to ensure the needs of people with disabilities, functional and access needs are adequately being planned for. The City of Los Angeles is conducting its review to include the following.

- Assessment current city emergency plans for efficacy
- Pre-identification of needs and resources
- Public notification and communications
- Policies or procedures for “sheltering-in-place”
- Shelter and care for individuals forced to evacuate their homes
- Assistance with evacuation and transportation
- Temporary housing
- Assistance in recovery and remediation efforts after an emergency or disaster

By conducting regular and comprehensive reviews of emergency plans to identify gaps in current needs, local governments will be in a better position to identify solutions for the goals they establish as they relate to inclusive emergency management planning for people with disabilities, functional, and access needs.

Additionally, as each community’s unique characteristics need to be considered, emergency plans should include unique situational concerns. For example, as was discussed in the introduction regarding a “Story of Cascading Impacts,” in communities

with high-rise buildings, it is challenging for first responders to reach and evacuate people.¹¹¹ High-rises merely illustrate one example. Depending on the jurisdiction, other examples include urban areas in which the population is particularly high, anticipated large-scale disasters, such as earthquakes, fires, extended power outages, or any other situation in which evacuation presents challenges for those with disabilities, access or functional needs. The point is that many unique jurisdictional situations should be considered when planning for individuals with disabilities, access and functional needs.

F. EFFECTIVE COMMUNICATION

Communication in disasters is critical. After Hurricane Katrina, it was evident that seniors, people with disabilities and caregivers could not, or did not, evacuate from New Orleans, and it is unclear if emergency messages were received.¹¹² According to the Centers for Disease Control and Prevention, 60% of those who died were senior citizens. Many may have had sensory, mobility, and cognitive disabilities and were not able to access emergency messages.¹¹³

When disaster threatens a community, the speed and accuracy by which a message is received can mean the difference between life and death. Yet, “how people communicate and “to whom”” can vary. In the case study for Joplin, Missouri after the tornadoes of May 2011, one of the promising practices that emerged from the devastation was that communication methods were successful. The public did not listen to the traditional sirens, but to their “secondary” source of information, which in this case, was the collaborative efforts of the “Weather Enterprise.” Initiated by the local NWS office, this group consists of trusted NWS, media and emergency management partners who then communicate emergency messages through local businesses, churches, schools and the general public. As illustrated in the analysis, 100 interviews were conducted that revealed the social factor of emergency warnings. It was also found that the “Weather Enterprise” utilized a multitude of different technologies and did not rely solely on

¹¹¹ National Council on Disability, 43.

¹¹² Ibid., 41.

¹¹³ Ibid., 43.

antiquated technology. While traditional methods were used, new social networking technologies were also used. As new technology emerges, promising practices for emergency communications are also emerging. While not many studies exist of this kind, this study revealed how accepted social networks and technology can save lives. While the study was not able to quantify the numbers, it is believed that many with disabilities, access and functional needs were able to receive emergency communication messages not available in the past.

Broward County utilizes similar collaborative and social networks as Joplin's "Weather Enterprise." In addition, it also utilizes its VPR outlined in the case study. While registries have shown value, and continue to evolve in how they enable identification and communication with the AFN community, they remain one of many tools emergency managers need to communicate with people with disabilities, access and functional needs. The VPR committee has provided a unique and positive opportunity for collaboration between the county, its municipalities and the AFN community. The partnerships built through the committee have helped progress planning efforts for and "with" people with disabilities, access and functional needs. Additionally, the VPR has enabled municipalities to identify and locate where their AFN communities are, as well as how to reach them and their emergency contacts. Using GIS technology, information for AFN communities has been identified that has enabled emergency managers to plan and leverage resources more efficiently and effectively. Some municipalities have initiated the process of mapping the VPR registrants with their corresponding fire districts along with Community Emergency Response Team (CERT) volunteers who live in their area, which has furthered outreach efforts and gained positive results for the community.

At the local level, county and municipal government will be much better prepared to respond to a disaster if they have demographic knowledge for their jurisdictions. This knowledge becomes an emergency management tool during the pre-disaster planning stages for access and functional needs. Once a community has a "snap shot" (or picture) illustrating a jurisdiction's unique characteristics, identification of stakeholders becomes an easier task. For instance, if a large percent of elderly live in a certain community, it

would make sense to have someone from the building's management team and a resident at the table to determine the potential needs before a disaster impacts the community. Ideally, the resident would be a leader of the community and possibly an existing volunteer for their community (i.e., CERT). Identifying and defining the demographic characteristics of a jurisdiction becomes a critical step in building the collaborative network or the 'interagency strategic planning committee'.

In summary, each of the case studies analyzed demonstrated how valuable collaboration is for emergency management planning efforts. The analysis suggests that identification of individuals with disabilities, access and functional needs is a challenge. However, through the collaboration efforts in building partnerships with daily service providers of the AFN community, some of the challenges pertaining to identification are beginning to evolve with solutions. This network of partnerships with the AFN community is vital for effective emergency management and creates the environment that will foster community resilience—the ultimate goal.

G. ADDITIONAL RESEARCH

A great deal of value for additional research exists with regard to inclusive disaster planning for the AFN community. Unfortunately, much of this work will occur after future disasters. After action reports will need to be analyzed and compared against current emergency plans. Much of the new and evolving progress done with regard to disaster planning for the AFN community has not undergone a test beyond exercises. An analysis of how the nation fares in future disasters will reveal how much progress has been made with regard to inclusive emergency management planning. Furthermore, this progress should be an ongoing process that continually conducts a comparative analysis between current policy, strategy and emergency plans against every disaster after action report.

H. CONCLUSION

Oftentimes municipal levels of local government are not specifically mentioned in guidance and policy documents. Most guidance is geared toward the "local" county level of government. This lack of clarity can produce a gap between what a municipal

jurisdiction can provide as the true first responder, and higher levels of government. While some municipalities may be quite small and unable to provide devoted resources to pre-planning efforts, they should be included within a collaborative effort with the county. Larger cities, with greater organizational and funding structures, are better positioned to devote dedicated resources toward effective emergency management planning efforts.

While local usually refers to the county level of government, municipalities should also be considered and implement national guidelines. Where appropriate, this may be accomplished in partnerships between the municipality and their corresponding county. As described in the “FEMA Comprehensive Guide,” state, tribal and local governments are responsible for maintaining plans to support emergency response. Emergency managers should incorporate the planning considerations addressed in this guidance into their existing plans

More can be done. Due to the inherent nature of disasters, advance planning and preparation is critical. An emergency management plan that integrates the needs of individuals with disabilities and others with AFN throughout the emergency planning process is the cornerstone for a successful, nondiscriminatory emergency management response and recovery. Most municipalities have Comprehensive Emergency Management and/or Operations Plans (CEMP/CEOP). If they have achieved this level of planning and preparedness, they must also act as the lead for their jurisdictions to ensure comprehensive planning also occurs for their populations with disabilities, access and functional needs. It is not only a moral obligation and the “right” thing to do; it is evolving into a legal obligation as well.

It is best summarized in a statement made by FEMA's Administrator, Craig Fugate: "If we wait and plan for people with disabilities after we write the basic plan, we fail."¹¹⁴

¹¹⁴ U.S. House, Committee on Homeland Security, Subcommittee on Emergency Communication, Preparation, and Response, Quote by Craig Fugate. Written Statement of Marcie Roth, Director, Office of Disability Integration and Coordination, Federal Emergency Management Agency, Department of Homeland Security, *Caring for Special Needs during Disasters: What's Being Done for Vulnerable Populations?* Before the House Committee on Homeland Security, Subcommittee on Emergency Communications, Preparedness, and Response U.S. House of Representatives, Washington, DC, June 15, 2010, http://www.fema.gov/txt/about/odic/written_statement_roth.txt.

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