

# EVACUATING POPULATIONS WITH SPECIAL NEEDS

*Routes to Effective Evacuation Planning Primer Series*



April 2009



U.S. Department of Transportation  
Federal Highway Administration



## TABLE OF CONTENTS

Foreword .....	iii
Chapter 1: Overview and Defining Special Needs .....	i
Chapter 2: Legislative Framework .....	13
Chapter 3: Planning and Preparedness – Overview .....	17
Chapter 4: Communication Needs .....	29
Chapter 5: Transportation Needs During Activation and Operations .....	39
Chapter 6: Congregate and Residential Care Facilities .....	49
Chapter 7: Animal Needs .....	61
Chapter 8: Re-Entry and Return to Readiness .....	71
Annexes .....	79
Annex 1: Glossary and Acronyms .....	80
Annex 2: Legislation, Regulations, and Policy .....	88
Annex 3: Evacuation Checklist.....	94
Annex 4: Sample Worksheet for Trip Times.....	107
Annex 5: Congregate and Residential Care Facilities Case Studies .....	108
Annex 6: References and Resources.....	115



An aerial, top-down view of a multi-lane highway interchange. The image is heavily stylized with a blue color overlay and motion blur, giving it a sense of speed and modernity. The road lines are white, and several vehicles, including cars and a large truck, are visible on the right side of the frame. The overall composition is dynamic and geometric.

## NOTICE

This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its contents or use thereof. This report does not constitute a standard, specification, or regulation.

The United States Government does not endorse products or manufacturers. Trade and manufacturers' names appear in this report only because they are considered essential to the object of the document.



# FOREWORD

## BY JEFFREY A. LINDLEY, FHWA ASSOCIATE ADMINISTRATOR FOR OPERATIONS

The Federal Highway Administration (FHWA) proudly presents this primer, *Evacuating Populations with Special Needs*, as the third in the *Routes to Effective Evacuation Planning* primer series. This installment focuses on evacuating people who need assistance in leaving an area, particularly people with disabilities, aging populations, people living in congregate or residential care facilities, and those with household pets. We developed this primer to assist transportation agencies, emergency managers, first responders, and special needs service organizations understand applicable legislation—including new legislation passed after the Hurricane Katrina response—and develop and implement evacuations of special needs populations. We hope this primer helps planners and responders better understand the needs of people with disabilities, the aging population, and others with special needs.

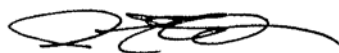
FHWA recognizes that evacuation operations are primarily a State and local function; therefore, State and local authorities are the most knowledgeable in this area. Evacuating people with disabilities and individuals with medical conditions requires specific consideration of their needs. Many of you may recall the tragic events of Hurricanes Katrina and Rita. Sadly, people with disabilities, the aging population, and people with medical conditions were disproportionately affected. People who did not have access to transportation or who were unable to understand emergency communications were also left behind in many cases.

That tragedy, as well as other disasters, clearly indicated a need to strengthen transportation evacuation plans and responses specific to the needs of people with disabilities, the aging population, and people with medical or other conditions that hinder their movement during an evacuation. Evacuation of people with special needs has not only been a matter of keen interest and scrutiny on the part of many within government, academe, private sector groups such as the Red Cross and other groups representing this population, but it has also been an area of rapid and constant change as more about it has been learned and understood. In this spirit, FHWA has dedicated a primer to these important issues. The chapters that follow focus on specific issues related to evacuating those with special needs and provide the reader with a better sense of how communities can plan and work with the special needs, emer-



agency management, first responder, and transportation communities to ensure a safer evacuation of the special needs population. We include checklists to help agencies consider what needs to be in place before, during, and after an evacuation.

We encourage readers to contact FHWA's Office of Operations to comment on this document, share experiences, and offer suggestions to improve this primer. Comments and inquiries should be directed in writing to the U.S. Department of Transportation, Federal Highway Administration, Office of Operations, Emergency Transportation Operations Team, 1200 New Jersey Avenue, SE, Washington, DC 20590, or via e-mail to [ETO@dot.gov](mailto:ETO@dot.gov). For an electronic version of this document or other evacuation planning tools, please visit the Evacuation Planning Knowledge Management Center at the Emergency Transportation Operations Web site: [www.ops.fhwa.dot.gov/opssecurity](http://www.ops.fhwa.dot.gov/opssecurity) and the Department of Homeland Security (DHS) Lessons Learned Information System ETO Channel or the Content Specific page on mass evacuations at [www.llis.gov](http://www.llis.gov).



Jeffrey A. Lindley  
Associate Administrator for Operations, FHWA  
April 2009



## Technical Report Documentation Page

1. Report No. FHWA-HOP-09-022		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Routes to Effective Evacuation Planning Primer Series: Evacuating Populations with Special Needs				5. Report Date April 2009	
				6. Performing Organization Code	
7. Author(s) Nancy Houston, Andrea Vann Easton (Booz Allen Hamilton)  Elizabeth A. Davis, Jennifer Mincin, Brenda D. Phillips, Ph.D., Mariana Leckner, Ph.D. (EAD & Associates, LLC)				8. Performing Organization Report No.	
9. Performing Organization Name and Address Booz Allen Hamilton 8283 Greensboro Drive McLean, Virginia 22102  EAD & Associates, LLC 44 Court Street, Suite 812 Brooklyn, New York 11201				10. Work Unit No. (TRAIS)	
				11. Contract or Grant No.	
12. Sponsoring Agency Name and Address Federal Highway Administration, HOTO-1 U. S. Department of Transportation 1200 New Jersey Avenue SE Washington, D. C. 20590				13. Type of Report and Period Covered Final Report	
				14. Sponsoring Agency Code HOTO, FHWA	
15. Supplementary Notes Kimberly Vasconez, FHWA Team Leader, Emergency Transportation Operations, Contracting Officer's Technical Representative (COTR).					
16. Abstract Evacuation operations are conducted under the authority of, and based on decisions by, local and state authorities. The purpose of this primer, Evacuating Populations with Special Needs, is to provide local and state emergency managers, government officials, transportation agencies, and other organizations involved in disaster response with best practices and tools to accommodate people with special needs in an evacuation. This primer is designed to assist emergency managers and transportation personnel in developing an evacuation plan that includes the coordination of transportation resources that meet the requirements of people with special needs.  This document constitutes the third of a primer series entitled "Routes to Effective Evacuations." This primer focuses on special needs populations who require assistance during a local or multi-jurisdictional emergency evacuation.					
17. Key Words Evacuations, Special Needs, Emergency Management				18. Distribution Statement No restrictions.	
19. Security Classif. (of this report) Unclassified.		20. Security Classif. (of this page) Unclassified.		21. No. of Pages 136	
				22. Price	







# CHAPTER 1: OVERVIEW AND DEFINING SPECIAL NEEDS

Note: **Annex I** of the primer includes a glossary of key terms. Glossary terms are shown in bold when they first appear in the text and are listed in a box at the start of each chapter in which they first appear.

This chapter provides an overview of the primer and its purpose, as well as highlights the challenges in defining populations with special needs. It is important for each community to determine how to define its special needs and how to best plan for and address those needs. The remaining chapters of the primer provide specifics on relevant legislation, details to support planning for each phase of evacuation, and additional resources for further information on these topics.

## PURPOSE OF THE PRIMER

Local and state authorities conduct and serve as the decision makers for evacuation operations. This primer, *Evacuating Populations with Special Needs*, provides local and state emergency managers, government officials, transportation agencies, and other organizations involved in disaster response with best practices and tools to accommodate people with special needs in an evacuation. Specifically, this document should aid in developing an evacuation plan that includes the coordination of transportation resources to meet the requirements of people with special needs.

The US Department of Transportation's (DOT's) Federal Highway Administration (FHWA) has developed the *Routes to Effective Evacuation Planning Primer Series*<sup>1</sup> to address various aspects of emergency transportation and evacuation. This primer focuses on **special needs populations** who require assistance during a local or multi-jurisdictional emergency evacuation. The primer series, as a whole, captures and catalogues transportation management and operations advancements that can improve evacuation planning and operations. As experience in conducting evacuations increases and the concept of disaster support evolves, these primers may undergo adjustment

A Kaiser Family Foundation survey found that 40 percent of Hurricane Katrina victims who did not evacuate were either physically unable to leave or were caring for a person with a disability.

<sup>1</sup> FHWA's ETO publications flyer: [http://ops.fhwa.dot.gov/opssecurity/evac\\_plan\\_doc\\_flyer/index.htm](http://ops.fhwa.dot.gov/opssecurity/evac_plan_doc_flyer/index.htm)

## GLOSSARY TERMS USED IN THIS CHAPTER

Accessible  
Ambulette  
Americans with Disabilities Act (ADA)  
Congregate and Residential Care Facilities (CRCFs)  
Durable Medical Equipment (DME)  
Emergency Management Agencies (EMAs)  
Homeless Populations  
Household Pets  
National Response Framework (NRF)  
Non-governmental Organization (NGO)  
Pandemic and All-Hazards Preparedness Act (PAHPA)  
Paratransit  
People with Medical Conditions  
People with No Access to a Vehicle  
Persons with Disabilities  
Service Animals  
Special Needs Populations

People with disabilities comprised 25 to 30 percent of those impacted by Hurricane Katrina.

#### COORDINATION IS KEY

Evacuating a person with dementia who is homebound and bedridden requires several resources, possibly a paramedic, caretaker, ambulance, oxygen support, and a facility ready to receive the patient. Key partners coordinate such a movement—emergency medical services, family, a DME company, nursing home facilities, home health aides, a dispatcher, those keeping a registry for those with special needs, and, of course, the transportation provider.

based on new information, findings, lessons learned, best practices, and tools that local jurisdictions and states use and share.

In disaster management, special needs issues are considered a “human” issue. As a result, relevant initiatives have largely been assigned to disaster human services in terms of planning, education and outreach, response, and recovery. However, in recent years, the full integration and incorporation of special needs issues in emergency management is becoming both accepted and implemented on the local, state, and federal levels.

In 2005, the Kaiser Family Foundation, Harvard School of Public Health, and *The Washington Post*<sup>2</sup> conducted interviews of displaced Hurricane Katrina evacuees then living in Houston and found:

- Over 40 percent of those who did not evacuate were either physically unable to leave or were caring for a person with a disability
- 34 percent of Katrina victims were trapped in their homes
- 50 percent of those who were trapped waited 3 or more days to be rescued.

According to the Consortium for Citizens with Disabilities' Emergency Management Task Force in 2006, “The experiences of [2005's] hurricanes were a wake-up call to everyone, and the disability community was particularly affected by the shortcomings of the various systems that did not serve them well. People with disabilities comprised 25 to 30 percent of those impacted by Hurricanes Katrina and Rita.” The need for best practices and better integration of special needs issues during emergency evacuations is self-evident.

## TRANSPORTATION FOR EVACUATING SPECIAL NEEDS POPULATIONS

Transportation during emergencies is critical to evacuating people who either have specific mobility issues or do not have access to transportation. Evacuation for populations with special needs<sup>3</sup> must be carefully planned for in advance to ensure maximum safety. This primer addresses key issues that state and local governments will face. Moreover, it provides recommendations to ensure that individuals with special needs are evacuated rapidly and efficiently to save and protect their lives and that resources are used efficiently and to their fullest capacity. During medium to large evacuations, every transportation system will be overwhelmed, especially when evacuating special

<sup>2</sup> The *Washington Post*, Kaiser Family Foundation, Harvard University Survey of Hurricane Katrina Evacuees (2005). <http://www.kff.org/newsmedia/upload/7401.pdf>

<sup>3</sup> It is important to acknowledge that “special needs” is a contentious term within the disability community, and there has been much debate on whether or not to change the term within the disaster field. Some people with disabilities find the term special needs to be disparaging. As this debate continues, and again, for the purposes of this primer, special needs will respectfully be used to define people with disabilities across the age spectrum.



needs populations. The decision to evacuate special needs populations must be thoughtfully considered because the risks to the individual, particularly the medically vulnerable, during an evacuation must be carefully weighed against the consequences potentially faced if the individual were to remain in place.

Evacuation orders result from a complex and difficult decision-making process that is aided by advance planning. In preparing the plans, local and state **emergency management agencies (EMAs)**, along with any established special needs committee, planning groups, and those agencies (including transportation departments) supporting the evacuation, will consider:

- The full range of medical, physical, developmental, and sensory disabilities and special needs
- The potential harm or impact that the emergency or movement may cause
- The capacity to provide safe, alternate shelter for individuals after the evacuation including medicine, **durable medical equipment (DME)**, and **service animals** after the evacuation
- The ability to move caregivers, who are essential to the care of special needs people.
- Without a disaster transportation plan for the medically vulnerable, these individuals could face tremendous risks during major disasters.

When a mass evacuation is ordered, key entities must coordinate transportation resources during the emergency evacuation. An emergency evacuation of special needs populations requires close coordination among the local and state EMAs, federal resources, private organizations including businesses and **non-governmental organizations (NGOs)**, and transportation agencies. Conveyances used for an evacuation include automobiles, buses, trains, boats, and even airplanes and helicopters. Each community will have access to specific modes of transportation, and all transportation resources—public, private, and non-governmental—should be considered in evacuation planning and operations. This may include, for example, airport shuttle vans, buses from faith-based organizations, school buses, and **paratransit** vehicles. In addition, it will be critical to consider specific modes of transportation for people with physical disabilities and those with medical conditions. Prior identification of available transportation resources and commitments for use will be highly valuable during an emergency to avoid competition for resources. To do this, emergency managers must bring together first responders, transportation organizations, and others that can assist during evacuation.

## SCOPE OF THE PRIMER

While the primary scope of the primers in the *Routes to Effective Evacuations* series focuses on transporting populations out of harm's way, this primer addresses moving special needs populations. "Special needs" will be defined as:

1. People with disabilities
2. People with medical conditions
3. **Congregate and residential care facilities (CRCFs)**
4. **People with no access to a vehicle**
5. **Homeless populations**
6. Correctional facilities
7. People with service animals and **household pets**.

FHWA recognizes that currently there is no universal definition of “special needs.” Therefore, this primer attempts to address the evacuation of those primary populations that may need transportation assistance. While this approach may omit some population groups, individual communities should add to the suggestions in this primer by assessing their population to identify people who will have specific transportation needs during an evacuation. Once identified, those individuals and their advocacy groups and private care facilities should be included in evacuation planning.

### “Special Needs” Definitions

No singular definition of the term “special needs” exists, although the term is widely used within the disaster services and emergency management industry to address people with disabilities. However, the term “special needs” is currently under debate in the disability, healthcare, and emergency management communities. “Special needs” can be narrowly defined as a broad and overarching concept (*see examples of definitions below*). Currently, there is no federally mandated or suggested definition being provided to states and localities. In fact, federal agencies use different definitions in addressing special needs populations and their own missions. In August 2007, the Federal Emergency Management Agency (FEMA) issued a new reference guide titled *A Reference Guide for Accommodating Individuals with Disabilities in the Provision of Disaster Mass Care, Housing and Human Services* (available at <http://www.fema.gov/oer/reference/index.shtm>), which outlines existing legal requirements and standards relating to access for people with disabilities.

Further, on August 15, 2008, FEMA issued the interim release of *Comprehensive Preparedness Guide 301: Special Needs Populations (Version 1.0)* available at <http://www.fema.gov/pdf/media/2008/301.pdf>. In that document, FEMA has included the following language:

“The **National Response Framework (NRF)** definition for ‘special needs’ provides a function-based approach for planning and seeks to establish a flexible framework that addresses a broad set of common function-based needs irrespective of specific diagnosis, statuses, or labels (e.g., children, the elderly,



transportation disadvantaged).<sup>4</sup> In other words, this function-based definition reflects capabilities of the individual, not the condition or label. Governments that choose to align their language to the NRF definition will improve inter-governmental communication during an incident. The definition of ‘special needs population’ as it appears in the NRF is as follows:

*Populations whose members may have additional needs before, during, and after an incident in functional areas, including but not limited to:*

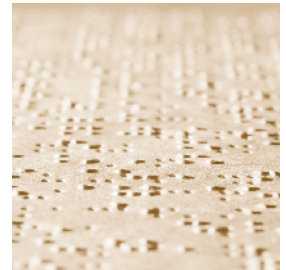
- Maintaining independence
- Communication
- Transportation
- Supervision
- Medical care.

*Individuals in need of additional response assistance may include those who have disabilities, live in institutionalized settings, are elderly, are children, are from diverse cultures, have limited English proficiency or are non-English speaking, or are transportation disadvantaged.”*

The NRF definition focuses on the following functional aspects:

- **“Maintaining Independence** – Individuals requiring support to be independent in daily activities may lose this support during the course of an emergency or a disaster. This support may include supplies (e.g., diapers, formula, catheters, and ostomy supplies), DME (e.g., wheelchairs, walkers, and scooters), and/or attendants or caregivers. Supplying needed support to these individuals will enable them to maintain their pre-disaster level of independence.
- **Communication** – Individuals who have limitations that interfere with the receipt of and response to information will need that information provided in methods they can understand and use. They may not be able to hear verbal announcements, see directional signs, or understand how to get assistance because of hearing, vision, speech, cognitive, and/or intellectual limitations, and/or limited English proficiency.
- **Transportation** – Individuals who cannot drive or who do not have a vehicle may require transportation support for successful evacuation. This support may include **accessible** vehicles (e.g., lift equipped or vehicles suitable for transporting individuals who use oxygen) or information about how and where to access mass transportation during an evacuation.

<sup>4</sup> The concept of a function-based approach to defining special needs populations has been developed by June Isaacson Kailes. See Kailes, J. and Enders, A. in “Moving Beyond ‘Special Needs’ A Function-Based Framework for Emergency Management Planning,” *Journal of Disability Policy Studies*, Vol/No. 44/207, pp. 230-237.



- **Supervision** – Before, during, and after an emergency, individuals may lose the support of caregivers, family, or friends or may be unable to cope in a new environment (particularly if they have dementia or psychiatric conditions such as schizophrenia or intense anxiety). If separated from their caregivers, young children may be unable to identify themselves and, when in danger, may lack the cognitive ability to assess the situation and react appropriately.
- **Medical Care** – Individuals who are not self-sufficient or who do not have adequate support from caregivers, family, or friends may need assistance with managing unstable, terminal, or contagious conditions that require observation and ongoing treatment; managing intravenous (IV) therapy, tube feeding, and vital signs; receiving dialysis, oxygen, and suction administration; managing wounds; and operating power-dependent equipment to sustain life. These individuals require the support of trained medical professionals.

The above examples illustrate function-based needs that may exist within the community.”

Despite efforts at the federal level to define what people constitute as those with special needs, jurisdictions and planning groups know the communities they serve and can identify those people who would need help during evacuations, who is caring for those people, and how the jurisdiction should aid those people during times of disaster. As jurisdictions undergo the planning process, including the metropolitan planning organization (MPO) process, and work with these populations and their advocates and caregivers, the universe may expand to include others in the community. It is important that local communities define what “special needs” is for their specific community and as appropriate to their population.

## People with Disabilities

While the meaning of the term “special needs” depends on the community, there are some terms that have legal implications and must be considered for evacuation planning.<sup>5</sup> For example:

- **Americans with Disabilities Act (ADA), 1990** – According to the ADA, **persons with disabilities** are a protected class. An individual is defined as someone with a disability if they:
  - I. Have a physical or mental impairment that substantially limits a major life activity

---

<sup>5</sup> It is important to differentiate between agencies that have a definition of “special needs” populations such as HHS, the Department of Homeland Security (DHS), and the CDC, and that of the ADA definition. Since the ADA is law, the definition of “people with disabilities” means that they are a protected class and can use the ADA as statutory authority for enforcement and lawsuits. Other agencies can offer definitions of special needs as guidance or for the purposes of that specific agency’s planning benefit, but often are not enforced or regulated in the same way that the ADA law is regulated and enforced.

2. Have a record of such an impairment, and/or
  3. Are regarded as having such an impairment.
- ***US Health and Human Services (HHS), Pandemic and All-Hazards Preparedness Act (PAHPA), 2006*** – According to the PAHPA, “the term ‘at-risk individuals’ means children, pregnant women, senior citizens and other individuals who have special needs in the event of a public health emergency, as determined by the Secretary.”
  - ***Centers for Disease Control and Prevention (CDC), 2004*** – The CDC suggests that many health departments use a similar definition: “groups whose needs are not fully addressed by traditional service providers or who feel they cannot comfortably or safely access and use the standard resources offered in disaster preparedness, relief, and recovery. They include, but are not limited to, those who are physically or mentally disabled (blind, deaf, hard-of-hearing, cognitive disorders, mobility limitations), limited or non-English speaking, geographically or culturally isolated, medically or chemically dependent, homeless, frail/elderly, and children.”

When developing the parameters of the term “special needs” in your community, consider the following information:

- ***People with disabilities are an important and significant part of the overall population.*** According to the 2000 US census, there are close to 50 million people with disabilities, which is approximately 17 percent of the total population in the United States.<sup>6</sup> It is estimated that, of the 50 million who have identified themselves as having a disability, 28 percent are 65 years and over. According to the Federal Interagency Forum on Aging Related Statistics, in 2003, there were 36 million people 65 years and older in the United States.
- ***The ADA defines disability in specific terms.*** Some types of disabilities (includes age spectrum from pediatric to geriatric) are:
  - Physical (e.g., severe arthritis, spinal cord injuries, people who use wheelchairs, people with Multiple Sclerosis)
  - Sensory (e.g., people who are blind, deaf, hard of hearing)
  - Cognitive (e.g., people with mental illness, learning disabilities, mental retardation/developmental disabilities).
- ***Some people with disabilities may have co-existing disabilities.*** Planners will recognize that some individuals have co-existing disabilities. For example, there may be a person in a wheelchair who is also mentally retarded/

<sup>6</sup> Several disability organizations, such as the National Organization on Disability (NOD), place the number of people with disabilities higher; they estimate the number is 54 million with approximately 20 percent of the population affected by one or more disabilities (NOD, 2005).



developmentally delayed (MRDD). During an evacuation, much like the dementia example cited before, many factors must be considered including level of understanding of emergency evacuation messages, appropriately moving the person in a wheelchair, and knowing where the person will be evacuated once moved. Several entities will most likely be involved, including caretakers/family members, home health aides, emergency medical services (EMS), **ambulette** services, and others.

- **There is an overlap of aging and disability.** There is a high correlation between aging issues and disability. According to the 2000 US census, there are over 14 million people over the age of 65 who also have one or more disabilities.
- **Likewise, there are young people who have one or more disabilities.** There are 5.2 million children between the ages of 5 and 20 with a disability in the United States, according to the 2000 US census.

The Transit Cooperative Research Program (TCRP) report, *Public Transportation, Emergency Mobilization and Emergency Operations Guide*<sup>7</sup>, includes evacuation planning information for people with disabilities. This guide discusses how message warnings should be in various and alternate formats (e.g., Braille, large font, and verbal) as well as general guidelines on evacuating communities.

### People with Medical Conditions<sup>8</sup>

Many people throughout the United States may have one or more existing medical conditions, some more severe than others. For the purposes of this primer, “**people with medical conditions**” will refer to individuals who have one or more medical diagnoses that may or may not interfere with activities of daily living, but who may need assistance during an emergency evacuation. This may include, but is not limited to, people with:

- Cancer
- Alzheimer’s and other forms of dementia
- Psychiatric disabilities such as schizophrenia, bipolar disorder, severe depression, severe anxiety borderline personality
- Heart conditions such as heart disease, congestive heart failure, stroke
- Multiple Sclerosis
- Cerebral Palsy
- Severe traumatic brain injuries

<sup>7</sup> *Public Transportation, Emergency Mobilization and Emergency Operations Guide (2006)*, [http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp\\_rpt\\_86v7.pdf](http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_86v7.pdf)

<sup>8</sup> If a person with a medical condition becomes debilitated, limited, or otherwise impaired, he/she may be protected under the ADA.



- Parkinson's Disease
- Diabetes.

Examples of individuals with medical conditions who may need assistance during an evacuation may include some who have:

- A stable medical or psychiatric condition, but will need access to medications
- Oxygen or other specific medical needs
- Weight beyond the safety restrictions of general issue cots or requiring lifting equipment
- Difficulty in eating, dressing, bathing, and/or using the toilet
- Ambulatory challenges, requiring assistance with ambulation, mobility, position change, and transfer
- Periodic observation needs (e.g., glucose, vital signs, ostomy, urinary, catheter care)
- Periodic wound care assistance
- Full-time medical or pharmaceutical needs outside of hospitalization.

## CRCFs

CRCFs include nursing homes, assisted living centers, drug treatment centers, group homes, residential homes, foster homes, adult and childcare facilities, etc. Emergency management, transportation, and other coordinating agencies or entities (such as paratransit, ambulettes, and NGOs) should give specific consideration to planning for and evacuating CRCFs. It is important to keep in mind that while nursing homes are required to have evacuation and emergency plans in place, not all residential care facilities are under the same requirements. Regulating authorities and roles and responsibilities must be taken into consideration when evacuating CRCFs.<sup>9</sup>

CRCFs should have strong and comprehensive shelter-in-place and operational continuation plans in effect in addition to plans to safely evacuate patients and staff to an alternate facility during disasters. The ADA mandates that evacuation planning and operations take into account accessibility issues. In addition, Section 504 of the Rehabilitation Act states that “no otherwise qualified individual with a disability in the United States, as defined in section 7(20) shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance or under any program or activity conducted by any Executive agency or by the United States Postal Service.” This includes all government entities that conduct the planning for or participate in evacuation operations, particularly those that

The American Association of Homes and Services for the Aging estimates that more than 1.4 million people live in nursing homes and 900,000 in assisted living residences in the United States. Of these, 150,000 individuals receive care and services at an adult day center, and 1.1 million seniors reside in some type of senior housing community.

<sup>9</sup> Cahalan and Renne, 2007

The US General Accounting Office's 2006 report *Preliminary Observations on the Evacuation of Vulnerable Populations due to Hurricanes and Other Disasters* states:

"In preparing for and carrying out the evacuation of transportation-disadvantaged populations who are not in institutions during a disaster, states and localities face challenges in identifying these populations, determining their needs, and providing for and coordinating their transportation. Identifying these populations and determining their needs present challenges because their overall size, location, and composition can be difficult to determine in advance of an emergency."

receive DOT funding.<sup>10</sup> Chapter 6 of this primer includes additional details about CRCFs.

### People with No Access to a Vehicle

In this primer, "people with no access to a vehicle" sometimes called carless populations, refers to individuals and families in a community that do not have a personal vehicle and generally rely on public transportation on a daily basis. They may not have a vehicle for reasons including economic factors, geographic location (e.g., residents of urban areas may not own a vehicle), health conditions (e.g., those with physical disabilities, some of the very elderly), environmental conscientiousness, and those without a license. Regardless of why they do not have a vehicle, their needs must be incorporated into emergency evacuation plans and considered during emergency evacuations.

Transportation agencies must consider those dependent on public transportation as part of their planning responsibility. "People without vehicles"<sup>11</sup> ("transportation-disadvantaged") is a broad category, which will need to be identified on the local level. This population may be concentrated in urban (e.g., high-rise apartments, public housing) and rural (e.g., migrant farm community, elders) areas.

### Homeless Populations

Many urban and suburban environments have homeless populations within them. According to the National Coalition for the Homeless (NCH) in 2007, homelessness can be either permanent or temporary, with some families and individuals moving in and out of homelessness. The NCH estimates that there are some 3.5 million people in the United States who are homeless, but the NCH cautions that the number is realistically higher because of restraints on how to define and count homeless populations. These restraints include the transient nature of the homeless population, difficulty with data collection methodologies, and difficulty in locating people who are homeless as they often stay in cars or "make-shift" housing such as tents or boxes.

Although the movement of homeless populations during an emergency evacuation is not specifically addressed herein, they should be considered among those with limited access to transportation, and strategies for communicating pick-up points to the homeless should be considered. Some homeless populations have health conditions; others have limited English proficiency. They may reside in temporary shelters or eat at kitchens that serve the homeless.

<sup>10</sup> Cahalan and Renne, 2007

<sup>11</sup> Communities throughout the country use different terminology regarding people who do not have access to their own vehicle. For example, the State of Florida refers to such populations as "transportation-disadvantaged" ([www.dot.state.fl.us](http://www.dot.state.fl.us)). The General Accounting Office, DOT, and FHWA use both "transportation-disadvantaged" and "people without cars" ([www.gao.gov](http://www.gao.gov), [www.dot.gov](http://www.dot.gov), [www.fhwa.dot.gov](http://www.fhwa.dot.gov)).



Pinellas County Florida's plan, *Homeless Hurricane Evacuation/Sheltering Plan* (2006), illustrates some of the issues that must be addressed when evacuating homeless populations including, but not limited to:

- Communicating with a transient population who has very limited access to radio, television, or the Internet; who may not speak English; or who may have low levels of literacy
- Helping the homeless population access transportation during an emergency
- Appropriately managing people who are mentally ill and/or substance abusers and homeless
- Keeping homeless families together during an evacuation.

### Correctional Facilities

Correctional facilities manage the evacuation of their resident population in coordination with, but separately from, general community evacuations including special needs populations. The facility operators address issues such as security and detention for the safety of the incarcerated evacuees and protecting the public from potential escapees. Prisons are subject to the same hazards as the general public and, as such, significant facility-specific planning must be a part of evacuation considerations.

Prisons are required by law to have their own transportation and evacuation plans. If the facility cannot provide appropriate transportation, requests for assistance should be directed to the relevant EMA, as with all resource requests. The EMA will coordinate with transportation agencies if needed. In such cases, transportation agencies may need to provide additional staff and vehicle resources. Normally, prisons will evacuate in advance of other populations and should never be transported with general populations. They are sheltered at like facilities as available—federal-to-federal, county-to-county, etc. However, there are county and state prisons that do provide (“rent out”) space to the federal prisons. These arrangements are generally not in the scope of emergency planners, except to coordinate with them to ensure they have plans in place and do not need additional assistance from the local government. (See **Case Study #3 in Annex 5.**)

### Service Animals and Household Pets

For the purposes of this primer, animals will be discussed in two categories: (1) service animals and (2) household pets. The ADA defines service animals as “any guide dog, signal dog, or other animal individually trained to provide assistance to an individual with a disability, including but not limited to, guiding individuals with impaired vision, alerting individuals with impaired hearing to intruders or sounds, providing minimal protection or rescue work, pulling a

The National Institute of Corrections commissioned guidance for responding to a variety of prison emergencies, including transportation needs, titled *A Guide to Preparing for and Responding to Prison Emergencies: Self-Audit Checklists, National Survey Results, Resource Materials, Case Studies*.

National Institute  
of Corrections  
([www.nicic.org](http://www.nicic.org))

A household pet is defined in FEMA's *October 27, 2007 Eligible Costs Related to Pet Evacuations and Sheltering* (DAP9523.19) as a “domesticated animal, such as a dog, cat, bird, rabbit, rodent, or turtle that is traditionally kept in the home for pleasure rather than for commercial purposes, can travel in commercial carriers, and be housed in temporary facilities. Household pets do not include reptiles (except turtles), amphibians, fish, insects/arachnids, farm animals (including horses), and animals kept for racing purposes.”

wheelchair, or fetching dropped items.”<sup>12</sup> Service animals assist people with disabilities in various activities including sight (seeing-eye dogs) and hearing (hearing dogs). Often, a service animal enables a person with a disability to live independently. This is why it is critical that officials do not separate people with disabilities from their service animal during an evacuation. Household pets must not be confused with a service animal. **Chapter 7** further discusses both service animals and household pets.

## SUMMARY

This chapter provides an overview of the primer and its purpose as well as highlights the challenges in defining populations with special needs. It is important for each community to determine how to define special needs for the community and how to best plan for and address those needs. The remaining chapters of the primer provide more specifics on relevant legislation, more detail to support each phase of evacuation, and additional resources for further information on these topics.



---

<sup>12</sup> Americans with Disabilities Act, 1990 ([www.ada.gov](http://www.ada.gov))

# CHAPTER 2: LEGISLATIVE FRAMEWORK

As one of the most devastating events to impact the United States in recent times, Hurricane Katrina played a pivotal role in legislatively enforcing the inclusion of special needs populations in all aspects of emergency management, including mitigation, planning, response, and recovery efforts. During the immediate aftermath of Hurricanes Katrina and Rita in 2005, media coverage of people with disabilities and medical conditions stranded on bridges, nursing homes, and rooftops with little hope of rescue left a horrific and indelible mark on the psyche of Americans and those around the world. Statistics documented in *Impacts and Contributions of Older Persons in Emergency Situations: A Case Study of Hurricane Katrina in the United States of America*<sup>13</sup> and the US General Accounting Office's (GAO's) *Disaster Preparedness: Preliminary Observations on the Evacuation of Vulnerable Populations Due to Hurricanes and Other Events*<sup>14</sup> cited that:

- There were approximately 1,464 reported deaths. Of the 910 recovered by the Disaster Mortuary Operational Response Team (DMORT), 64 percent were 65 years of age and older.
- In New Orleans alone, 15 percent of the population was over the age of 60; 74 percent of known victims were in this same age group. During Hurricane Katrina, the National Disaster Medical System (NDMS) assisted in evacuating 2,900 patients from mobilization centers to patient reception areas. It was the first time the NDMS patient evacuation component was activated.
- There are higher numbers of elderly who are transportation disadvantaged because of the overlap between age, disability, low income, and less likelihood of driving.

The National Council on Disability (NCD) released a report in 2006 outlining how the government failed to assist people with psychiatric disabilities during Hurricanes Katrina and Rita, and identifying major violations of the law on several accounts including discrimination during evacuations. The findings indicate that the mismanagement of evacuating people with psychiatric disabilities

<sup>13</sup> Tokesky & Weston (2006)

<sup>14</sup> GAO, *Disaster Preparedness: Preliminary Observations on the Evacuation of Vulnerable Populations Due to Hurricanes and Other Events* (2006). <http://www.gao.gov/new.items/d06790c.pdf>

## GLOSSARY TERMS USED IN THIS CHAPTER

Older Americans Act of 1965 (OAA)

Reasonable  
Accommodations

The 2006 NCD report noted that some people with psychiatric disabilities "had difficulty comprehending the evacuation messages and other essential communications and some were treated roughly because they could not follow the instructions".

NCD, "The Needs of People with Psychiatric Disabilities During and After Hurricanes Katrina and Rita: Position Paper and Recommendations" (2006)





resulted in losing residents, mistreatment, and inappropriate institutionalization. According to the report:

Disaster response plans often did not include protocols to evacuate people with psychiatric disabilities. During evacuations, emergency officials physically lost residents of group homes and psychiatric facilities many of who are still missing. Others have not or cannot return home because essential supports have not been restored or because the cost of living has increased too much. When people with psychiatric disabilities arrived at evacuation locations—ranging from state parks to churches—those locations often were not prepared to meet the medical and mental health needs of the evacuees with psychiatric disabilities. Many people with psychiatric disabilities never made it to evacuation shelters because they were inappropriately and involuntarily institutionalized. Some of these people still have not been discharged, despite evaluations that indicate they should be.<sup>15</sup>

The catastrophic events of September 11, 2001, and Hurricanes Katrina and Rita in 2005 have led to the integration of special needs issues into emergency management planning at the national level. This section highlights key legislation and federal initiatives associated with special needs populations and emergency management; however, it is not a comprehensive list. There is still debate among key planners at the national level about different components of the planning (for example, the very definition of “special needs populations” is widely contested). Therefore, as local planners use national guidance and become familiar with the latest opinions and views on these issues, solutions will be developed to meet local capabilities.

## DISASTER PREPAREDNESS IN FEDERAL LEGISLATION, REGULATIONS, POLICY

All levels of government share responsibility for preparing for and responding to disasters, depending on the size and scope of the disaster. The local government level maintains the primary responsibility and authority for disaster preparedness and response, including evacuations. Good practices dictate that local governments work with individuals and families to prepare for disasters and potential evacuations. Local political authorities retain the responsibility for issuing evacuation orders and executing evacuations. When local governments are unable to effectively respond to a disaster, they may request assistance from other local governments and their state, territory, or tribal nation. Likewise, when a state is unable to meet the needs of the local governments requesting assistance, the state may request mutual aid from other states and the federal government. The following sections focus on the aspects of existing laws related to special needs populations. Table 2-1 provides a brief overview of some existing legislation, and **Annex 2** provides additional details.

<sup>15</sup> NCD, “The Needs of People with Psychiatric Disabilities During and After Hurricanes Katrina and Rita: Position Paper and Recommendations” (2006)

Table 2-1: Legislation Summary

TITLE OF LEGISLATION	TYPE OF MANDATE	DESCRIPTION	HOW RELATES TO SPECIAL NEEDS
Robert T. Stafford Disaster Relief & Emergency Assistance Act (PL. 93-288)	Law	Established the Presidential Disaster Declaration system, which triggers federal financial and resource assistance to eligible states and local authorities through FEMA.	Special needs fully integrated into emergency management.
Americans with Disabilities Act (ADA) of 1990	Law	Mandates that all public and private sector facilities come into and remain in compliance, provide <b>reasonable accommodations</b> , and be accessible. Access must be both physical (e.g., architectural barriers) and programmatic.	Public facilities should consider the needs of people with disabilities in emergency evacuation planning.
<b>Older Americans Act of 1965 (OAA)</b>	Law	An anti-discrimination law that classifies older Americans as a legally protected class.	Can be used to authorize funds to assist older Americans in the recovery process primarily because OAA provides grants to states for community planning and services.
2004 Executive Order (13347) and Creation of the Interagency Coordinating Council on Emergency Preparedness and Individuals with Disabilities	Exec Order	Established to ensure that the federal government appropriately supports safety and security for individuals with disabilities in disaster situations.	Consider the unique needs of employees and individuals with disabilities served by state, local, and tribal governments, and private organizations and individuals in emergency preparedness planning.
Health Insurance Portability and Accountability Act (HIPAA)	Law	Requires uniform federal privacy protections for individually identifiable health information.	Medical information of people with special needs must be protected.
Pet Evacuation Transportation Standards Act of 2006 (PETS Act)	Law	All cities and states must have a pet plan in place to receive FEMA funding.	All emergency evacuation plans must include policies and procedures for evacuating both service animals and household pets.
HHS, Pandemic and All-Hazards Preparedness Act	Law	Focuses on public health and medical bioterrorism preparedness as well as all hazard medical surge capacity.	The needs of “at-risk” individuals should be taken into account in managing preparedness initiatives such as the Strategic National Stockpile (SNS) and grants to states.





# CHAPTER 3: PLANNING AND PREPAREDNESS – OVERVIEW

The best way to prevent injury and loss of life during an emergency evacuation is advance planning that prepares transportation agencies, EMAs, and the special needs population. Experience shows that without proper planning and community preparedness, disasters become even more chaotic and unnecessary loss of life and injuries result. In short, those with disabilities may face increased risk, higher death rates, and difficulty in evacuating without prior planning at both the household and agency levels.<sup>16</sup>

## TRANSPORTATION NEEDS

It is important to properly store, maintain, and document the number of buses being identified for emergency contingency purposes and to perform maintenance on and test the inactive fleet often. Some of the vehicles to be used for transportation in an evacuation may be owned by various public and non-profit agencies. If these vehicles are insufficient to meet the need, it may become necessary to contract for vehicles.

On a federal level, FEMA has committed to supporting state and local agencies with transportation resources for evacuation. According to *USA Today* on September 11, 2008, prior to the landfall of Hurricane Ike, Glenn Cannon, FEMA's Assistant Administrator for Disaster Operations said "FEMA has contracts in place for trains, planes, and buses, in case local authorities order evacuations."<sup>17</sup> It is important for communities to identify how many and what type of vehicles will need to be acquired through a contract, what agency holds that contract, what the requirements are to use the contract, what the specifications are for specialized equipment to support moving those with special needs, and how costs are accounted for and reimbursed under the contract. Local

The Federal Transit Administration (FTA), through its report *Disaster Response and Recovery Resources for Transit Agencies*, recommends that a contingency fleet of vehicles be kept and maintained in case of emergency or disaster when feasible.

FTA, 2006, *Disaster Response and Recovery Resource for Transit Agencies*

### GLOSSARY TERMS USED IN THIS CHAPTER

Congregate Care Like-to-Like Sheltering  
Cognitive Disabilities  
Emergency Alert System (EAS)  
Emergency Operations Centers (EOCs)  
Emergency Support Functions (ESF)  
General Population Shelters  
Geographic Information System (GIS)  
Hospitals  
Mutual-Aid Agreements  
Special Needs or Medical Needs Shelters or Units  
Transfer Trauma

<sup>16</sup> McGuire et al., 2007.

<sup>17</sup> "Evacuation Fatigue" a Concern as Ike churns toward Gulf, *USA Today*, September 11, 2008, [http://www.usatoday.com/weather/hurricane/2008-09-08-hurricane-ike-cuba\\_N.htm](http://www.usatoday.com/weather/hurricane/2008-09-08-hurricane-ike-cuba_N.htm)



jurisdictions should work with local and state EMAs to ensure these requirements are included with the request for Presidential disaster declaration and/or coordinated with FEMA in advance to ensure rapid delivery of these transportation resources.

The Federal Transit Administration (FTA) recognizes that “Transit’s unique role in facilitating the evacuation of people with special needs before and after an event needs to be coordinated and planned for in advance.”<sup>18</sup> Those who may require transportation assistance include:

1. Individuals who can independently get to a pick-up (evacuation) point
2. Individuals who live independently and require transportation from their location
3. Individuals who live in a group setting (e.g., group home, assisted living center) that require transportation directly from their location
4. Individuals in acute care/in-patient facilities
5. Individuals with disabilities
6. Individuals with limited English proficiency.

FTA recognizes that increased coordination (at both state and local **Emergency Operations Centers [EOCs]**) among **Emergency Support Function (ESF)-1: Transportation, ESF-6: Mass Care, ESF-7 Logistics Management and Resource Support, and ESF-8: Health and Medical Services** is necessary to ensure adequate, timely, and efficient transportation to and from individual residences, group homes, shelters, assisted living facilities, and hospitals. According to FTA, planners should be aware of the:

- Need to coordinate the identification of individuals with specialized needs, their locations, and their requirements for transportation assistance (e.g., type of vehicle, language translation services) prior to an emergency event.
- Need to coordinate the roles, responsibilities, and dispatching functions for paratransit services to evacuate individuals requiring transportation from their location. This includes the interface with human service transportation providers (e.g., Medicaid, aging).
- Need to coordinate resumption of critical health care functions such as dialysis treatments and outpatient treatment. This may also include treating patients with limited English proficiency, so translators should be included in treatment plans.
- Need to coordinate post-event efforts and manage special needs patients in shelter settings.

<sup>18</sup> Federal Transit Administration, 2006, *Disaster Response and Recovery Resource for Transit Agencies*, <http://transit-safety.volpe.dot.gov/publications/safety/DisasterResponse/PDF/DisasterResponse.pdf>

- Requirements for transporting people with special needs:
  - Define roles of public transit agencies
  - Coordinate people with special needs lists with community transportation coordinators and ADA passengers
  - Pre-plan routes to serve people with special needs.

In 2008, the Transportation Research Board (TRB) released its Special Report 294, *The Role of Transit in Emergency Evacuation*, which “explores the role that transit systems can play in accommodating the evacuation, egress, and ingress of people to or from critical locations in an emergency.”

## CHALLENGES FOR EMERGENCY EVACUATION PLANNING AND PREPAREDNESS

Several challenges exist when planning for the evacuation of people with disabilities. Planners should consider the following:

1. Recognize clearly that people with disabilities include diverse situations and conditions from mobility to sensory to **cognitive disabilities**.<sup>19</sup> Medical conditions must also be considered.
2. Disabilities may be permanent or temporary, and the number of people with disabilities may vary over time. As many as one in every five people is expected to experience at least a temporary disability.<sup>20</sup> Moreover, the number of people with disabilities in the United States is expected to rise over the next 30 years.<sup>21</sup> As the number of people with disabilities and medical conditions increases, access and inclusion of them remains low and problematic, especially regarding disasters and emergency evacuations. Plans should be adjusted routinely to account for changes in the number of people and scope of evacuations of those with special requirements.
3. An individual may experience multiple types of disabilities simultaneously such as a blind amputee who requires both a wheelchair and service animal.
4. Other situations and conditions may interact including limited language abilities, age, poverty,<sup>22</sup> and cultural differences. For example, an elderly immigrant with a mobility limitation may speak only her native language, relying on a younger member of the family for translation. The older

According to the TRB Special Report 294, “Transit has a unique role in evacuating the carless and special needs populations—such as the disabled, the elderly, and the medically homebound—in an emergency; but most local evacuation plans do not address the needs of these groups adequately.”

<sup>19</sup> National Organization on Disability, N.D.

<sup>20</sup> N.F.P.A., 2007.

<sup>21</sup> Schmid, R, “U.S. Must Prepare for Growing Disabled Population, Study Says,” *Orlando Sentinel*, April 25, 2007.

<sup>22</sup> It is important to note that income levels tend to be lower among those with disabilities, thus reducing the likelihood that they possess transportation and/or resources such as being able to purchase gasoline for an evacuation.

person would need to be transported with the family member acting as translator.

5. Geographic location matters. Many people in urban areas rely on public transportation systems to move about or may use transportation provided by non-profit organizations, senior services, or city agencies. Seniors with disabilities who are low income represent a particularly vulnerable group.
6. Few jurisdictions have staff familiar with disabilities in general, let alone evacuation planning.<sup>23</sup> Therefore, people from the disability community must be included in emergency evacuation planning and preparedness; they bring real perspectives, ideas, and experience to the planning process. This practice is clearly recommended by Executive Order 13347: Individuals with Disabilities in Emergencies.
7. Many proposed solutions such as registries, buddy systems, and transportation inventories represent untested ideas that may carry as many risks and challenges as they do potential benefits. From a transportation perspective, it is important to consider whether there are enough resources to pick up individuals and possible caretakers/family members and transport them to the designated facility. Caretakers and family should never be separated during transportation, and agencies need to plan accordingly.

### Identifying Special Needs Populations

A recommended starting point to plan for special needs population evacuations is to gather baseline data on the number and types of people with disabilities.<sup>24</sup> Using census data, information from social service and home health agencies and other supporting organizations can provide an initial snapshot for planning purposes. MPOs and state DOTs are required by law to address the needs of environmental justice and Title VI populations in their systems planning processes (23 CFR 450). As a result, they must document where these populations are located. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (Sec 6001 – Planning/ 23 USC 134 and 135; 23 CFR 450) contains requirements for transportation agencies in security.

Once the general number and type of disabilities is known, it may be possible to create a specialized registry that identifies the location of those at risk.

**Geographic Information Systems (GIS)** can be used to create displays for planning purposes. However, such registries can be time-consuming and expensive, and individuals may be reluctant to self-disclose their conditions

The Oahu MPO in Honolulu, Hawaii, identifies the environmental justice and Title VI populations on the island of Oahu in the report *Environmental Justice in the Oahu MPO Planning Process: Defining Environmental Justice Populations (2004)*, <http://oahumpo.org/T6EJ/t6ej.html>

<sup>23</sup> Department of Homeland Security, 2006.

<sup>24</sup> McGuire et al., 2007.

or other personal information.<sup>25</sup> Registries must be available to those who need to use them and not locked up during an event.<sup>26</sup> If registries are used, transportation agencies must be part of the team that develops and uses them during exercises and emergencies. Limited evidence to date suggests that registries must be specialized and linked to inventories of transportation assets.<sup>27</sup>

## Training

Training staff to work with people with disabilities is important. Many first responders and emergency management and transportation personnel lack understanding of disabilities, including how to communicate with and/or physically move an individual in a wheelchair or with very specialized equipment. FEMA's training course, *Emergency Planning and Special Needs Populations* (G-197),<sup>28</sup> addresses many of the concerns regarding people with disabilities and emergency management training. However, the G-197 course is not specific training for transportation agencies on evacuating people with disabilities; rather, it is an overview course that teaches participants how to include special needs populations in all phases of emergency management.

Transportation agencies must remain alert to training as it unfolds nationally and within the state and look for local training opportunities. For example, a transportation agency could have a local agency that works with visually impaired and blind populations train bus drivers or have bus drivers go to a state school or a nursing home to interact with staff and residents to gain experience in understanding people with dementia, mental retardation, etc. A starting point may be to bring representatives from the disability community together with transportation responders to discuss key issues and concerns. Including people with disabilities in emergency evacuation exercises and drills will provide valuable and practical information to transportation agencies.

## Outreach

Transportation agencies can participate in and support efforts to educate those at risk. FEMA and the American Red Cross (ARC), among others, recommend that persons with disabilities engage in self-education, personal planning, and preparedness. People with disabilities should develop a personal support network and an evacuation kit. People with disabilities will be motivated to evacuate when they believe that those assisting them are truly ready to meet their individual needs.<sup>29</sup> Furthermore, building trust between those at

The Oklahoma Assistive Technology Program is specifically designed to provide critical information to first responders regarding evacuating people with disabilities.

Transportation agencies can help disseminate information prior to an event and can encourage those at risk to prepare, thus reducing the numbers of persons requiring assistance during an evacuation.

<sup>25</sup> Metz et al, 2002.

<sup>26</sup> California Independent Living Council 2004.

<sup>27</sup> GAO, 2006.

<sup>28</sup> FEMA G-197, *Emergency Planning and Special Needs Populations*, is a course that was developed by emergency management and special needs specialists to show how to integrate special needs populations into all aspects of emergency management. The course can be accessed on the FEMA EMI Web site at <http://training.fema.gov/IS/>.

<sup>29</sup> Van Willigen et al., 2002.



risk and those involved in evacuation is important. Individuals, particularly the elderly and those with serious health problems, are most likely to evacuate when they trust in the credibility of local officials.<sup>30</sup>

Early evacuation of those with special needs must be a priority.<sup>31, 32</sup> Failure to evacuate early may result in increased risk of death, delays due to clogged transportation arteries, and elongated evacuation times that may heighten **transfer trauma** and other conditions. Those who are left may very well die.<sup>33</sup> Consider the following:

- Collaborate with community agencies engaged in emergency transportation planning. If an emergency transportation-planning group does not exist in your area, start one.
- Schedule a meeting with the agencies engaged in emergency management in your community and ensure they understand what messages need to be delivered to the special needs populations in your community. It is important that the transportation agencies have clear messages that can be communicated to the general public and special needs populations. Assist those agencies in educating the public. Designate a few people to receive training in delivering emergency preparedness information.
- Assist the EMAs in your community in distributing pamphlets, guides, and/or other materials (e.g., bus drivers can have emergency preparedness brochures on buses to distribute).
- Participate in exercises and drills as well as regular community events. Offer transportation during non-disaster times, such as to state fairs or other local events so that familiarity increases, credibility builds, and people gain experience interacting with each other.
- Negotiate a co-branding agreement wherein your agency is permitted to reprint other agencies' materials with your transportation agency's logo.
- Remember not to always focus on the "needs" of the special needs populations in your community; remember their abilities as well. Emergency preparedness, response, and recovery begin at the individual level and assisting people to be prepared, where appropriate, will ultimately make your job easier when an incident occurs. This applies to transportation agencies as well as all agencies involved in emergency management and response.

<sup>30</sup> Rosenketter et al., 2007; Tierney, Lindell and Perry, 2001.

<sup>31</sup> Kirkpatrick et al., 2004.

<sup>32</sup> In terms of prioritized evacuations, check with local and/or state EMAs regarding protocols for evacuating people with disabilities and medical conditions. If no protocols are in place, transportation agencies may want to support local and state EMAs in working with special needs organizations to put protocols in place as well as provide traffic and other relevant analysis to EMAs for priority evacuation of special needs populations.

<sup>33</sup> McGuire et al., 2007.

## Planning “With” versus Planning “For” People with Special Needs

Transportation agencies need to engage and plan with the disability and special needs community, especially with regard to emergency evacuation procedures and transportation. It is imperative that the planning process also include the disability community. The following is a checklist to ensure that special needs issues are integrated into emergency evacuation plans and other initiatives. Since some of these activities will be ongoing, it is important to establish the roles and responsibilities of each agency. There are a number of Web sites that can provide information about federal public involvement requirements and techniques. These are included in **Annex 6** of this primer.

- ☑ Organize the initial emergency evacuation planning team. Hold a kick-off meeting and include American Sign Language (ASL) interpreters if requested, microphones for the hard of hearing, and other languages as needed. Make sure the meeting location is accessible. A transportation agency may want to work with the local EMA to co-host this kick-off meeting and offer to co-lead future meetings.
- ☑ Establish ongoing meetings and reviews (get buy-in from the organizations to continually be a part of the planning and response process; this includes educational outreach into the disability and special needs community and responders).
- ☑ Determine jurisdictional strategies, timelines, and community needs for evacuation in coordination with local EMAs and the disability community.
- ☑ Identify and develop resources to address the information needs of special populations within your community. This might include examining existing Web sites, hotlines, brochures, flyers, **Emergency Alert System (EAS)**, media outlets, volunteer groups, and communication technologies (e.g., pagers, calling systems).
- ☑ Design multiple and redundant means to reach and communicate with the disability community and the local EMA.
- ☑ Identify a variety of viable options in the plan and focus on abilities. The special needs community is very diverse. There is no “one quick fix” that will meet all of the needs of all of the members of special needs populations.
- ☑ Coordinate with the disability community in establishing cross training for transportation personnel and the special needs population, especially in regard to the movement of people with mobility and medical needs. For example, a person with a physical disability can show a transportation staff member how to move him/her from the wheelchair to the transport vehicle with minimal complications. Likewise, transportation agencies can teach the disability community about organizing evacuation routes and the challenges they face. Together, transportation agencies and the disability community can come up with joint solutions.



After Hurricane Katrina, hundreds of people with disabilities were separated from critical equipment resulting in the need for those that moved and received evacuees to provide individual support and replace highly specialized and expensive equipment.

National Organization on  
Disability, 2005

- ✓ Consider the needs of the medically fragile, who may be dependent upon their caregivers to plan for, manage, and provide appropriate transportation to various sites, such as shelters or points of distribution.
- ✓ Reexamine, test, and update systems pertaining to emergency evacuation of people with disabilities and those with other unique disaster-related needs. Test these plans through emergency evacuation tabletops, exercises, and drills. Identify the types of vehicles needed to move people with mobility and medical needs and include those agencies at planning meetings as well as exercises and drills.
  - Inventory and develop **mutual-aid agreements** with other agencies, jurisdictions, private faith-based groups, state schools, and airport shuttle services to identify available transportation assets.
  - Cross-analyze the available vehicles with the registry of people needing assistance in evacuating and map it using GIS (if one exists).
- ✓ Provide a robust communication and education program specifically geared toward people with disabilities, seniors, and other individuals with specific needs.
- ✓ Consider the following for emergency evacuation planning committees:
  - Foster open dialogue about emergency response and concerns of the special needs population.
  - Improve community awareness and appropriate response utilization and management.

**Chapter 4** of this primer provides more specific information on communicating with special needs populations and the community in general.

## MEDICAL NEEDS

Movement of people with medical needs, particularly senior citizens, must be conducted carefully to avoid transfer trauma.<sup>34</sup> Transfer trauma occurs when those who are moved die as a result of the movement (see **Chapter 6**). Movement of those with DME may require additional time. After Hurricane Katrina, people with disabilities were forcibly separated from service animals, resulting in further challenges to their mobility and independence. In addition to compliance with the ADA, keeping people with their caretakers, DMEs, and service animals reduces the burden on the shelter (see **Chapter 2**).

### Medical Support Personnel

Emergency evacuation planning for personnel must include both transportation staff and medical staff or caretakers. When transporting people with

<sup>34</sup> Fernandez et al., 2002.

medical conditions, equipment and medicine will need to be transported along with the person.

As will be discussed in **Chapter 6**, it is imperative to transport medical personnel and/or caregivers with people with medical conditions. Staffing needs and ratios when transporting people with medical requirements during an evacuation are evaluated differently than a non-emergency movement because of the technical skill sets required to ensure adequate care. For example, people with medical needs will need a healthcare professional, such as a nurse or home health aid, who will be responsible for providing an advanced level of care to the person.

When considering staffing recommendations for evacuations, establish standards for both medical personnel who will be transported with the person as well as people who are alone and may need assistance. Planners should keep in mind that personnel (caretakers, personal attendants, buddies, family, and friends) may be unable to get to the person's home during an emergency, and transportation personnel should be aware of this and how to manage these types of contingencies (e.g., should the driver wait or move without the caretaker). Transportation agencies must be prepared to assist those with special needs to move themselves physically as well as move their equipment and service animals and the animal's emergency kit.<sup>35</sup>

Each jurisdiction, in conjunction with its planning committee, will need to make reasonable adjustments to its plans based on capacity and resources. Recognizing that adjustments will be made, good plans include ideal staffing levels as a goal. Many jurisdictions use established staffing models, which should be reviewed by the planning committee. However, most jurisdictions may not have adequate medical or transportation staff to meet the ideal staffing standards or needs. Commitments for support may be established in local or state mutual-aid agreements or jurisdictions may adjust mutual-aid agreements to address the supply of medical personnel. If staffing models are used, they should incorporate specific technical support (e.g., registered nurses, nurse practitioners, and medical doctors), the client-to-professional ratio, and the number of vehicle drivers required.

Transportation agencies also should work with local health authorities, DME suppliers, and other medical care personnel. Plans should address transportation staff shifts, especially if those with special support requirements are evacuated before the general population. Transportation staff should know protocols and be trained on:

- Moving people with medical conditions (including bedridden, oxygen-dependent, and those with respirators)

Transportation agencies must train their drivers and others in communication, interaction, lifting, and other tasks and should include those who can do this (e.g., advocacy organizations, community emergency response team members, and others) on board the vehicle to free up the driver.

Planning groups may coordinate with neighboring jurisdictions and the state to obtain commitments for support.

<sup>35</sup> It is important to be aware that liability issues and work place safety issues may arise. In the planning phases, it is prudent to involve your agency's general counsel in discussions of liability and workplace safety. By addressing these issues proactively in the planning process, before the disaster strikes, agencies are able to develop solutions in advance.



Pre-selected locations for those with special support requirements tend to be more common in areas that experience frequent events. More rural areas or areas that do not experience a widespread impact may not have pre-designated or sufficient numbers of special needs shelters.

The “No Household Pets” policy in general population shelters does not apply to service animals (see [Chapter 7](#)).

The special needs shelter may be a stand-alone shelter or a special needs unit within the general population shelter. By offering skilled medical staff, medical supplies, specialized equipment, and special dietary provisions, the special needs shelter will provide a higher level of care than at a general population shelter.

- Assisting people with mobility limitations including quadriplegics, paraplegics, and stroke survivors
- Asking for guidance from the person with special needs prior to touching, lifting, or otherwise moving an evacuee.

## SHELTERS AND THE ROLE OF TRANSPORTATION AGENCIES

Prior to, during, or after a disaster, there is often a need to establish areas of safe refuge or shelters to temporarily house those who are displaced as a result of a disaster. It is essential, although not always common, to be prepared to shelter or provide safe refuge during an emergency or disaster to all individuals (including those with special needs) within a community who do not have an alternative such as friends and family. While the focus of this primer is not sheltering, the primer does provide an overview of some primary considerations. Transportation agencies participating in evacuation planning and operations must be aware of their jurisdiction’s sheltering plan and know which facilities will receive people with special needs during an emergency evacuation.

Transportation agencies move people to shelters, which are presumed to be safer, more secure locations. Shelters housing those with special requirements constitute specially designated locations. During disaster events, EMAs will identify functional shelters that may or may not conform to evacuation plans. Shelters often take the form of general population shelters, special/medical needs shelters or units, congregate care like-to-like shelters, and hospitals.

Transportation agencies will be transporting their passengers to one or more of these facilities:

- **General Population Shelter:** General population shelters support individuals who can independently support their own needs, including individuals who are with their own caregivers. General population shelters should be, but are not always, accessible for those with mobility disabilities (such as providing entrance ramps, accessible bathrooms, and passageways). If transportation agencies are moving people with disabilities to a general population shelter, contingency plans must be in place in the event the general population shelter is not accessible.
- **Special Needs or Medical Needs Shelters or Units:** Definitions for **special needs or medical needs shelters or units** can vary and depend on the resources available and whether jurisdictions have established such a shelter system. Transportation agencies and emergency evacuation planning committees must clearly understand the type of special needs shelter system that is in place in their local jurisdiction and the types of individuals that may be cared for at these shelters or units. All special needs shelters must be accessible. The level of care provided depends on the availability of resources within the jurisdiction or through its

agreements with out-of-jurisdiction providers. The limits of the special needs shelters must be communicated clearly to the public and transportation agencies. Transportation agencies may aid in the operation of a special needs shelter by moving not only people with medical needs but equipment, medicine, and other resources between facilities.

- **Congregate Care Like-To-Like Sheltering:** This type of sheltering occurs when evacuees are moved from one CRCF to other CRCFs that provide an equal level of care. CRCFs and the recipient facilities should develop a plan to maximize resources and provide a continuum of care for those residents being moved between facilities. Transportation agencies should be aware that residential chain facilities are most likely to be able to do this; small, independent facilities may experience greater difficulty in securing site-to-site beds for patients and clients. As such, communities with smaller, independent facilities may need additional support and may not have destinations pre-arranged. Transportation agency staff should seek to become part of medical planning teams and to participate in exercises, drills, and other types of training. For additional information on CRCFs, see **Chapter 6**.
- **Hospitals:** Sheltering at **hospitals** should be reserved only for the most critical patients who require specialized, skilled care on a regular basis, often those whose condition is likely to deteriorate quickly during an emergency. Hospitals are required to have emergency plans in place. Transportation agency staff should seek to become part of medical planning teams and to participate in exercises, drills, and other types of training.

A person who receives 24-hour home health aid, has an IV drip, and is electrically dependent would be considered fragile, warranting preemptive evacuation to a hospital to receive high-level care.

## Transportation and Shelter Operations

In support of sheltering operations, transportation agencies should:

- Be part of the planning process to pre-designate locations or keep an updated list of such locations.
- Know whom to contact to verify that shelters are open and receiving evacuees.
- Know the locations of general and special needs shelters and if they are open and receiving evacuees.
- Confirm with the shelter manager that they will receive transported evacuees and that the shelter can provide accommodations for the evacuees.
- Ensure that the transportation provider can provide requisite accommodations for evacuees on a given vehicle.

- Inform evacuees of the location and assure them that the shelter is ready for their particular needs, including accommodating service animals, equipment, and support people.
- Complete transport.

Regarding their role relating to shelters, transportation agencies should be familiar with local jurisdiction plans and should ask:

- ☒ Has my agency coordinated with the local EMA and ARC regarding transportation to general and/or special needs shelters?
- ☒ Has the transportation driver discussed shelter locations with those on board?
- ☒ Are the evacuees being prepared to move from the bus to the shelter?
- ☒ What kinds of accommodations exist at the special needs shelters?
- ☒ What categories of special needs evacuees can general needs shelters accommodate?
- ☒ Does the special or general needs shelter know we are en route?
- ☒ Has the special or general needs shelter been notified that our arrival is imminent and that they should stand by to assist us with offloading those needing special care?
- ☒ Are people with medical conditions automatically being sent to a hospital or alternate care facility?



# CHAPTER 4: COMMUNICATION NEEDS

Transportation agencies, their employees, and associated personnel may face considerable challenges in communicating with those in need of transportation assistance. With patience and, where possible, pre-planning, communication efforts can be enhanced. This chapter provides information for transportation personnel on how to better communicate with people who have limited English proficiency, who speak other languages, and who have a disability that affects communications.

## LANGUAGES/LIMITED ENGLISH PROFICIENCY<sup>36</sup>

Depending on the location, languages may vary from primarily English to languages found on every continent. Transportation agencies should devise methods on how to communicate verbally, as well as using text and graphics. For those with limited literacy levels, spoken and written communications—in any language—will not work well. In these cases, “talking boards,” or other graphic tools that use pictures of key tasks (e.g., bathroom, food, location of pain) will be needed on each transportation vehicle. When patients experience cognitive impairments such as Alzheimer’s or other types of dementia, additional communication strategies may be necessary as described below. Accordingly, behaving in a calm, reassuring, and sincere manner may serve as the only means to convey intent. Training staff to communicate through a variety of means will build the confidence of the transportation staff in an evacuation.

Keeping patients and/or people with disabilities together with their ready kits/go bags, buddies, caretakers, equipment, service animals, and/or medical staff goes a long way toward making an evacuation successful. Making a considerable effort to keep them together with key resources will help all dimensions of the transportation process (movement, storage, communication) to flow far better.

Ideally, the pre-planning process will result in the identification of the ways in which transportation agencies can and will communicate with CRCFs and others before, during, and after an event. Communications are often the first thing to fail during an emergency due to a lack of resources (e.g., cell phones,

### GLOSSARY TERMS USED IN THIS CHAPTER

Assistive Devices  
People with Sensory  
Disabilities  
Sign Language  
Interpreter  
Text Telephone (TTY)

Within immigrant families, the elderly are among those least likely to speak English, most likely to be in CRCFs, and with whom communications may be particularly challenging.

<sup>36</sup> *How to Engage Low-Literacy and Limited-English-Proficiency Populations in Transportation Decisionmaking* (2006), [www.fhwa.dot.gov/hep/lowlim/index.htm](http://www.fhwa.dot.gov/hep/lowlim/index.htm)



walkie-talkies, radios), limited range, or disasters destroying communication lines (e.g., cell towers).

One of the most useful activities transportation agencies can undertake is an exercise. Conduct a transfer exercise with volunteers who can replicate the population to be transferred such as local people who speak various languages including sign language or who cannot hear. Practice various ways of communicating among vehicle, agencies, and facilities; with medical staff and caretakers on board the vehicle; and between transportation staff and patients. Conduct a thorough, honest, and intensive debriefing of the exercise to identify places where improvements can be made.

To be prepared to assist people with limited English proficiency, a few tasks can be undertaken:

- Work with local agencies and facilities to identify the range of languages and the possible number of people with limited English proficiency.
- Encourage the local planning committee(s) to identify the types of languages and whether or not the person can communicate with written or pictorial means.
- Devise a strategy to keep caretakers and service animals with the passenger.
- Develop written and pictorial illustrations of various words and phrases that may need to be used during the evacuation process. Develop these in the languages most likely to be needed based on the census taken during evacuation planning. Include copies on board all transportation vehicles and provide copies to each supervisor, driver, and other transportation staff. Focus on the following:
  - What is happening and why (e.g., there is a hurricane coming and we need to move you to safety)
  - The place where the person is being taken and the time it should take to get there
  - The kind of facility that they are being taken to and how they will be cared for
  - What has been done to prepare for their transport and arrival; this will reassure many patients and their caretakers.
- Create consistent, easily readable photo identification badges and shirts for the transportation staff:
  - Color-code the shirts and/or badges to identify supervisors, drivers, and other key staff
  - Give a printed handout in relevant languages and/or with illustrations to each evacuee.

## COMMUNICATING WITH PEOPLE WITH DISABILITIES

The National Organization on Disability's (NOD's) Emergency Preparedness Initiative identified three types of people who may require transportation assistance during emergencies—those with sensory, mobility, or cognitive disabilities. NOD and various etiquette guides recommend strategies for communicating with patients who fall into these categories.<sup>37</sup>

### Sensory

**People with sensory disabilities** may experience varying levels of vision impairment or may be deaf or hard-of-hearing. Levels of functioning may vary from the blind who travel easily through urban areas or seniors with macular degeneration who have not acclimated to their declining vision. Working and communicating with persons who have sensory disabilities requires the transportation employee to practice sensitivity, respect, compassion, and patience. The agency may experience this in two types of settings—working with those with sensory disabilities to plan for transportation and transporting persons with sensory disabilities.

It is important that persons with sensory disabilities be brought into the planning process. Their insights may generate particularly appropriate ideas as they experience the condition on a daily basis. Accordingly, it is important to ensure that the planning process addresses their communication needs such as having materials provided in Braille where possible, allowing service animals to stay with the planning partner, and/or including a certified **sign language interpreter**.

Following the direction of Executive Order 13447, these key partners must be included if transportation of evacuees is to be as successful as possible. The lack of planning among agencies prior to a disaster often results in a more chaotic situation as well as miscommunication and lack of coordination during response. Partnering is critical to avoiding negative outcomes.

Transportation agency staff must be trained in working with those with sensory disabilities. Practical suggestions include:

- Speak in a normal tone of voice.
- Maintain eye contact even with those who are visually impaired.
- Consider having staff trim facial hair so that lips can be easily seen; do not cover the mouth with hands while talking.
- Do not turn away from a person who is deaf or hard-of-hearing; allow the person to observe you speaking.

<sup>37</sup> For example, visit [www.nod.org](http://www.nod.org), Emergency Preparedness Initiative for downloadable brochures and also see the 2007 NFPA Emergency Evacuation Guide for Persons with Disabilities, available at [www.nfpa.org](http://www.nfpa.org), or Oklahoma Abletech's publication "Social Etiquette: Tips for Firefighters Who Work with People with Disabilities" available at [www.ok.gov/abletech/Fire\\_Safety/index.html](http://www.ok.gov/abletech/Fire_Safety/index.html).



- Try to decrease noise and other distractions.
- Have a variety of communication tools ready if possible—a sign language interpreter, a communication board or laminated list, and/or pen and paper.
- Always ask permission before touching someone, such as “may I assist you onto the bus, please?” Respect their response.
- Be polite and respectful, such as “would you help me by getting onto the bus now?”
- Orient a visually impaired individual to the transportation vehicle.
- Provide written or verbal instructions on what is going to happen during the transportation.
- Always explain what is going to happen next in stepwise, concrete terms.
- Offer to assist with the service animal's needs such as food and water. Do not touch the service animal without asking permission first.
- Observe obstacles and barriers ahead of the person and call them out to the person (e.g., “there is a curb to step down first, then three steps up and a left turn onto the bus”).
- Provide alternatives and allow the person to make decisions; respect their independence.
- Verify that transportation and other agencies involved in communication understand and can communicate with each other (interoperability).
- Take communications equipment specific to the individual during the evacuation so that they are able to continue to communicate once reaching their destination.
- Smile and be reassuringly supportive.

Ideally, agencies will identify vehicles that can be used to transport people, service animals, and/or equipment along with their caretakers, buddies, and if needed medical staff—as one.

### Mobility

Mobility disabilities can range from people who experience difficulty moving; to those who use **assistive devices** such as canes, walkers, wheelchairs, or scooters; to those who may need to remain in beds or similar conveyances. It is absolutely imperative that people with mobility challenges remain with their equipment. Leaving equipment behind places a significant burden on the patient as well as on staff at the arrival facility. Similarly, service animals must be accommodated under the ADA and cannot be left behind.

Transportation agencies will develop more effective transportation plans if they include people with mobility disabilities in the planning process. Agencies should ensure that the locations they select for meetings are accessible and that sufficient notice is provided so that those with a mobility disability can

arrange to be at the meeting. Providing transportation to the meeting for such partners might prove beneficial and insightful.

Working with people with mobility limitations requires many of the suggestions listed above, including speaking in a normal tone of voice; being respectful; touching only with permission; and providing written, pictorial, and/or verbal instructions in an appropriate language. In addition, agencies should train and exercise their personnel in greeting and communicating with individuals:

- Speak at eye level; if needed, sit down to communicate with those in wheelchairs.
- Provide options and ask for suggestions. Be open to the person's suggestions as they have more experience with transportation.
- Maintain eye contact.
- Verify that you have understood and that the individual understands.
- Be patient, particularly if an individual also has difficulty speaking or may speak slowly. Verify that you have understood (e.g., "I believe you said that you would like me to place your walker next to you on the bus, is that correct?").
- Tell the individual where you have placed their assistive device.
- Always ask for permission to touch a service animal; this animal is working and should not be distracted.
- Thank the person for their support and suggestions.

### Cognitive

Cognitive disabilities can vary as much as sensory or mobility situations. Cognitive disabilities can be temporary such as the impact of a stroke or brain injury, as permanent as a cognitive development disability such as mental retardation, or as fluctuating as an individual going through early stages of Alzheimer's or other types of dementia. Because of the diverse range, it can be challenging to communicate properly and appropriately at all times. Disasters and the trauma of transportation may also worsen some conditions, increasing stress and confusion and impairing communication abilities. Some strategies for enhancing communication include:

- Try to decrease noise and other distractions that may impair comprehension.
- Maintain eye contact.
- Be polite and reassuring.
- Speak slowly and carefully but in a normal tone of voice.
- Keep phrases simple and straightforward.



- If someone asks you to repeat something, do so.
- Listen carefully.
- Verify what you think you heard (e.g., “I believe you said that you would like for me to...”).
- Think of yourself as a partner in the communication process and work with the individual to confirm understanding. Include buddies, caretakers, and others as partners in the communication process but focus your attention on the individual with the cognitive disability. Do not ignore the person by communicating solely with the family member or friend.
- Provide written, verbal, and/or pictorial information about the transportation procedures.
- Do not assume that you should transfer individuals with cognitive disabilities to a special needs shelter or other such facility; verify with the individual, their facility, and/or their family member where they are to be transported. Likewise, do not transport a person with an apparent cognitive disability to a facility without the facility’s knowledge that an individual has arrived who may need special assistance.

### CRCFs

To ensure continued communications between transportation agencies and CRCFs during evacuation, the following steps are recommended:

- Identify the types of communication resources available prior to an event:
  - If one type of communication system is the one to be used in most events (e.g., cell phones), develop a backup system.
  - Ensure that as many agencies and facilities as possible know the communications plan and use the same equipment.
  - If using a radio system, test to ensure that all agencies and facilities use the same channel and wavelength to avoid problems of interoperability (i.e., cannot communicate because equipment varies too much).
- Test the communication resources on a regular basis.
- Develop a phone-tree of key people to contact for transportation during an evacuation. This may include supervisors, medical staff, facility directors, and others.
  - Test these phone numbers on a regular basis to ensure that they have not changed and that the name of the person is still the same.
  - Conduct a communications drill at least once a year.

- Before the onset of an event, or shortly before the start of something like hurricane season (June through November), check the system again.
- In particular:
  - Identify, discuss, and explain the various terms used during transportation and within facilities to enhance comprehension during transportation. If a “code blue” (or similar system) is used to convey a particular type of emergency, ensure that all people participating in the evacuation understand what that means.
  - Ensure that drivers and other on-board staff know who to call along the route in an emergency. Pre-identify and test the numbers of hospitals, 9-1-1, and other EMS resources along the route.
- Upon arrival at the host facility, the transportation agency should communicate a safe arrival to the original CRCF and confirm successful transfer of patients to the new facility.
- After transfer, assess the communications equipment, as it may be needed for re-entry after the danger has passed:
  - Is it in working order? Do batteries need to be charged?
  - Do any repairs need to be made to the communications equipment?
  - Have any communications boards or other such materials been used? Do they need to be replaced or repaired?
  - Have you informed the host facility staff and transportation supervisors of where drivers and other transportation staff will be staying in case they are needed again?
- Do not underestimate the abilities of those with disabilities and their capacities to assist, respond to, and participate in their own transportation and communication needs.

## CONTENT: WHAT INFORMATION NEEDS TO BE COMMUNICATED

Written, recorded, and arranged communications prepared in advance can be developed to distribute to evacuees. Develop a simple, straightforward information sheet at an age-appropriate reading level with graphics. Include blanks for shelter locations and other information that will be filled in just before or during the event. Agencies might partner with local or state EMAs and other agencies to produce pamphlets, brochures, Web site materials, posters, and other items (such as t-shirts, cups, maps, magnets, calendars, bags, and other useful materials) that communicate information needed by people with special needs. This information should address the following questions, and may be written in a Frequently Asked Questions (FAQ) format:

People need to know where they are going, why they are being transported to a certain facility, and what awaits them at the facility. Transportation agencies can help ensure a smooth and lower-stress evacuation by communicating information to evacuees.

- Where is the transportation collection site closest to my home?
- How do I arrange for transportation from my home?
- What type of vehicle will be used for transportation? Can it accommodate my equipment, luggage, medical needs, and support person? How much can I bring?
- How far in advance do I need to arrange transportation?
- How do I get on a transportation registry? Is it handled confidentially? Does it guarantee that I will get transportation assistance? How does the registry work in my community?
- Where can I get further information about an upcoming evacuation in my language (including ASL)?
- Is this agency ready for my particular needs? Whom can I contact for further information? Do they speak my language at this number? Is there **Text Telephone (TTY)**?
- What transportation route will most likely be used?
- Where will I be taken? Are they ready for my needs? Can I contact the shelter in advance to let them know that I am coming?
- Is the transportation staff trained in lifting me and in transporting my equipment?
- Can the transportation staff understand me? What can I do to increase my ability to communicate with the staff?
- Can the transportation vehicle take my service animal? Will the shelter accept my service animal? Do I need to do anything special to assist my service animal?
- Will I be allowed to get off the vehicle to use bathroom facilities?
- Is the transportation fleet organized sufficiently so that we will not run out of gas?
- How can I be sure that I will not be separated from my equipment or service animal?
- What happens if I have a medical emergency during transportation?
- Will there be medical facilities in or near the shelter location should I need them?
- If I am separated from my family, what should I do to be reunited?
- How do I get back home?
- Where can I find further information?

Public information is vital prior to an emergency evacuation. The local emergency evacuation planning committee should suggest recommendations regarding several issues from the evacuation and transportation perspective including how to work with local EMA and shelter officials to advertise the locations and accommodations provided by shelters and the role of transportation agencies in assisting people to reach shelters.

People with special needs are more likely to move to such locations if they believe that facilities are ready for them. Advance information and education can positively influence evacuation behavior and increase the willingness of those with special needs to use transportation services. Public service announcements that demonstrate people with special needs using such vehicles and entering shelters can increase public confidence in the credibility of what transportation agencies have to offer.

- Determine when to provide special needs shelter locations, either just prior to, during an emergency, or well in advance.

There are advantages and disadvantages that the planning committee and transportation agencies need to consider about the proper time to open special needs shelters. Jurisdictions handle this in different ways. Some announce both general shelters and special needs shelters well in advance, which allows individuals to make a plan and practice it to become more familiar with the location of their shelter. Others decide to only announce shelters during an evacuation or after an emergency has occurred, when a shelter can be confirmed to be safe and out of harm's way. Transportation agencies must know, before the public, which shelters will be open, if special needs populations will be evacuated in advance of the general public, emergency evacuation routes, and where people with special needs will be sent. Shelters are usually designated by the local EMA but opened by the ARC. It is vital that transportation agencies have a good working relationship with representatives from both EMA and shelter operations staff.

- Ensure that you know where designated shelters are located per the local emergency management plan or how to learn if the plan has been altered in an event.
- Ensure that people with special needs know where and how they can be picked up and to which shelters they may be assigned.

### Checklist

Communicating with a diverse set of passengers can be challenging, and no single driver, supervisor, or agency can have the full capacity to respond. However, capabilities can be enhanced through planning and preparing as much in advance as possible. Transportation agencies can:

- ☒ Work with the local EMA to be a part of a language bank for emergency times.



- ✓ Work with the EMA and others to pre-identify the languages used in the area including ASL.
- ✓ Involve local ethnic organizations in helping with translation at location pick-up points and during transport.
- ✓ Ask local instructors of foreign languages and their students to assist with interpretation.
- ✓ Contact area colleges and universities to integrate international students speaking foreign languages into communications during transport. It is important to make sure that they are properly trained, especially with any medical translations.
- ✓ Train staff in 50 of the most commonly used words in two to three of the most common local languages. In Oklahoma City, for example, all new police recruits are now required to learn basic Spanish.
- ✓ Work with the EMA and other agencies to identify the numbers of people and the types of disabilities that may influence communication choices.
- ✓ Write scripts to be released at the time of an evacuation for drivers and others to use with people who do not speak the local language or who may be deaf or hard of hearing.
- ✓ Purchase communication boards that simultaneously use signs/pictures and words in locally spoken languages.
- ✓ Involve people with special needs, social service and health organizations, and others with expertise in pre-writing and testing transportation messages that will be used before, during, and after an event.
- ✓ Increase interaction between transportation staff and those likely to need transportation including inviting people with special needs to planning sessions and to participate in training.
- ✓ Encourage transportation staff to go to events that increase their interaction and communication with people with special needs such as events held at a school for the deaf and/or blind, events held at a facility for people with cognitive disabilities (adult day care, state residential facility), and ethnic cultural festivals that use local languages and/or dialects.
- ✓ Encourage the agency to co-sponsor local events such as Disability Awareness Week and/or to reach out at the onset of tornado and hurricane seasons to people with special needs.
- ✓ Conduct training for transportation staff by involving people with special needs in developing the staff's ability to hear, comprehend, and make themselves understood by those who they will seek to serve.
- ✓ Develop pre-recorded messages in the languages that are spoken.

# CHAPTER 5: TRANSPORTATION NEEDS DURING ACTIVATION AND OPERATIONS

Successful transportation during evacuations depends on careful planning. This is important when evacuating special needs populations, as the type of vehicle provided can expedite or complicate evacuations. Collaboration between providing agencies is critical, as response vehicles may be mustered from a variety of public and private agencies. Communication serves a critical role in successfully transporting special needs populations, including communication between drivers and dispatchers, between responding agencies, and between the public and responders. Use of **intelligent transportation systems (ITS)**, where available, may enhance response as well. ITS can provide critical real-time information to evacuees and those transporting them, which may reduce the amount of time spent in evacuation operations.

## MOBILIZING VEHICLES AND VEHICLE OPERATORS

Response plans at agency and jurisdictional levels should include clearly stated procedures for mobilizing vehicles and vehicle operators. Mobilization should occur using pre-planned lists of agencies, drivers, vehicles, and other personnel and resources required for special needs evacuation operations.

Providing agencies or companies and vehicle operators should be notified as far in advance as possible to ensure they will secure their homes and families prior to service in the emergency event. They also need time to prepare people with special needs and to arrange shift assignments and alternates with their staff.

It has been reported that transportation personnel had a difficult time volunteering to drive buses because family evacuations were not provided for; prior planning was not fully considered; and in some cases, essential personnel were not clearly identified.<sup>38</sup> Two weeks after Hurricane Katrina hit New Orleans, Mayor Nagin stated on *Meet the Press*:

Participation by both public agencies and contracted transportation providers in local jurisdiction-run exercises and drills may contribute to familiarity with plans, procedures, and routes. Transportation agencies should reach out to and maintain a relationship with local EMAs and make themselves available to participate during exercises and drills as they are critical assets during disasters.

### GLOSSARY TERMS USED IN THIS CHAPTER

Closed Circuit Television (CCTV)  
Global Positioning System (GPS)  
Highway Advisory Radio (HAR)  
Intelligent Transportation Systems (ITS)  
Service Patrols  
Traffic Control Devices  
Traffic Management Centers (TMCs)  
Variable Message Sign (VMS)

<sup>38</sup> Litman (2006) *Lessons from Katrina and Rita: What Major Disasters can Teach Transportation Planners*

“Sure, there was [sic] lots of buses out there, but guess what? You can't find drivers that would stay behind with a Category 5 hurricane, you know, pending down on New Orleans. We barely got enough drivers to move people on Sunday, or Saturday and Sunday, to move them to the Superdome. We barely had enough drivers for that. So sure, we had the assets, but the drivers just weren't available.”<sup>39</sup>

Staging areas with clear access and egress for staff and vehicles should be designated in plans. However, if they are not viable at the time of the operation, alternatives should be considered. Arrangements for food, water, or EMS should include directed delivery to the staging area. Enough supplies should be ordered to accommodate the needs of drivers, mechanics, and other staff. Additional staff required for evacuation assistance should be simultaneously mobilized and assigned to drivers and vehicles.

Staging area staff will brief transportation operators and assistants on routes, shelter locations, anticipated traveling conditions, and the needs of evacuees (including the presence of service animals or specialized or heavy equipment) so that each route is run as efficiently as possible.

## DISPATCH AND TRACKING

Mobilization for rapid-onset events may occur under unfavorable conditions. As a result, communications with operators, dispatchers, and evacuees is needed to ensure that passengers are prepared and waiting in appropriate locations and that operators are fully aware of their assigned routes. Passengers will need to know information such as pick-up locations, what they need to bring with them, and accurate information on the disaster. For more information on communicating with special needs passengers, see **Chapter 4**.

An essential line of communication is between dispatchers and drivers. Dispatchers should keep track of the following, in addition to other needs as determined through local planning:

- Driver names and contact information
- Vehicle information (owner, number, license plate, type, capacity, etc.) and assignment
- Route maps
- Locations of fuel and emergency vehicle repair facilities
- Contact information for interpreters and translators
- Evacuee information (where available through evacuation registries)
- Contact information for liaisons and other people and agencies that will provide critical, up-to-date information

---

<sup>39</sup> Litman (2006)

- Names and contact information for people assisting with evacuations (e.g., mechanics, personnel at fuel depots, staging area workers, assistants traveling with vehicles).

Accurate lists of people working during the evacuation should be maintained to ensure the safety of all responders. Tracking is also necessary to ensure each vehicle is returned in proper condition to the owner and each responder is properly credited with work.

Passenger manifests should also be provided to the dispatcher or another entity to enable immediate tracking of those being evacuated. In this way, the driver will not be the sole holder of the manifest, allowing for back-up information. Although it is important to recognize that passenger manifests are resources, it is also important to be aware of confidentiality issues and sensitivity regarding the information in the manifest. Passenger manifest sharing should be done when necessary and as appropriate between agencies.

FEMA is developing a National Mass Evacuation Tracking System (NMETS). NMETS is an open source database system designed to track the movement of people, pets, bags, and medical equipment. The single national system can assist state and local agencies in tracking the movement of evacuees and provides additional modules to support congregate care facility management. The system requires enrollment of the evacuee prior to transport. The evacuee receives a barcode bracelet that can link him/her to traveling companions, service animals, household pets, and medical equipment.

In the event of an evacuation, Texas evacuees will be registered on site and issued a bar-coded RFID wristband. An evacuee's wristband will be scanned by the GDEM with a wireless device as the evacuee boards a state-contracted vehicle, and the information will be added to the bus boarding log. Evacuee intake information and location will then be sent wirelessly to the data center at the University of Texas Center for Space Research. Vehicles will be equipped with a **Global Positioning System (GPS)** to track the vehicle's location along the evacuation route. Upon reaching the destination, the SNETS will update evacuee profiles and provide real-time information. This will enable the state to respond to inquiries from the public about evacuated family members and reunite them.<sup>40</sup>

## OPERATIONS: EVACUATION AND RE-ENTRY

Evacuation and re-entry operations will be similar in the way drivers and passengers are mobilized and coordinated. Drivers and dispatchers must be aware at all times of roadway closures and restrictions resulting from hazardous conditions and changes to shelter locations and capacities. This can be addressed through normal agency procedures or via a designated liaison to dispatchers to provide current and timely information. On the federal level, ESF-I handles this coordination.

The State of Texas has created a *Special Needs Evacuation Tracking System (SNETS)*, which is a state-wide citizen evacuation system using a variety of radio frequency identification (RFID) systems, wireless, and other data technologies to provide real-time information on evacuees to the Governor's Division of Emergency Management (GDEM).

<sup>40</sup> Wise Research Ltd/Using RFID, "Texas to Use RFID to Manage Citizen Evacuations." December 11, 2007.



Re-entry will include the clearance of vehicles into areas as allowed by law enforcement. Dispatchers must maintain current roadway conditions, weather updates, and/or other emergency information to prevent the return of people into hazardous areas. Particular attention should be given to electric and other utility outages, as persons with disabilities may be dependent on those services for daily medical needs. This information should be provided through normal channels as determined by local emergency management structures. See **Chapter 8** for further information on re-entry.

Field checklists placed in each vehicle or at staging areas can be used to guide the evacuation and re-entry processes, particularly when new operators are being used or when plans are being executed for the first time. Checklist items may include, but are not limited to, the following:

- ☒ Driver identification (ID)—name, contact information—and credentials
- ☒ Location of staging areas
- ☒ Location of vehicle keys and back-up keys
- ☒ Emergency contact for drivers and format (e.g., Citizens' Band [CB] radio, push-to-talk, emergency frequencies for radio communication)
- ☒ Dispatch contact and alternate
- ☒ Route maps and alternate route maps
- ☒ Lists of evacuees per vehicle with contact information
- ☒ Shelter locations and types (e.g., general population, special medical needs, pet-friendly)
- ☒ Specialized equipment required (e.g., wheelchair lifts, foreign language information)
- ☒ Fuel locations
- ☒ Instructions for breaks and shift changes
- ☒ Local information sources (e.g., 211/511 systems, **highway advisory radio** [HAR])
- ☒ Point-of-contact for rumor control (to verify road closures or shelter changes that may be announced by the media or purported by evacuees)
- ☒ Worksheets for trip times (departure and arrival); mileage; passenger names and counts; driver name, company, and contact information; staging areas; pick-up points; and shelter locations. Detailed records must be kept for any potential cost reimbursement.

Critical to the success of mobilization and operation are current information and clear instructions. For a sample worksheet on record keeping for trips, refer to **Annex 4**.

## USING ITS IN EVACUATIONS OF PEOPLE WITH SPECIAL NEEDS

ITS includes vehicle and infrastructure technologies used to collect and distribute transportation-related information among vehicles, the roadway, the environment, transportation system managers, and system users. Generally, ITS applications are not usually discussed in emergency management plans. Despite this lack of focus, these tools can aid system administrators, emergency personnel, and evacuees during a mass evacuation.<sup>41</sup>

In planning for disasters and evacuations, ITS can be used to identify transportation system vulnerabilities and aid in the development of countermeasure strategies. During an evacuation, officials can use ITS to collect real-time data related to current roadway conditions and to monitor evacuation progress.<sup>42</sup> These applications may be used to facilitate communication and direct resources and to aid in evacuations by timing traffic signals, approximating travel times, and providing detour information. To maximize the benefit of ITS tools, the system should be extended throughout the evacuation route to the sheltering point. ITS can also be useful in assisting re-entry after a disaster to help guide returnees home via the best route.<sup>43</sup>

While ITS applications can be useful under certain conditions for evacuation planning and execution, agencies incorporating ITS into an evacuation plan must be aware of the limitations of ITS. Many technologically advanced ITS applications depend on electricity and wired communications. Natural disasters have the potential to leave ITS tools inoperable due to power outages, communications disruptions, and even damage to the equipment. Installing applications with independent power sources such as solar cells and wireless communications such as Wi-Fi or WiMax can improve system performance during a disaster but cannot ensure system operability.<sup>44</sup>

The following describes some of the most common ITS tools and their use in aiding those evacuating people with special needs.

### Traffic Management Centers (TMCs) and EOC

**TMCs** can serve as the transportation-specific operations center for all incoming ITS information. The EOC or even the staging area can use this information to facilitate communication with emergency workers. Sometimes, the two centers are located within the same facility. However, most often, these facilities are linked electronically or through transportation liaisons to the EOC who are familiar with how to obtain, analyze, and interpret transportation data. Transportation agency and emergency personnel at the TMC or EOC may use data collected at TMCs to make real-time evacuation decisions



<sup>41</sup> FHWA, *Using Highways During Evacuation Operations for Events with Advance Notice*.

<sup>42</sup> W2i, *Minneapolis Bridge Collapse Provides Early Test of Wi-Fi Network*.

<sup>43</sup> FHWA, *Using Highways During Evacuation Operations for Events with Advance Notice*.

<sup>44</sup> *Ibid.*

and monitor progress, including decisions that will aid in the evacuation of elderly and disabled persons.<sup>45</sup> Information from cameras and traffic counters monitoring roads around hospitals, nursing homes, and other such facilities can be used to better route vehicles providing evacuation assistance to these facilities. These applications can help determine where incident response and removal may be required and provide overall travel time information.<sup>46</sup> The TMC's effective management of available capacity reduces the potential for operational failures, which can cause gridlock, long hours of delays, vehicle breakdowns, frustrated travelers, and significant risks to the evacuees.<sup>47</sup>

On August 1, 2007, a bridge collapsed on I-35W in Minneapolis, Minnesota, and there was an interest in how the city's Wi-Fi network could be used to support the emergency response. According to w2i Digital Cities' James Farstad, "Immediately following the collapse, city emergency and community communications centers were flooded with incoming alerts from witnesses to the tragedy. In the 90 minutes following the event, the city's 911 Emergency Communications Center handled more than 450 calls. Its 311 Non-emergency Communications Center logged over 600 contacts. Cellular carrier systems in the region were overloaded within 30 minutes." Numerous other potential applications of the wireless network were identified including "opening an alternate path to electronic communication and information for city personnel; extending the Wi-Fi network infrastructure to fully blanket the scene of the bridge collapse for emergency personnel on-site connectivity; implementing live multiple perspective camera coverage of the scene for EOC and Command Post uses; and providing community links to City of Minneapolis resources, Hospital Emergency Coordination Units, State of Minnesota Department of Transportation traffic routing information, Red Cross Blood Bank collection points, and local and national news outlets."<sup>48</sup>

### Cameras/Closed Circuit Television

**Closed-circuit television (CCTV)** provides an advantage over loop detectors by allowing officials direct visual confirmation of traffic and weather conditions, sometimes including a multiple perspective camera view of major traffic arteries for TMC staff. This technology can assist transportation personnel in closing roads determined to be unsafe and developing appropriate rerouting.<sup>49</sup> Such information could be transmitted to those vehicles transporting evacuees with special needs to reduce delays and the time the evacuees spend being transported to a shelter, alternate nursing home location, or other such facility. CCTV also provides a secure means of linking the centers of operation during an evacuation including the TMC, EOC, public safety,

Strategically placed cameras within the transportation infrastructure can be used to broadcast CCTV to monitor traffic speed and flow, which can be used to improve evacuation management.

FHWA, Using Highways  
During Evacuation  
Operations for Events with  
Advance Notice

<sup>45</sup> National ITS Architecture Team, Disaster Response and Evacuation.

<sup>46</sup> FHWA, *Using Highways During Evacuation Operations for Events with Advance Notice*.

<sup>47</sup> National ITS Architecture Team, Disaster Response and Evacuation.

<sup>48</sup> W2i, Minneapolis Bridge Collapse Provides Early Test of Wi-Fi Network.

<sup>49</sup> National ITS Architecture Team, Disaster Response and Evacuation.

fire department, and shelters. When connected to a wireless network and operating under their own power, these CCTV signals open a path to electronic communication and information for evacuation managers even if other municipal functions shut down.<sup>50</sup>

### Variable Message Signs (VMS)

VMS, also known as changeable message signs (CMS) or dynamic message signs (DMS), are electronic road signs that display messages to systems users. VMS can be permanent fixtures or portables devices, displaying either a preprogrammed message or one programmed in real time. The signs can display travel times, locations of traffic incidents, or locations of shelters for evacuees.<sup>51</sup> VMS are especially helpful to hearing-impaired evacuees who are unable to hear radio announcements or information from 211/511 systems.<sup>52</sup> VMS are usually controlled from the TMC, so coordination with the TMC staff will be necessary if the EMA wants messages posted regarding the evacuation or re-entry.



### Traffic Counting Devices

These devices are installed into the roadway to count the number of vehicles on the road. Data from these devices can be used to provide emergency personnel with the quickest route to and from evacuation sites and shelters, especially when transporting people with special needs. Permanently installed traffic counters can supply data to one or more locations, generally a state-wide, regional, or local transportation agency. Information can also be sent into the TMC and can be shared with the EOC. It is important to note that there is sometimes a delay associated with the devices supplying the traffic count data back to the collection point. This is primarily due to the type of communications system used to transmit the data. However, even with such delays, this is often the most up-to-date information available on traffic volumes during the evacuation. In addition, it is useful to have a redundant communications system in the event the primary system is inoperable. Since not all communities have installed permanent traffic count stations, historical traffic count data collected manually can aid planners in estimating roadway conditions during the evacuation.

### Traffic Control Devices

These devices can help transportation managers to maximize evacuation efficiency by enabling designated vehicles to move more freely on otherwise gridlocked roads. While such devices can assist all evacuees, they are especially useful when transporting people with special needs to avoid medical emer-

<sup>50</sup> W2i, Minneapolis Bridge Collapse Provides Early Test of Wi-Fi Network.

<sup>51</sup> FHWA, *Using Highways During Evacuation Operations for Events with Advance Notice*.

<sup>52</sup> CalSILC, *CA Wildfires for People with Disabilities*.



gencies, rapidly transfer trauma patients, and other such functions that reduce the duration of the evacuation. Traffic control devices include:

- **High occupancy vehicle (HOV) lanes/bus-only lanes** can allow buses and other vehicles to transport people with special needs to shelters quickly in order to return and pick up more passengers.
- **Pavement markings** can designate specific evacuation lanes or lanes that are designated for emergency vehicles.
- **Interconnected traffic signals** decrease the time that evacuating vehicles spend waiting for green lights by synchronizing traffic signals, thereby increasing traffic flow. An optimal signal pattern for an evacuation scenario can be created in advance for quick implementation during an actual event. Additionally, like cameras and other ITS applications, independent power sources can be installed on traffic signals to allow for continued use during a power outage.
- **Traffic signal pre-emption** are devices on some traffic signals that allow an approaching emergency vehicle to change the traffic signal timing pattern to allow them to proceed unimpeded through the intersection. However, the use of such devices may disrupt the major direction of traffic flow during an evacuation, so their use during that time must be carefully considered.
- **Ramp meters** are traffic signals installed on highway entrance ramps to control the flow of traffic by allowing vehicles to enter the highway in a uniform manner.
- **Ramp gates** are deployable gates on highway entrance/exit ramps that prevent traffic from entering or exiting the highway at that point. These can be especially useful if a reverse flow lane is being utilized.
- **Reversible lanes** allow for an increased traffic flow in a particular direction. Some highways are designed to accommodate reversible traffic on a daily basis, such as during daily rush hour periods or special events. Utilizing these extra lanes can increase the available throughput volume of traffic during an evacuation.

In addition to planned reversible lanes, transportation agency staff can decide to reverse the direction of all inbound lanes, even further increasing the number of vehicles exiting an evacuation area. While possible, this practice should only be implemented in situations where additional roadway capacity is required. Measures to keep vehicles from entering the lanes further up the road must be taken, and there must be a detour return route for municipal and emergency vehicles. However, if an otherwise non-reversible lane is reversed, ITS applications such as cameras, CCTV, and loop detectors can assist in the coordination. Such traffic control devices are owned and operated by transportation agencies at the state and local levels. It is important that these agencies be represented in evacuation planning and operations

so they can make the adjustments necessary to the traffic control devices to support the evacuation and re-entry.

### Traveler Information

Traveler information systems vary from HAR with limited broadcast ranges to speech-activated automated phone services available to users to provide route-specific traffic, weather, and shelter information such as available transit services and expected travel times and evacuation duration.<sup>53</sup> HAR services may be provided by fixed or portable radio systems, and messages may be easily changed for various conditions and language needs. Before or during a disaster, evacuees can dial a pre-designated number on a landline or cellular telephone to get traveler information. Information may be specific to the jurisdiction or agency operating the service, such as sheltering information via ARC services (as in certain locations in Florida) or evacuation route information from state and local governments. The availability of traveler information services varies widely, with most locations not offering substantial detail at present. Each service provides limited options for the deaf and hard-of-hearing, and alternate information or TTY services should be considered in addition to traditional services. It is important to keep in mind that jurisdictions may have different call numbers. Some cities like New York City maintain a non-emergency general information number (311) that may provide information for evacuees. Such a system allows the 911 number to remain open for emergency calls.

The southeast Florida, Central Florida, and Tampa regions under the Florida Department of Transportation implemented 511 systems where users can obtain information about congestion, travel times, and road closures. A separate hotline provides information on hurricane shelters. Florida also makes its state and regional 511 services available online, allows users to customize its 511 information including travel trips for specific routes, and will present customized information when calling 511 via caller ID.<sup>54</sup> Generally, a state or local transportation agency maintains these 511 systems. Emergency managers should coordinate with the appropriate agency to provide the content for any recorded messages as well as real-time information to be provided on these 511 systems.

### Service Patrols<sup>55</sup> (Traffic Incident Management [TIM] assets)

**Service patrols** can be transportation workers or contractors under agreement with the state transportation agency who are dispatched to support law enforcement, fire, and rescue personnel in addressing traffic incidents. They may be used along evacuation routes to mitigate or rapidly address incidents

511 is the established national number for traveler information, although not all areas have established the service yet. As of fall 2008, there were 41 active 511 systems in states and major urban areas. About 17 states do not yet have 511 systems in place but are planning for them in the future.

<sup>53</sup> Florida Elder Affairs, *Disaster Preparedness Guide*.

<sup>54</sup> Florida Elder Affairs, *Disaster Preparedness Guide*.

<sup>55</sup> Service patrols will have different names around the country (e.g., incident management assistance patrols or courtesy patrols).

According to a survey of 106 urban areas conducted in 2006 by the ITS Joint Program Office, service patrols were operating in over 70 regions in the United States.

and maximize traffic flow.<sup>56</sup> While they serve an important purpose to the general public, including directing traffic and providing fuel for motorists, these patrols can be especially helpful to evacuees who need assistance. Other ITS applications can be used to ensure that service patrols can operate effectively and efficiently during an evacuation. This could include using cameras and CCTV to provide service patrols with real-time information and taking advantage of reversible lanes, shoulder use, and special signal control strategies to allow them to quickly move within the evacuation zones.<sup>57</sup>

Service patrols are generally operated by state and/or local transportation agencies either with their own staff or through a contract. Service patrols are generally found in major urban areas, although some do operate on a limited basis in more rural areas. Service patrol vehicles travel a certain route or geographic area and assist motorists in need. The TMC maintains contact with service patrols and can dispatch them to a particular location to respond to a specific need such as a traffic crash observed via the TMC's CCTV cameras. For an evacuation, the service patrol vehicles may be stationed along the evacuation routes at certain intervals so they can quickly respond to an incident such as a vehicle needing fuel, fixing a flat tire, or other minor repairs. Providing these services can help to move disabled vehicles out of the traffic stream to allow other evacuating vehicles to pass. To provide information to decision makers considering establishment of a service patrol, FHWA published a *Service Patrol Handbook* in November 2008.

<sup>56</sup> National ITS Architecture Team, Disaster Response and Evacuation.

<sup>57</sup> National ITS Architecture Team, Disaster Response and Evacuation..

# CHAPTER 6: CONGREGATE AND RESIDENTIAL CARE FACILITIES

Whether planning for sheltering-in-place, moving patients from one facility to another similar facility, or being prepared to take care of and manage individuals from facilities that failed to plan adequately for emergencies, the transportation evacuation planning process should generally occur in parallel with the development of the special needs planning. CRCFs, local EMAs and health departments, and community and faith-based organizations should all work together to ensure the safety of medically vulnerable individuals living in the community.

Clearly, the decision to evacuate whole communities in general is difficult.<sup>58</sup> The evacuation and movement of clients/patients, in whole or in part, of a residential skilled care facility is an action of last resort and must not be treated lightly. In 2006, the GAO released a report, *Preliminary Observations on the Evacuation of Vulnerable Populations Due to Hurricanes and Other Disasters* that states:

“Hospital and nursing home administrators face challenges related to evacuations caused by hurricanes, including deciding whether to evacuate and obtaining transportation. Although state and local governments can order evacuations, health care facilities can be exempt from these orders. Facility administrators are generally responsible for deciding whether to evacuate, and if they decide not to evacuate, they face the challenge of ensuring that their facilities have sufficient resources to provide care until assistance arrives. If they evacuate, contractors providing transportation for hospitals and nursing homes could be unlikely to provide facilities with enough vehicles during a major disaster such as a hurricane because local demand for transportation would likely exceed supply. Nursing home administrators told us they face unique challenges during evacuations. For example, they must locate receiving facilities that can accommodate residents who may need a place to live for a long period of time.”

Using case studies, the HHS Agency for Healthcare Research and Quality (AHRQ) report *Emergency Preparedness Atlas: US Nursing Home and Hospital Facilities* illustrates how emergency management agencies can use GIS mapping to locate hospitals and nursing homes. The report provides certain guidance for nursing home emergency evacuation including collected infor-

<sup>58</sup> Balag, et. al, 2005

## GLOSSARY TERMS USED IN THIS CHAPTER

Automatic Vehicle  
Location (AVL)  
Custodial Care

The AHRQ released the 2007 report, *Emergency Preparedness Atlas*, to assist communities with the identification of hospitals and nursing homes for planning and preparedness purposes.

It is important for emergency planners, transportation agencies, and transportation providers to include CRCFs in planning to ensure the needs of these specialized facilities are considered in the community's overall evacuation plan.

In August 2007, the National Transportation Safety Board issued its investigative report on the bus fire incident and recommended that the International Association of Chiefs of Police disseminate the publication from the Pipeline and Hazardous Materials Safety Administration (PHMSA) called *Guidance for the Safe Transportation of Medical Oxygen for Personal Use on Buses and Trains*.

This publication was developed by PHMSA and is available at <http://www.phmsa.dot.gov/staticfiles/PHMSA/DownloadableFiles/Files/gstomo.pdf>.

mation on disaster-related planning and roles nursing homes could play in regional preparedness such as arranging hospitals to transfer their less-critically ill or recovering patients to nursing homes.

This chapter provides ideas, good practices, and general guidance for transportation evacuation planners. It is not meant to supplant or override local, state, and federal regulations, or to provide legal advice. Each community must know and understand the responsibilities, regulations, and liability issues.

## LEGAL CONSIDERATIONS

The federal government requires all facilities that receive Medicaid and Medicare funding to have emergency plans in place and train their staff.<sup>59</sup> Furthermore, individual states, as part of the licensing process, often put in place additional regulations for skilled care facilities (e.g., nursing homes and other long-term care sites) to meet emergency planning guidance. These regulations are often reviewed over the course of regular, ongoing re-licensing inspections as well as during other periodic peer reviews conducted for the purpose of accreditation. Finally, local fire codes, health safety standards, and emergency rules may apply depending upon what standards have been established in each locality.

Since this particular topic is relevant in the context of the overall primer, but not directly or indirectly overseen or regulated by the US DOT, specific recommendations are not being provided. Rather, the discussion will focus on a checklist for planning and documented issues relating to the transportation of certain populations such as transfer trauma. (See related case studies in **Annex 5**.)

It is important to recognize that the difference between planning requirements and actual disaster outcomes in the areas of evacuation and transportation is in a state of flux. Legal cases involving St. Rita's Nursing Home<sup>60</sup> and the death of residents in New Orleans as a result of Hurricane Katrina are underway. On September 9, 2007, the owners of the nursing home were acquitted on negligent homicide and cruelty charges; however, the owners still face other civil lawsuits. A case involving a bus fire in Texas during the movement of elderly patients and the transport of their oxygen tanks in the evacuation for Hurricane Rita<sup>61</sup> is also ongoing.

<sup>59</sup> US Health and Human Services, Office of Inspector General, August 2006, <http://www.oig.hhs.gov/oei/reports/oei-06-06-00020.pdf>

<sup>60</sup> St. Rita's nursing home in St. Bernard Parish chose not to evacuate, and 35 of their patients died. It is reported that three other nearby nursing homes did evacuate despite several difficulties including locating and securing transportation. Only one of the three nursing homes who evacuated lost a patient in the transfer (*Times-Picayune*, August 23, 2006).

<sup>61</sup> During Hurricane Rita evacuations, 23 elderly people who were being transported from a nursing home perished as their bus exploded. The bus was also carrying oxygen tanks, which fueled the fire. The motor coach company was found to be out of compliance and is being held accountable (News on Wheels, Missouri DOT Newsletter, December 2005, [http://www.modot.org/mcs/documents/newsletters/NOW\\_Dec\\_05.pdf](http://www.modot.org/mcs/documents/newsletters/NOW_Dec_05.pdf)).



According to Weston and Tokesky's report, *Impacts and Contributions of Older Persons in Emergency Situations: A Case Study of Hurricane Katrina in the United States of America*<sup>62</sup>, some states, such as Florida, have legislation in place that make it illegal to leave individuals who are in the care of nursing homes or other CRCFs at the "doorsteps" of shelters or hospital emergency rooms. Although CRCFs are supposed to have emergency plans in place, the unfortunate reality is that some facilities do not, and they may depend on transportation agencies, government entities, and other facilities to provide help during an emergency. Accountability issues are still being addressed and continue to evolve.

## TRANSPORTATION NEEDS OF CRCFS

During an evacuation involving CRCFs, it is assumed that most residents will need transportation, including transportation requiring medical assistance en route. For single facility evacuations, this may be addressed through mutual-aid agreements that provide for public and private sources, possibly to include ambulances, Advanced Life Support (ALS) and Basic Life Support (BLS), ambulettes, vans and buses, and paratransit vehicles. In emergency events with a larger geographic scope, demand for these limited services is high and existing arrangements may not be available when needed. Demand for such vehicles exceeds supply in most locations.<sup>63, 64</sup>

In 2008, the AHRQ, released the Mass Evacuation Transportation Model, which estimates the time required to evacuate patients from healthcare facilities. The Transportation Model is accessible from the [AHRQ Web site](#). This model was tested in two locations—New York City and Los Angeles. A companion report (the *Mass Evacuation Transportation Model: User Manual*) provides instructions on how to run the model. This work is part of an AHRQ project to support development of a national strategy for the design, development, and implementation of an interagency mass patient and evacuee movement regulating and tracking system.

### Vehicles

Assignment of individuals to transportation types should be based on the minimum needs of the individual. Vehicles should also be appropriate to transport necessities such as wheelchairs, scooters, medical equipment, and service animals. Common vehicle types needed for CRCFs may include the following:

<sup>62</sup> Weston and Tokesky's (2006), *Impacts and Contributions of Older Persons in Emergency Situations: A Case Study of Hurricane Katrina in the United States of America*.

<sup>63</sup> Department of Homeland Security, 2005. p. 19.

<sup>64</sup> The US DOT emergency preparedness Web site at <http://www.dotcr.ost.dot.gov/asp/emergencyprep.asp> provides a variety of planning tools for people with disabilities to include a comprehensive checklist for transportation providers and organizations working with people with disabilities to guide transportation planning. US DOT, *Checklist for Transportation and Emergency Preparedness*, <http://www.dotcr.ost.dot.gov/Documents/Emergency/Emergency%20Checklist.doc>

In establishing agreements between CRCFs and transportation providers, it is essential to ensure that the vehicles available are appropriate for the facility's needs. All agreements should be in place in advance of potential events as a component of the emergency operations plans of both the CRCF and the provider.

- **Buses:** Passenger buses may be from public or private sources. Commonly used are school buses, public transit buses, and private bus lines. Buses are an excellent choice for the most mobile of evacuees, although there is a wide variety of accessibility in this area and many are able to easily transport people in wheelchairs. Such buses include low-floor buses that “kneel” to accommodate wheelchairs and buses with expanded capacities inside to transport multiple people with wheelchairs. In urban areas, there may be significant “pedestrian” populations needing transportation; thus, advance accommodation and prompt/advance evacuation of CRCFs is essential if local public transportation is the primary source of accessible vehicles.
- **Ambulances:** Types of ambulances potentially used for evacuation include those designed for emergency transport (e.g., ALS, BLS, Mobile Intensive Care Unit) and patient transport vehicles. Due to limited availabilities, ambulances should be reserved for those individuals who definitively need such transport. Generally, ambulances are reserved for those individuals with a present or anticipated life support need.
- **Ambulettes:** Ambulettes are vehicles that provide non-emergency assisted transportation to individuals. This service is commonly privately owned and is used for transportation to medical appointments, for example. Ambulette companies should not overextend service agreements during disaster to avoid complications in response.
- **Vans, Sport Utility Vehicles, and Other Vehicles:** Many individuals with special needs may be transported in non-specialized vehicles, if available. This does not include the centralized dispatch of transportation and may complicate evacuee tracking, so care must be taken to coordinate such transportation within the facility's larger plan.

Transportation service providers must plan for 24-hour access to vehicle keys and appropriate documents in the event that drivers must provide services after normal operating hours. These provisions should be clearly stated in emergency operations plans as well as operator checklists and field guides. Essential telephone numbers must be a part of such plans and documents in the event that primary sources for vehicle key access are not responsive.

Fuel sources must be pre-identified to ensure the ability to re-fuel as needed for repetitive trips. Coordination with local emergency management personnel at both evacuation locations and destinations is recommended to ensure no operational interruptions. Appropriate arrangements must be made with fuel vendors and other agencies (e.g., state DOTs) to provide services.

### Vehicle Identification/Credentialing

All vehicles used for transporting evacuees must be clearly marked to avoid confusion and inappropriate routing of evacuees. Vehicles should have placards with transport information (such as pick-up facility and shelter destination)

and/or identification information (e.g., color-coded placards corresponding to “tickets” given to evacuees to ensure they are on the right transportation service) and should have the capability to announce verbal instructions. All vehicles should be properly registered and insured with up-to-date safety inspections.

## Vehicle Operators

During larger emergency events, it is not uncommon for personnel to be in shorter supply than under normal conditions, as operators may also be victims of the unfolding event (e.g., live on the coast during a hurricane event). Therefore, it is recommended that transportation providers coordinate with appropriate agencies as per local procedure (e.g., DOT, law enforcement, EMA) in the event that drivers from other jurisdictions or agencies are available to assist. This could include counterparts from other locations within the same state, qualified drivers who are members of Community Emergency Response Teams (CERTs) or other agencies such as the ARC, volunteer firefighters, or the National Guard. Mutual-aid collaboration is normally available through local EMAs for such responses.

## Coordinated Dispatch

The responsibility for dispatching evacuation vehicles is contingent on local arrangements. Normal dispatch operations should be used to the greatest extent possible to minimize confusion with new procedures. It is possible that the CRCF will contact the provider directly, or in some locations, the coordination of scarce transportation resources may be the responsibility of an EMA. In any case, it is essential to become familiar with common practice in your area to avoid resource conflict and failure of service delivery. It is essential to ensure that the vehicle dispatched is able to maneuver into and out of the access points of the CRCF.

## Tracking

Tracking of both individuals and vehicles is an essential procedure when several transportation sources are employed for evacuation.

Each transportation agency should monitor vehicle movement during emergency events in the event conditions worsen during evacuations—dispatchers can then keep vehicles from dangerous areas, such as low-water crossings or damaged roadways. Information essential to vehicle record keeping includes driver name, vehicle number, times departing and arriving from facilities, mileage, and telephone/radio contact information.<sup>65</sup> Such information is also

Vehicle operators must be properly credentialed for the type of vehicle they are driving to ensure the safety of all evacuees. To drive a bus larger than a certain size, the driver is required to possess a valid commercial driver's license (CDL).

Pre-identification of specific pick-up and drop-off points is essential for tracking individuals and vehicles. The use of **automatic vehicle location (AVL)** and other computerized systems can assist dispatchers in ordering efficient movement of vehicles.

<sup>65</sup> The US DOT emergency preparedness Web site at <http://www.dotcr.ost.dot.gov/asp/emergencyprep.asp> provides a variety of planning tools for people with disabilities to include a comprehensive checklist for transportation providers and organizations working with people with disabilities to guide transportation planning. US DOT, *Checklist for Transportation and Emergency Preparedness*, <http://www.dotcr.ost.dot.gov/Documents/Emergency/Emergency%20Checklist.doc>

Provisions must be made to respond while en route to medical emergencies, which requires reliable communications systems and contact with dispatchers who may need to contact local EMS providers to respond.

It is important for local emergency managers to understand the plans of such custodial care facilities and what, if any, impacts they will have on the community's overall evacuation plan.

essential for reimbursement of costs following the disaster; if such programs are available.

People with specific medical needs will need a continuation of medical attention. CRCF managers will need to know where those individuals are to ensure appropriate caretakers are notified and able to serve the individual. Individuals with conditions such as dementia or certain mental illnesses must be accounted for to ensure their safety during evacuation events.

Evacuation registries for special needs populations are increasingly being used to pre-identify individuals possibly needing evacuation assistance. By comparing lists to transportation records, shelter registrations may use these registries to ensure identification and tracking of individuals. The HIPAA and other privacy regulations shall be adhered to during all tracking processes to ensure respect for each evacuee.

### Responding to Medical Emergencies while En Route

Relocation of individuals can create severe stress and anxiety under the best of conditions, and this can be exacerbated by transportation during a disaster of people with difficult medical or mobility conditions. Not only are the evacuees concerned with the home or possessions they are leaving, but they are also concerned with their health, ability to adapt to a sheltering environment, access to medical care or personal assistants, and safety in the temporary situation.

Some evacuees may experience transfer trauma, which is the physical manifestation of the stress of being relocated. During transport, this could exacerbate existing conditions, requiring medical attention.

### Connecting Local Transport to Longer-Distance Transport

Intermodal transportation may be necessary if evacuations cover a large geographic area or local facilities cannot support evacuation efforts. Buses, ambulettes, ambulances, and other vehicles may provide transportation to train stations, airports, or other transportation terminals. Prior arrangements must be made with such terminals to ensure there is a specific plan for persons with disabilities. Some communities have plans in place to transport people from several locations to a centralized staging area where they can be transferred to another mode of transportation more suitable for longer-distance travel.

### Security

People in **custodial care** must remain in such care during all transportation efforts. Custodial care is a widely defined term that includes situations such as those involving prisoners or daycare attendees. Prison systems are charged with providing transportation for inmates separate from general populations and other custodial care facilities. This transportation will require that vehicles

are properly staffed and may require additional escort vehicles for security purposes.

Standard operating procedures (SOPs) for custody should be followed to ensure the safety of these people as well as transportation providers. Each facility should refer to relevant procedures and regulations governing their jurisdictions and facilities. Common custodial situations may include patients with dementia, young children under institutional care (including daycare), persons in psychiatric care facilities, and other such facilities. Security should be at appropriate levels for the individuals in custody, such as ensuring children do not leave designated areas and that people without proper credentials or identification do not remove them from custody.

### Service Animals

Service animals are allowed in private transportation and shelter locations that serve the public as protected by the ADA. Unfortunately, incorrect information and false assumptions sometimes result in people not evacuating due to the real or anticipated rejection of a service animal. Transportation providers that do not regularly work with people who have service animals may not be aware of federal requirements to allow such animals access to vehicles. These requirements must be communicated not only to the planners, but also to dispatchers, drivers, and other personnel that may come in contact with a service animal. Service animals should remain with their owners to the greatest extent possible.

As recommended by the National Fire Protection Association (NFPA), the person with the service animal should specify how to handle the animal, how to assist the animal if it becomes disoriented or otherwise disturbed, and the special needs for feeding and watering the animal.<sup>66</sup> Careful handling of service animals is essential, as aggressive animals may be denied access to shelters and that could compromise the health and safety of the animal's handler. **Chapter 7** provides more information on this subject.

## EVACUATING VERSUS SHELTERING-IN-PLACE

Evacuating patients from nursing homes and other care facilities is not without risk, even with the best of planning intentions. A report released by the HHS, *Nursing Home Emergency Preparedness and Response During Recent Hurricanes*, cites several problems with the evacuation of some nursing homes.<sup>67</sup> Twenty nursing homes were evaluated in Alabama, Florida, Louisiana, Mississippi, and Texas; 13 evacuated residents, while 7 sheltered-in-place. The report indicates that while all 20 nursing homes experienced challenges, the nursing homes that evacuated experienced the most problems including “transportation contracts that were not honored, lengthy travel times, complicated medication

<sup>66</sup> NFPA, 2007, p. 12.

<sup>67</sup> US Health and Human Services, Office of Inspector General, August 2006.



needs, host facilities that were unavailable or inadequately prepared, inadequate staffing, insufficient food and water, and difficult re-entry to facilities.”<sup>68</sup> In addition to the findings from the HHS report, the GAO report indicates that several conditions spur evacuation planning, in particular, when jurisdictions develop procedures for financial reimbursement of transportation agencies and address legal liability concerns.<sup>69</sup>

### Transfer Trauma

It has been documented that when older people with medical conditions are moved during an evacuation, the chances of transfer trauma increase. Transfer trauma can affect patients both mentally and physically, and although transfer trauma is more indicative of the frail elderly, conditions of heat, extreme cold, and high humidity can cause those with chronic conditions to deteriorate quickly. Transfer trauma can result in death and must be taken seriously.<sup>70</sup> According to the Agency on Aging (AOA), “this condition affects elders impacted by a disaster that results in being uprooted from routines and familiar surroundings. This type of change can lead to aggravation, depression, serious illness, and even death among the elderly.”<sup>71</sup> Therefore, it is important for CRCFs and local emergency planners to be aware of this possibility when making an evacuation decision.

## MEDICAL ISSUES

When planning for and executing an evacuation, a number of medical issues should be considered by state and local planners.

### Personnel

Staffing is always a major concern, whether sheltering-in-place or evacuating residents. Often during an emergency or disaster, staff cannot get to their facility due to various factors including transportation issues from the emergency, family obligations, or inability to respond. Transportation personnel and other emergency responders may have similar difficulties.

In addition to preparing transportation personnel, staff at CRCFs must also be prepared and evacuated with their patients. When evacuating patients from CRCFs, agencies must consider medical and facility staff as well as transportation staff. Without medical and facility staff and transportation personnel, an evacuation risks failure, leaving people's lives in jeopardy as witnessed during Hurricanes Katrina and Rita as well as other disasters. Pre-planning, developing mutual-aid agreements, and identifying key partners are an effective method

It is critical that transportation agencies work with staff in developing an emergency response plan for both moving the general public as well as people with special needs and transportation disadvantaged people.

<sup>68</sup> Ibid.

<sup>69</sup> GAO, *Preliminary Observations on the Evacuation of Vulnerable Populations due to Hurricanes and Other Disasters*, 2006

<sup>70</sup> Fernandez, L., et al. (2002). “Frail elderly as disaster victims.” *Prehospital Disaster Medicine* 17, 2, 67-74.

<sup>71</sup> AOA, *Disaster Preparedness Manual for the Aging Network*, [http://www.aoa.gov/prof/aoaprof/disaster\\_assist/disaster\\_assist\\_manual\\_VI.aspx](http://www.aoa.gov/prof/aoaprof/disaster_assist/disaster_assist_manual_VI.aspx).

for transportation agencies to employ. Pre-planning and working with partners will enable agencies to, for example, identify primary and back-up evacuation routes and resources including accessing gasoline and knowing which towns are along the way. In addition, developing mutual-aid agreements will be critical if vehicles break down or there is an emergency or other need for assistance.

## Equipment

Transferring equipment during an evacuation must be considered in planning and exercises of facility plans. Equipment may include what is referred to as DME, such as, but not limited to:

- Oxygen tanks<sup>72</sup>
- Orthotics/prosthetics
- Apnea monitor
- Bath and bed lifts
- Canes
- Wheelchairs
- Incontinent supplies
- Electronic speech aids
- Halter monitors for heart conditions
- Hearing aids
- Specialized medical cots
- Portable TTYs
- Medications.

CRCFs require specialized equipment above and beyond the equipment of what might be appropriate for the general population. Transporting some DME may not be feasible. Therefore, it is important that transportation agencies that have agreements with CRCFs discuss what can and cannot be transported during an emergency evacuation. A list of supplies should be established and agreed upon based on the criteria for each facility. In addi-



<sup>72</sup> The DOT has guidelines regarding transporting oxygen. These guidelines include: (1) Oxygen should be transported only when necessary; (2) Follow instructions on the cylinder; (3) Inspect the cylinder for leaks, cracks, dents, gouges, etc.; (4) Limit one cylinder per person; (5) Cylinders are dangerous if dropped, handle with care; (6) Do not handle cylinders with hands that have grease or oil on them; (7) Secure each cylinder in an upright position and do not store in the aisle blocking exit and entrance; (8) Under no circumstance should smoking be allowed anywhere near the cylinders or on the vehicle transporting the cylinders; and (9) When the destination has been reached, remove all cylinders carefully and quickly (Missouri DOT). For additional information on transporting oxygen, log on to [www.fmcsa.dot.gov](http://www.fmcsa.dot.gov).

tion, it may be necessary to work with DME supply companies for delivery arrangements for frequently used personal supplies such as portable oxygen.

### Medicine

Medicine is critical for both sheltering-in-place and evacuations. Facilities that are evacuating patients to another like facility should bring additional medications along and not be dependent on the facility they are evacuating to, as they may have limited supplies. When transporting medical/pharmaceuticals, consider the following:

- It is best to place medicines in a plastic zip-lock bag or waterproof container with the type of medication and when they are to be distributed written on the outside.
- Medical records must be kept with the patient with backups in place.
- When possible, transport patients with family member(s) or someone from his/her support network.

## EVACUATION CONTINGENCY PLANNING FOR CRCFS

During Hurricane Rita<sup>73</sup>, as evacuations got underway, many evacuees' vehicles ran out of gas or overheated and broke down.<sup>74</sup> One scenario to consider during the transportation planning stage is what to do if the vehicle transporting patients from a CRCF breaks down or runs out of gas. In this situation, transportation agencies are a key player in continuity of patient care. How would transportation agencies manage this situation? Consider the following:

- Will you divert to a special needs shelter? If so, do you know where they are located?
- Do you have communications established with local EMAs and EMS?
- Do transportation staff know how to request assistance and resources? Are they aware of this type of contingency plan, and will staff know what to do?
- Do you have medical records on board to ensure continuity of patient care?
- If you divert to another location, will you be able to keep family/support members with the patient? How do transportation agencies accommodate family/support members in this situation?

Consider how different types of evacuation might impact transportation agencies and CRCFs. For example, how would a hurricane evacuation (that is activated several hours prior to gale force winds) differ from an evacuation

<sup>73</sup> It is estimated that 3 million people evacuated the Texas coast (Litman, 2006).

<sup>74</sup> Litman, 2006.

of a high rise due to fire or smoke conditions (where the need to evacuate is immediate for all individuals in danger)? These types of scenarios should be considered during planning and exercises, and drills should be conducted to test the plans. Consider different scenarios including:

- Timing of the evacuation (should special needs populations be evacuated prior to others?)
- Specialized equipment to assist with the process
- Different scenarios and the types of evacuation that would occur
- Dealing with medically fragile people who are at high risk.

## SHELTER CONSIDERATIONS

Although this primer does not specifically focus on sheltering issues, there are a few key points that are relevant to transportation of patients from CRCFs. Personnel, equipment, and medications will need to be transported with the patients and sheltered at the facility where patients are being evacuated. In addition, if a facility chooses to shelter-in-place, provisions to maintain life-sustaining equipment must be made, and transportation agencies may need to assist in transferring such equipment.







# CHAPTER 7: ANIMAL NEEDS

Animals have the same general needs as people during evacuations—safety, food, water, and shelter. However, due to the variety of animals that are domesticated and under human care, there are a wide variety of needs in handling, transporting, and sheltering these animals. Amendments to the **Stafford Act** in 2006, known as the PETS Act (see **Chapter 2**), require that jurisdictions integrate animal planning into local emergency response plans.<sup>75</sup> Congress intended this law to enhance animal safety in disasters, minimize public health concerns due to mass fatalities of animals, and ultimately encourage pet owners to evacuate with their animals rather than remain in danger with them.

While the need for service animal planning is clear, extensive information primarily exists in brochure and planning guidance format for preparing animals in the event of disaster. However, this guidance tends to focus on preparedness kits, locating animal-friendly shelters for household pets, addressing livestock concerns, and animal rescue after disaster. Service animals are often only addressed in brief, primarily to discuss preparedness kits for the animal and legal rights to public shelter access. Numerous Web sites also provide guidance for animal preparedness, including the Humane Society of the United States (HSUS), American Society for the Prevention of Cruelty to Animals (ASPCA), the ARC, the American Veterinary Medical Association (AVMA), and the NOD. In fact, the NOD's brochure on service animals states that household pets and service animals are treated very distinctly. Planners *should address household pets and service animals differently in plans and during evacuation operations.*

Most research on the topic lacks discussion on how to prepare for and manage transportation of service animals on public transportation systems. Literature applicable to service animals and evacuation via mass transit addresses preparedness before the event and/or activity after arrival at a shelter. The body of research on activities during an evacuation remains scant or non-existent. Amendments to the Stafford Act in 2006 (P.L. 109-308, 2006) require that jurisdictions integrate animal planning into local emergency response plans. However, it is unclear to what extent jurisdictions have complied with this new requirement. Although the NPR assessed all state plans, the changes in the law came after the NPR was completed. In addition,

<sup>75</sup> PETS P.L. 109-308, 2006

## GLOSSARY TERMS USED IN THIS CHAPTER

Stafford Act

The Department of Homeland Security (DHS) *Nationwide Plan Review (NPR): Phase 2 Report* (2006) addresses findings and best practices for service animal planning in all US states, reporting that only 23 percent of states have sufficient plans.

Of note, the NFPA's *Emergency Evacuation Planning Guide for People with Disabilities* (2007), which primarily focuses on structural evacuation planning, does include a discussion on service animals including legal rights of the owners. The guide also makes suggestions for service animal planning including addressing issues if the animal becomes disoriented or disturbed during emergency situations.

the Civil Rights Division of the US Department of Justice (DOJ) released a report that briefly addresses service animals, stating that they should never be separated from their owners, but does not detail methods to ensure this during evacuations.

## ANIMAL TYPES

Authorities categorize animals as household pets, working animals, farm and livestock animals, and institutional animals (e.g., those residing in zoos). Each has specific needs for transportation in evacuation, some of which are protected by federal law and others that are the responsibility of the owner. Owners of household pets, working animals, and farm and livestock, and those managing institutional animals must pre-plan transportation assistance to accommodate the specific needs of animals during evacuations. Government planners should be prepared to assist in the movement of large groups of animals, if necessary and consistent with public safety.

### Service Animal (auxiliary aid)

Service animals perform some of the functions and tasks that the individual with a disability cannot perform for him- or herself. For example, “seeing-eye dogs” are one type of service animal used by some individuals who are blind. People are most familiar with this type of service animal, but other service animals assist persons with different kinds of disabilities in their day-to-day activities. Some examples include:

- Alerting those with hearing impairments to sounds
- Pulling wheelchairs or carrying and picking up things for those with mobility impairments
- Assisting those with mobility impairments with balance.<sup>76</sup>

Service animals are permitted in all places that serve the public as long as the animal is not out of control or otherwise posing a direct threat to the health or safety of individuals.<sup>77</sup> This access includes transportation with their owners/handlers during evacuations.

HHS guidance, *Dealing with Disabilities: Tips for First Responders*, points out that some service animals are not registered in any way; therefore, the responder must trust the word of the evacuee in designating the animal as such. This guidance goes as far as to state that companion animals may be for psychiatric and emotional disabilities as well.<sup>78</sup> This can complicate determination of “service animals,” and transportation providers, in collaboration with partner human services organizations, should develop individual procedures for

It is important to recognize that not all service animals are dogs, so transportation agencies should anticipate a variety of animals.

<sup>76</sup> DOJ Civil Rights Division, <http://www.ada.gov/qasrvc.htm>.

<sup>77</sup> DRS/CRD/USDOJ 2002.

<sup>78</sup> <http://www.hhs.gov/od/tips.html>.

assessing situations. The DOJ's ADA Information Line, the HSUS, and others may provide assistance in establishing such procedures.<sup>79</sup>

In accessing forms of transportation, planners should cover the presence of service animals and the potential need to assist animals during evacuations. The animal should be kept with the handler to the greatest extent possible to minimize movement trauma and general safety to both. Emergency personnel and owners must address potential medical needs of the service animal to maintain the animal's health. As a result, transportation must include provisions to carry any necessary medications for animals as they would for a human passenger.

### Household Pets

Household pets may represent a wide variety of species, including dogs, cats, birds, rabbits, rodents, and turtles. People also own horses, amphibians, fish, insects/arachnids, farm animals, and others that are not defined as household pets by FEMA. The AVMA reports that:

- An estimated 58 percent of all US households have pets.<sup>80</sup>
- About 39 percent of households own dogs, and 34 percent care for cats.<sup>81</sup>

According to the HSUS people own:

- Some 73 million dogs and around 90 million cats in the United States
- About 11 million reptiles, kept as pets despite HSUS recommendations against such practices due to health and safety concerns.<sup>82</sup>

While there are no requirements for public shelters to accept household pets, there is an increasing presence of "household pet-friendly" shelters as well as specific "household pet shelters." These shelters require animals to be contained in appropriate containers to ensure the safety of both the household pet and the shelter workers, and the same principles should apply to transportation of such animals. As with other animals, medications should be transported with each animal and be clearly marked so that shelter workers can administer correct doses of necessary medications.

### Farm Animal/Livestock

Farm animals and livestock include animals that work on farms as well as stock for economic earnings. It is essential to address threats to livestock and farm animals as evidenced by previous events:

The ASPCA reports that:

- More than 30 percent of people who did not evacuate during Hurricane Katrina chose to stay to remain with their animals
- Up to 50 percent of households do not have a disaster plan for their animals
- 67 percent would not seek shelter if they had to leave their animals behind.

<sup>79</sup> [www.ada.gov](http://www.ada.gov).

<sup>80</sup> AVMA, 2002.

<sup>81</sup> [http://www.hsus.org/pets/issues\\_affecting\\_our\\_pets/](http://www.hsus.org/pets/issues_affecting_our_pets/).

<sup>82</sup> Ibid.

"In preparation for Hurricane Ike in 2008, Texas A & M students and faculty teamed with the Brazos County (Texas) Emergency Management Team to arrange shelter on university grounds for cats, dogs, horses, cattle, pigs, and other animals" according to *National Geographic News* on September 16, 2008.

The Miami Metro Zoo lost its aviary in Hurricane Andrew, and most of the 1,200 birds had to be recaptured.

The University of Miami Primate Research Center had several monkeys escape during Hurricane Andrew.

The New Orleans Aquarium of the Americas lost power during Hurricane Katrina and virtually all of its 10,000 fish died as a result.

- **1993:** Hundreds of thousands of pigs were evacuated in Mississippi River flooding.
- **1995:** Heat waves killed several million poultry in Virginia, Maryland, and Delaware.
- **1997:** Over 90,000 cattle perished during blizzards and snow melt along the Red River (North-Central Midwestern states).
- **1999:** One million chickens and turkeys and 110,000 hogs died, and manure spills resulted in environmental contamination following Hurricane Floyd.<sup>83</sup>

Livestock may include familiar animals, such as cattle, pigs, poultry, sheep, and goats, but may also include more exotic species such as emus, buffalo, ostriches, and others. Due to the specialized nature and the large numbers that may need to be evacuated, authorities and farm owners should develop plans to move the animals that address appropriate transportation needs and agreements on where to offload them. Farm animals that are used as working animals may include dogs, horses, mules, and others. The University of Vermont Extension Web site provides guidelines for disaster preparedness and includes the following statement that is essential for safe and unimpeded transport: "[Maintain a] Current list of all animals, including their location and records of feeding, vaccinations and tests. Make this information available at various locations on the farm. Make sure that you have proof of ownership for all animals."<sup>84</sup> Animals should also be properly identified with visible markings.

### Institutional Animals (theme parks, zoos, research labs, pet stores, animal shelters)

Institutional animals represent a wide variety of species, living conditions, and vulnerabilities. Theme parks (e.g., drive-through safaris), water shows, zoos of all sizes, kennels, stables, veterinary clinics, research labs affiliated with universities and corporations, pet stores, and animal shelters host animals that may be exposed to hazards and the need for evacuation depending on the location and risks present. Also included in this category of animals are marine mammals in custodial situations, such as performing dolphins. Each institutional facility is responsible for developing emergency plans, whether the facility is a zoo or an animal shelter. Evacuation should be coordinated through local EMAs and the EOC during activation. Transportation agencies may be requested to assist with some of the evacuations, but requests will come through the EOC. Private facilities, including pet daycare centers and overnight boarding facilities, are also responsible for developing their own emergency plans.

<sup>83</sup> FEMA, IS-111, p. 1-1. *New York Times*, September 20, 1999.

<sup>84</sup> [http://www.uvm.edu/~ascibios/?Page=Emergency/Disaster\\_Planning\\_for\\_Livestock.html](http://www.uvm.edu/~ascibios/?Page=Emergency/Disaster_Planning_for_Livestock.html).

## ANIMAL SHELTERING

Animals, whether service animals or household pets, may require transportation assistance or support. Service animals must be treated as working animals and remain with their respective individuals. Such animals are typically exceptionally well trained and, when cared for accordingly, remain with their individuals to help maintain independence and reduce the overall impact on a transportation agency or shelter facility.

Pet-friendly shelters generally follow one of two models. One model is a shelter for household pets only, and owners can drop off their pets to be housed there in the event of a disaster. Some such shelters require owners to pre-register so that the shelter knows how many animals and of what kind they must accommodate. The second type of shelter houses both the people evacuated and their household pets in the same facility. For example, evacuees may be housed in a school gymnasium while their household pets are housed in adjacent school facilities. In either case, the pet owner must come prepared with the required food, medicine, leashes, collars, and crates for their household pets.

Transportation agencies can be very helpful when accommodating or transporting household pets, because doing so spurs people to evacuate—thus, saving more than one life. However, care must be taken as well because animals can cause allergic and asthmatic reactions among other passengers and can spread diseases. Animals that are injured, sick, or frightened can react defensively and cause injury to themselves, other animals, and the well-meaning human trying to help. Identifying a wide array of agencies and organizations to assist can go a long way toward preserving the lives of household pets and encouraging human evacuation, as well.

## VEHICLES

Vehicles used in transporting animals out of disaster areas historically have ranged from single cars to makeshift vans to specialized vehicles. The HSUS, for example, has a fleet of vehicles with “satellite communication, mobile animal shelters and climate-controlled transport trailers, veterinary equipment, boats, all-terrain vehicles and support vehicles.” The fleet is self-sufficient for a minimum of 72 hours. The Virginia Beach SPCA converts its spay and neuter vehicle into an emergency response unit during disasters for overall support. Local animal welfare agencies and humane societies may be able to partner with transportation agencies to move and shelter animals.

Some key elements must be present in vehicles that transport animals:

- Ventilation
- Security from attack or disease spread from other animals
- Crates or units that are secured and will not move about or slip from the vehicle

It is important for each community to plan for all contingencies, including transporting animals so that each supporting agency knows its function, requirements for vehicles and drivers, shelter destinations, and other such information to support an evacuation.



- Crates or units that are not subject to winds and projectiles from driving during transport.

## TRACKING AND REUNIFICATION

Some household pets may have been implanted with a tracking device supported by the American Kennel Club. Local humane societies, veterinary colleges, and veterinarians may be able to provide handheld scanners to identify the animal's bar code and then provide an Internet link to check the owner's location. Supplemental means to identify animals may include putting a barcode onto an animal's collar.

Reunification of household pets should be coordinated through emergency management and animal rescue teams. If transportation agencies are requested to support the reunification effort, it will be coordinated through the EOC during activation. After Hurricane Katrina, the Animal Emergency Response Network (AERN) was developed by Petfinder.com in collaboration with a number of public and private agencies. According to AERN, they developed "the most comprehensive database designed to centralize and organize information about pets in disaster who are in need of help or have been rescued and are waiting to be reunited with their families." For more information about AERN, go to its Web site at <http://disaster.petfinder.com/emergency/>.

## MEDICAL, QUARANTINE, VETERINARY

In the aftermath of Hurricane Katrina, the Louisiana State University and its College of Veterinary Medicine opened up a pet shelter, supported a foster pet program, and provided emergency care to seriously ill and injured animals.

Quarantine of animals may be necessary when animals exhibit signs of disease so that others do not contract the illness. Symptoms should be monitored closely, as even what appears to be a simple matter of running nose and/or diarrhea can result in the death of dozens of animals within a short time. If animals become ill during transportation, the animal and the vehicle in which they were transported may require decontamination, which would need to be coordinated with local emergency management and hazardous materials (HazMat) teams.

Advance identification of and agreements with pet-friendly shelters, boarding facilities, and other appropriate locations such as animal welfare facilities, humane society shelters, local veterinarians, colleges of veterinary medicine, rescue organizations, and foster home programs aid in more effective, safer, and rapid transfer of animals.

Transportation agencies should work with local emergency managers and humane societies to plan ahead for collection, transfer, housing, and care of animals including veterinary care. In addition, these entities should widely distribute materials describing the owner's responsibilities in preparing for and evacuating their animals.

## EQUIPMENT

To move animals carefully, the US Department of Agriculture Animal and Plant Health Inspection Service (APHIS) recommends using travel containers with:<sup>85</sup>

- Locking bolts to secure the container
- Metal doors since animals can chew through plastic
- Four metal rods that fasten and secure the door into the container
- No wheels since airlines will not accept such crates
- Sturdy construction with no weak points
- Adequate ventilation
- Enough space for the animal to turn around
- Access and room for food and water
- Access and room for cleaning.

APHIS suggests including an owner's t-shirt or article of clothing in the crate that may help keep the animal calmer.

Leashes and muzzles of varying sizes can be useful as animals under stressful conditions or with injuries may bite defensively. Strong, sturdy gloves can prevent scratches to humans. Masks worn by humans can hinder the transmission of germs and diseases from humans to animals.

Emergency managers and the local humane society should encourage pet owners and those with service animals to develop a ready kit or go-bag in order to evacuate their animals. In addition to keeping copies of records and a photo of their animal(s) with them, another copy should be placed in the go-kit that, as appropriate, will contain:<sup>86, 87</sup>

- Proof of vaccination and veterinary records
- Licenses, rabies, and ID tags
- Two weeks of food, water, and medications
- Bedding and toys
- Litter box, litter, and a scoop
- Food and water bowls
- Information on medication and feeding schedules
- Newspapers, pee pads, cleaning supplies

<sup>85</sup> [http://www.aphis.usda.gov/animal\\_welfare/pet\\_travel/pet\\_travel\\_tips.shtml](http://www.aphis.usda.gov/animal_welfare/pet_travel/pet_travel_tips.shtml).

<sup>86</sup> Virginia Beach SPCA, <http://vbspca.com/modules/vbspcainfo/item.php?itemid=73>; National Organization on Disability ([www.nod.org](http://www.nod.org)).

<sup>87</sup> Virginia Beach SPCA, <http://vbspca.com/modules/vbspcainfo/item.php?itemid=73>, "Disaster Readiness Tips for Owners of Pets or Service Animals," [www.nod.org](http://www.nod.org)



- Collars, leashes, muzzles, harnesses
- First-aid kit
- A manual can opener and spoons
- Stakes and a break-proof rope or tie down.

## FOOD

Animal rescue teams and key animal organizations, such as HSUS and ASPCA, will coordinate with the local EMA and transportation agencies to manage the movement of donated pet food and other pet items for storage and dissemination to where animals are being held for reunification. Transportation agencies may be called upon to assist with donated goods, including pet supplies, and they should be prepared with staff and vehicles.

## LESSONS LEARNED

The following excerpts from case studies illustrate some experiences with pet evacuation and sheltering in recent disasters. These are provided to aid planners in considering all contingencies and challenges and taking advantage of past experience.

### Case Study #1

Citation: Leslie Irvine. 2004. *Providing for Pets During Disasters: An Exploratory Study*. Quick Response Research Report 171. Boulder, CO: Natural Hazards Research and Applications Information Center, University of Colorado.  
<http://www.colorado.edu/hazards/qr/qr171/qr171.html>.

"No plans were in place when Hurricane Andrew hit southeast Florida in 1992. An estimated 1,000 dogs and cats were euthanized merely for lack of space in which to house them. When Hurricane Charley hit the southwest Florida coast in August 2004, it also left many animals, as well as people, homeless. However, in the years since Hurricane Andrew, efforts to inform the public of what to do with animals in a disaster have increased, and national animal welfare organizations have developed emergency response plans.

Since Hurricane Andrew, a network of organizations has developed to meet the needs of animals and animal stakeholders during the relief period of a declared disaster. Through memoranda and statements of understanding with FEMA and the ARC, various agencies have become the designated animal responders following disasters. National veterinary organizations, such as the VMAT of the AVMA, are responsible for medical care. National animal welfare organizations such as the HSUS, the American Humane Association, Code 3 Associates, and Emergency Animal Rescue Services will send their disaster programs to stricken areas at the request of an affected state. Often the labor will be divided (as during Hurricane Charley), with VMAT taking primary

responsibility for large animals (livestock) and the HSUS taking responsibility for household pets.

Individual states, too, have developed their own animal response plans. For example, following Hurricane Floyd, in which over three million animals (livestock and household pets) died, the major animal stakeholders in North Carolina developed a cooperative response plan. Labeled SART, for State Animal Response Team, the effort involves a public/private partnership based in a nonprofit organization that can obtain grants, accept donations, and subcontract with government agencies. The SART model uses the Incident Command System found in other emergency response organizations. Once in place, a SART facilitates formation of County Animal Response Teams (CARTs), which can respond to incidents in individual counties or cooperate in multi-county incidents. To date, several states have SART/CART plans, while other states have less formal plans for animal response. Even with a well-developed response network, the animal needs may tax this network of resources when disasters occur in multiple communities at once, as when Florida was hit or threatened by several hurricanes (Jeanne, Charley, Frances, and Ivan) in a span of six weeks in the late summer of 2004.”

## Case Study #2

Citation: Irvine, Leslie. 2006. *Providing for Pets during Disasters, Part II: Animal Response Volunteers in Gonzales, Louisiana*. Quick Response Research Report 187. Boulder, CO: University of Colorado Natural Hazards Center. <http://www.colorado.edu/hazards/qr/qr187/qr187.html>.

“Lamar-Dixon holds numerous equestrian and livestock events, and thus has barns with running water and power. It also has a 300-space RV park (all spaces have electrical hookups), as well as restrooms and showers. It was an ideal site for the animal response.

The HSUS leased five barns for sheltering rescued animals. The barns had roofs and open sides, with five aisles of 20 stalls each. The 10' × 10' stalls had three walls and wood shavings on the floors. Three of the five barns were full of dogs. They were all in crates; most were wire, but others were the plastic airline type. The fourth barn housed horses and the fifth was the cat shelter and the veterinary hospital, staffed by the VMATs. In addition, one of the three dog barns had an entire aisle of aggressive dogs; many had obviously been used for fighting. These dogs could not be kenneled with the general population and required skilled handlers.”







# CHAPTER 8: RE-ENTRY AND RETURN TO READINESS

Returning displaced evacuees to their homes should seem like a reverse of the original procedures. However, new challenges await those involved in transporting people displaced by disasters. For seniors, those with disabilities, and those with medical conditions, the return may take longer. These populations may face additional challenges. For example, while many people can return to their houses without electricity, those dependent on oxygen or using motorized equipment cannot do without electricity or a dependable generator. Those who depend upon in-home nursing care cannot do so if insufficient medical personnel have returned to continue the in-home support needed. While many people can navigate a house that has been damaged, someone who is blind or has a mobility limitation cannot easily traverse such conditions. Furthermore, replacement of lost items necessary for daily life, such as prescriptions, medical supplies, and even food for service animals, takes time.

## TRANSPORTATION

Highway re-entry routes will be opened according to the needs of law enforcement and emergency management officials and in compliance with public safety and security requirements. Considerations also include the availability of reliable utilities, such as water, electric, gas, and gasoline for returning vehicles. If these are not available in affected areas and create a hazard to the returning individual, that person should not return, despite roadway re-openings. No one should be returned to areas that are not designated for re-entry.

Re-entry routes may be planned in advance to reverse steps taken during evacuation. Maintaining the same routes for evacuation and re-entry will help reduce confusion among dispatchers, drivers, and evacuees. Route maps should be placed in each vehicle and may be posted at shelters to assist people in locating appropriate transportation home.

As with evacuation procedures, dispatchers should track the following:

- ☑ Driver names and contact information
- ☑ Vehicle information (e.g., owner, number, license plate, type, capacity) and assignment
- ☑ Route maps

Drivers should carry additional supplies during re-entry due to the potential for road hazards such as nails and other debris that may puncture tires or otherwise create difficult conditions. Flashlights, water, spare tires, temporary “flat tire” fixative, a shovel, and heavy-duty gloves may come in handy during re-entry.

- ✓ Location of fuel and emergency repair facilities
- ✓ Contact information for interpreters and translators
- ✓ Evacuee information (where available through evacuation registries)
- ✓ Contact information for liaisons and other people and agencies that will provide critical up-to-date information, including medical support personnel who cared for an evacuee prior to the evacuation
- ✓ Names and contact information for people assisting with evacuations (e.g., mechanics, personnel at fuel depots, staging area workers, assistants traveling with vehicles).

Routes may be impacted by the event that required evacuation. For example, large amounts of debris from tornados and hurricanes or standing water from flooding could close planned re-entry routes. To avoid problems during transportation operations, dispatchers must maintain contact with drivers and individuals responsible for reporting road conditions. This will vary from jurisdiction to jurisdiction, and local procedures should be followed. Road conditions might be reported, for example, via ITS, local police, emergency management, or other sources. Regardless of the source, real-time knowledge of roadway conditions enables dispatchers to relay route diversions to drivers. Similarly, contact must be maintained in the event that a passenger must be diverted to address a medical emergency.

If single collection points were used for evacuation, such as a school or community center, re-entry may use the same drop-off points, assuming they are still in a safe condition. Those locations should be coordinated with local emergency management and law enforcement personnel in the planning process to ensure that people are not stranded at such drop-off points. Facilities that are evacuated, such as CRCFs, may require door-to-door return of evacuees to the CRCF.

Record keeping and tracking of vehicles, personnel, and passengers are as critical during re-entry as during the evacuation. Copies of all records should be sent to the EMA since they will be required to submit paperwork for federal, state, or other reimbursement.

Driver checklists for re-entry should mirror those used during evacuation, to include:

- ✓ Driver ID (name, contact information) and credentials
- ✓ Location of collection points and staging areas
- ✓ Location of vehicle keys and back-up keys
- ✓ Emergency contact for drivers and format of communication used by the drivers (e.g., CB radio, push-to-talk)
- ✓ Dispatch contact and alternate contacts

- ☑ Route maps and alternate route maps
- ☑ Lists of evacuees per vehicle with their contact information
- ☑ Shelter locations and types (e.g., general population, special medical needs, pet-friendly)
- ☑ Specialized equipment required (e.g., wheelchair lifts)
- ☑ Fuel locations
- ☑ Instructions for breaks and shift changes
- ☑ Local information sources (e.g., 211/511 systems, HAR locations)
- ☑ Point-of-contact for rumor control (to verify road closures or shelter changes that may be announced by the media or reported by evacuees).

Each agency should also develop procedures to return property and personnel to normal operational mode, such as procedures for checking in vehicles, post-event maintenance checks, and accounting for all personnel.

## ISSUES TO BE ADDRESSED BEFORE RE-ENTRY

Ideally, shelter management staff and CRCF managers will have developed a re-entry plan for each client and will know whether the individual can return home. However, obtaining accurate information and assurances that this is the case can take time. Thus, transportation agencies may need to stay attuned to the situation and in contact with local shelters, CRCF, and emergency management staff to assess the re-entry issues, including when access is authorized.

While waiting for re-entry to begin, transportation agencies can undertake a number of tasks:

- Conduct or collect daily situation status updates on road conditions, shelter locations, CRCFs, and movement of evacuees. This information can be obtained from shelter managers, the ARC, and EMA staff. Bear in mind:
  - Road conditions change daily. While emergency road operations usually push debris to the roadside, all roads will not necessarily remain open or should be used. Damage may have occurred to roads, bridges, and overpasses that will be revealed with time. Damage assessment processes may be ongoing for some time, and transportation agencies should be part of the information flow from the responsible agencies handling road conditions. These agencies may include the EMA, DOT, Public Works, and/or Engineering Departments.
  - Shelters close rapidly in some cases and often consolidate their populations. For example, schools used as shelters typically try to close as soon as possible, particularly when school is in session. Transportation agencies may be called upon to transfer evacuees from one site to another. Daily updates can be secured from shelter

managers, the ARC, and the EMA. Mapping these locations can be very helpful; where available, agencies may wish to be placed on a distribution list for such maps. After Hurricane Katrina, for example, FEMA's GIS section produced such maps daily and upon demand.

- Shelter and CRCF managers should be asked for periodic updates on the people they have as the number and type of disabilities may change daily as people move in to and out of temporary accommodations. This information enables transportation agencies to plan for which types of vehicles to service and deploy to assist with special needs people during re-entry.
- Transportation agencies may wish to conduct daily telephone briefings with shelter and CRCF managers hosting displaced populations.

During the period between the opening and closing of a shelter, transportation providers may undertake a number of tasks including:

- Debrief staff regarding their evacuation experience and identifying their recommendations for improving re-entry procedures.
- Participate in briefings with staff representing shelters, CRCFs, and other locations hosting evacuees to identify issues and concerns and address them before re-entry.
- Implement staff recommendations for re-entry procedures.
- Encourage staff to rest and recover from what may have been long work hours.
- Clean vehicles including decontamination procedures as needed.
- Check the functioning of equipment designed to support persons with disabilities including wheelchair lifts.
- Repair damaged vehicles and/or conduct routine maintenance.
- Restock key supplies and equipment for transportation including tires, gasoline, and communication materials, and replace batteries for flashlights, strobes, medical equipment, and other items.
- Check the first-aid kit and replace items that were used.
- Monitor and chart the number of requests for transportation assistance to identify ebbs and flows. Retain this information for post-disaster assessments and revisions to the operational plan.
- Communicate closely with CRCFs to coordinate the return of people and their support network and medical equipment.

## COMMUNICATION

Communication for re-entry involves several parties. Moving people may involve taking them to new locations including their original home, a new shelter or facility, or a temporary housing unit. Communication will involve being in touch with shelter and facility managers and, through the managers, with the individual evacuees. It is advisable for transportation supervisors to visit facilities prior to scheduling pick-ups to identify potential problems and to visibly demonstrate their involvement in the re-entry process.

It is also possible that many evacuees may have gone to the homes of family, friends, or other hosts and may be out of the information/communication loop offered by shelters and other facilities. Consequently, it may be necessary to broaden the ways of communicating with evacuees prior to their return.

Re-entry communication strategies may include:

- Ask shelter and facility managers to make announcements (written, verbal, and/or graphic) to their residents regarding transportation to their home
- Post signs and provide information in appropriate languages, including Braille, on re-entry transportation procedures
- Send transportation messages out via TTY, Web sites, e-mail, text messaging, pagers, and other devices used within the local community
- Notify the media to disseminate information about transportation through radio, television, closed-captioning, and public service announcement (PSAs)
  - To increase information dissemination, use people from the impacted communities. Use senior citizens, people with disabilities, and people who speak local languages to make public announcements on radio, television, and other communication media
- Use VMS on highways to convey information on transportation availability
- Develop PSAs or other types of messages with the following information:
  - Locations for pick-ups and the types of accommodations being made (wheelchairs, service animals)
  - Times for pick-ups
  - Estimated time to travel home
  - Where to get additional information
  - How to schedule individual pick-ups outside of collection points
- Maintain communications while en route to the home location, being especially sure to notify reception centers, facilities, and others of the expected time of arrival and any delays en route

Transportation agencies must maintain contact with shelter and facility managers to know when the shelters are closing and will need transportation for evacuees.



- Monitor conditions of people on the vehicle and be ready to activate emergency procedures if necessary including first aid, cardiopulmonary resuscitation (CPR), or other medical procedures
- Maintain awareness of the geographic locations while traveling and knowing the location of the nearest medical facilities and contact numbers for highway service and law enforcement patrols and local first responders.

## ANIMALS

Ideally, all service animals will have been kept with their owners or handlers during evacuations and will be transported with them on the return trip. This is important for the animal's health and safety, as well as the well-being of the owner or handler. While the transportation provider is not responsible for reuniting separated service animals and owners, reasonable effort should be made to accommodate reunions to assist the individual and service animal in re-entry and recovery. Items necessary for the service animal must be accommodated as well including food, water, medications, and other needs.

Legislation, as discussed in **Chapters 2 and 7**, requires transportation providers to accommodate service animals in any situation. This fact must be clearly communicated to all drivers, dispatchers, and other personnel that may encounter a service animal or who plan for re-entry transportation. Be aware that you may need to transport people who are allergic to animals separately from people who have service animals. Therefore, it will be important to find out whether any people have allergies and to make transportation plans accordingly. This may mean scheduling several trips and cleaning vehicles so animal dander does not cause a reaction in those people who are allergic.

## POST-EVENT ACTIONS

Once the entire operation has ended, transportation agencies must take advantage of what they have learned to improve future evacuation support operations. Preferably, within a week of the end of operations, agencies should conduct an after-action debriefing. It is usually a good idea to hold such a forum with a professional, skilled facilitator who will ensure that:

- All have a voice in the process and are not shy about offering their insights.
- All issues are addressed fully and thoughtfully.
- Participants focus on both positive and negative actions and outcomes, as well as suggested corrections.
- Participants do not feel intimidated or pressured to say something or to silence themselves about events that happened.

Agencies may wish to conduct internal debriefings and to participate in other debriefings as well. The external events may include post-event analyses done by the local EMA, the ARC, and other facilities that sheltered evacuees. It is advisable to ensure that those with disabilities, seniors, CRCFs and shelter managers, contracted transportation companies, and others have a presence at these events, as they will bring additional insights useful for improving future operations.

Ideally, the debriefing process will result in revisions to the operational plan. Each section of the plan should be re-considered so that improvements can be made. Additional items may be added to checklists, and procedures may be altered. As such, corresponding training and exercises will be adjusted accordingly. Planners should also stay current on new technologies and procedures that become available and read the literature and best practices on persons with disabilities, seniors, medical evacuees, and transportation. In addition, updates to registries, sheltering procedures, and local plans should be monitored, and the transportation operational plan should be updated accordingly.

Annual updates should be made to the plan including:

- Convening a planning task force that includes agencies likely to be involved in transportation beyond the agency's role such as:
  - The populations likely to be evacuated
  - Shelter operators
  - Facility managers
  - Transportation contractors
  - Law enforcement, EMS, fire and rescue, and emergency management personnel
- Assessing each section of the plan and updating as necessary, ensuring that the plan is consistent with what local planners in other agencies expect and what individual evacuees may need.

Transportation agencies should also participate in and offer training related to evacuation planning and operations. This may include training staff on communications, lifting, equipment, and emergency procedures, and working with staff from shelters, CRCFs, reception centers, and others involved in transportation for evacuations.

If not already completed, an inventory of vehicles, equipment, materials, and supplies should be undertaken so that these items can be restocked prior to the next evacuation. Standby contracts could be arranged with private sector companies to ensure the availability of transportation equipment and supplies when needed.

The transportation agency is a crucial partner in the process of planning for evacuation and must take the post-disaster event time period as an opportunity to strengthen and enhance its partnership with those at risk and those who work to keep the community safe.





# ANNEXES

This primer includes the following annexes:

1. Glossary and Acronyms
2. Legislation, Regulations, and Policy
3. Evacuation Checklist
4. Sample Worksheet for Trip Times
5. Congregate and Residential Care Facilities Case Studies
6. References and Resources



## ANNEX I: GLOSSARY AND ACRONYMS

**Accessible:** Per the Americans with Disabilities Act (see below), having the legally required features and/or qualities that ensure entrance, participation, and usability of places, programs, services, and activities by individuals with a wide variety of disabilities.

**ADA Definition of Persons with Disabilities:** According to the ADA, persons with disabilities are a protected class. An individual is defined as someone with a disability if they: (1) have a physical or mental impairment that substantially limits a major life activity; (2) have a record of such an impairment; and/or (3) are regarded as having such an impairment.

**AERN** Animal Emergency Response Network

**AHRQ** Agency for Healthcare Research and Quality

**ALS** Advanced Life Support

**Ambulette:** Vehicles that transport people with disabilities or those with medical conditions. Ambulettes accept Medicaid, Medicare, and other private insurance for travel reimbursement to specific locations such as from a client's home to a dialysis center and then back home. Ambulettes can take several clients, whereas ambulances, in general, hold one patient for transport to a hospital.

**Americans with Disabilities Act (ADA):** Passed in 1990, the ADA is civil rights legislation that protects individuals with disabilities. It guarantees equal opportunity for individuals with disabilities in public accommodations, employment, transportation, state and local government services, and telecommunications.

**Animal Welfare Act (P.L. 89-544):** Enacted in 1966, Public Law 89-544, commonly referred to as "The Animal Welfare Act" authorizes the Secretary of Agriculture to regulate transport, sale, and handling of dogs, cats, nonhuman primates, guinea pigs, hamsters, and rabbits intended to be used in research or "for other purposes." It requires licensing and inspection of dog and cat dealers and humane handling at auction sales.

**AOA** Agency on Aging

**APHIS** Animal and Plant Health Inspection Service (US Department of Agriculture)

**ARC** American Red Cross

**ASL** American Sign Language

**ASPCA** American Society for the Prevention of Cruelty to Animals

**Assistive Device:** Assistive devices are tools, equipment, or products that can help people perform tasks associated with daily living and/or manage specific medical conditions or disabilities.<sup>88</sup> Assistive devices can range from hearing aids to computer programs to more simple devices such as a "reacher."

**Automatic Vehicle Location (AVL):** AVL is a computer-based vehicle tracking system. For transit, the actual real-time position of each vehicle is determined and relayed to a control center. Actual position determination and relay techniques vary, depending on the needs of the transit system and the technologies employed. (Institute of Transportation Studies at the University of California and Caltrans)

**AVMA** American Veterinary Medical Association

**BLS** Basic Life Support

**CART** County Animal Response Team

<sup>88</sup> Medline Plus, National Institutes of Health: <http://www.nlm.nih.gov/medlineplus/assisteddevices.html>.



**CB** Citizens' Band (radio)

**CDC** Centers for Disease Control

**CDL** Commercial Driver's License

**CERT** Community Emergency Response Team

**Closed-Circuit Television (CCTV):** CCTV is a television in which the video signals are transmitted from one or more cameras by cable to a restricted set of monitors. (Oxford English Dictionary)

**CMS** Changeable Message Sign (also known as VMS or DMS)

**Cognitive Disabilities:** Cognitive disabilities can vary as much as sensory or mobility situations. Cognitive disabilities can be temporary such as the impact of a stroke or brain injury, as permanent as a cognitive development disability such as mental retardation, or as fluctuating as an individual going through early stages of Alzheimer's or other types of dementia.

**Congregate and Residential Care Facilities (CRCFs):** CRCFs include nursing homes, assisted living centers, drug treatment centers, group homes, residential homes, foster homes, adult and childcare facilities, etc.

**Congregate Care Like-to-Like Sheltering:** This type of sheltering occurs when evacuees are moved from one congregate care facility to other congregate care facilities that provide an equal level of care.

**CPR** Cardiopulmonary Resuscitation

**Custodial Care:** A widely defined term that includes situations involving those such as prisoners or daycare attendees.

**DHS** Department of Homeland Security

**DMORT** Disaster Mortuary Operational Response Team

**DMS** Dynamic Message Sign (also known as VMS or CMS)

**DOJ** Department of Justice

**DOT** Department of Transportation

**Durable Medical Equipment (DME):** DME is medical equipment that a person needs to function on a daily basis such as oxygen tanks, wheelchairs, orthotics, and prosthetics.

**Emergency Alert System (EAS):** The EAS is designed to provide the President with a means to address the American people in the event of a national emergency. Beginning in 1963, the President permitted state and local emergency information to be transmitted using the system. Since then, local emergency management personnel have used the EAS to relay local emergency messages via broadcast stations, cable, and wireless cable systems. In October 2005, the Federal Communications Commission expanded the EAS rules to require EAS participation by digital television broadcasters, digital cable television providers, digital broadcast radio, digital audio radio service, and direct broadcast satellite systems. ([www.fcc.gov](http://www.fcc.gov))

**Emergency Management Agency (EMA):** An EMA may also be known as an Office of Emergency Management (OEM), as an Office of Emergency Services (OES), or by a similar name. It is generally described as a state or local government agency that provides support to the local community in response to an emergency situation.

**Emergency Operations Center (EOC):** The EOC is an established location/facility in which local and state staff and officials can receive information pertaining to an incident and from which they can provide direction, coordination, and support to emergency

operations. Also, this is where the decision makers and support agencies will report to manage the evacuation.

**Emergency Support Function (ESF):** The federal government groups most of its resources and capabilities, and those of certain private-sector and non-governmental organizations, under ESFs. ESFs align categories of resources and provide strategic objectives for their use. They use standardized resource management concepts such as typing, inventory, and tracking to facilitate the dispatch, deployment, and recovery of resources before, during, and after an incident. Support agencies are assigned based on the availability of resources in a given functional area. ESFs provide the greatest possible access to federal department and agency resources regardless of which agency has those resources.

**EMS** Emergency Medical Services

**ESF-1** Emergency Support Function-1 (also referred to as “Transportation Support Function”)

**ESF-6** Emergency Support Function-6 (also referred to as “Mass Case Support Function”)

**ESF-7** Emergency Support Function-7 (also referred to as “Logistics Management and Resource Support Function”)

**ESF-8** Emergency Support Function-8 (also referred to as “Health and Medical Services Support Function”)

**Executive Order 13347:** On July 22, 2004, President Bush signed Executive Order 13347 to strengthen emergency preparedness with respect to individuals with disabilities. This Executive Order directs the federal government to address the safety and security needs of people with disabilities in emergency situations including natural and man-made disasters.

**FAQ** Frequently Asked Questions

**FCC** Federal Communications Commission

**FEMA** Federal Emergency Management Agency

**FHWA** Federal Highway Administration

**FTA** Federal Transit Administration

**GAO** General Accountability Office

**GDEM** Governor’s Division of Emergency Management

**General Population Shelter:** General population shelters support individuals who can independently support their own needs, including individuals who are with their own caregivers. General population shelters should be, but are not always, accessible for those with mobility disabilities (such as providing entrance ramps, accessible bathrooms, and passageways).

**Geographic Information System (GIS):** GIS is a system for creating, storing, analyzing, and managing spatial data and associated attributes. It is a computer system capable of integrating, storing, editing, analyzing, sharing, and displaying geographically referenced information.

**Global Positioning System (GPS):** The GPS is a US space-based radio navigation system that provides reliable positioning, navigation, and timing services to civilian users on a continuous worldwide basis—freely available to all. For anyone with a GPS receiver, the system will provide location and time. GPS provides accurate location and

time information for an unlimited number of people in all weather; day and night, anywhere in the world. ([www.gps.gov](http://www.gps.gov))

**HazMat** Hazardous Materials

**HHS** Health and Human Services

**Highway Advisory Radio (HAR):** HAR is used to broadcast information to motorists in a localized area and provide more information than can often be communicated with a VMS.

**HIPAA** Health Insurance Portability and Accountability Act

**Homeless Populations:** According to the National Coalition for the Homeless (NCH), homelessness can be either permanent or temporary with some families and individuals moving in and out of homelessness. The NCH estimates that there are some 3.5 million people in the United States who are homeless, but cautions that the number is realistically higher because of restraints on how to define and count the homeless populations. These restraints include the transient nature of the homeless population, difficulty with data collection methodologies, and locating people who are homeless as they often stay in cars or "make-shift" housing such as tents or boxes.

**Household Pet:** A household pet is defined as a domesticated animal, such as a dog, cat, bird, rabbit, rodent, or turtle, that is traditionally kept in the home for pleasure rather than commercial purposes, can travel in commercial carriers, and be housed in temporary facilities. Household pets do not include reptiles (except turtles), amphibians, fish, insects/arachnids, farm animals (including horses), and animals kept for racing purposes.

**Hospitals:** Sheltering at hospitals should be reserved only for the most critical patients who require specialized, skilled care on a regular basis, often those whose condition is likely to deteriorate quickly during an emergency.

**HOV** High Occupancy Vehicle

**HSUS** Humane Society of the United States

**ICC** Interagency Coordinating Council on Emergency Preparedness and Individuals with Disabilities

**ID** Identification

**Intelligent Transportation Systems (ITS):** ITS encompass a broad range of wireless and wireline communications-based information and electronics technologies. One of the ways that DOT officials are responding to the need for information is through the application of ITS technologies.

**IV** Intravenous

**JCAHO** Joint Commission on the Accreditation of Healthcare Organizations

**MJHHA** Miami Jewish Home and Hospital for the Aged

**MPO** Metropolitan Planning Organization

**MRDD** Mentally Retarded/Developmentally Delayed

**Mutual-Aid Agreement:** A written agreement between agencies and/or jurisdictions that they will assist one another on request by furnishing personnel, equipment, and/or expertise in a specified manner. The primary objective is to facilitate rapid, short-term deployment of emergency support prior to, during, and/or after an incident.

**National Incident Management System (NIMS):** A system mandated by Homeland Security Presidential Directive 5 that provides a consistent nationwide approach for govern-

ments, the private sector, and non-governmental organizations to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity.

**National Response Framework (NRF):** The NRF is a guide to how the nation conducts all-hazards incident management. It is built upon flexible, scalable, and adaptable coordinating structures to align key roles and responsibilities across the nation. It is intended to capture specific authorities and best practices for managing incidents that range from the serious but purely local to large-scale terrorist attacks or catastrophic natural disasters.

**NCD** National Council on Disability

**NCH** National Coalition for the Homeless

**NDMS** National Disaster Medical System

**NFPA** National Fire Protection Association

**NIMS** National Incident Management System

**NMETS** National Mass Evacuation Tracking System

**NOD** National Organization on Disability

**Non-Governmental Organization (NGO):** NGOs are non-profit entities with an association that is based on the interests of its members, individuals, or institutions and that is not created by government, but may work cooperatively with government. Such organizations serve a public purpose not a private benefit. (DHS NIMS Implementation for Non-Governmental Organizations)

**NPR** Nationwide Plan Review

**NTSB** National Transportation Safety Board

**OEM** Office of Emergency Management (can be state or local; also known as EMA)

**Older Americans Act of 1965 (OAA):** Originally signed into law in 1965, the OAA created the Administration on Aging and authorized grants to states for community planning and services programs, as well as for research, demonstration, and training projects in the field of aging. Later amendments to the act added grants to area Agencies on Aging for local needs identification, planning, and funding of services, including but not limited to nutrition programs in the community as well as for those who are home-bound; programs that serve Native American elders; services targeted at low-income minority elders; health promotion and disease prevention activities; in-home services for frail elders; and those services that protect the rights of older persons such as the long-term care ombudsman program.

**Pandemic and All-Hazards Preparedness Act (PAHPA):** PAHPA was passed in 2006 and focuses on public health and medical bioterrorism preparedness as well as all-hazard medical surge capacity. Among many provisions in the Act, a specific section addresses special needs or "at-risk populations" including children, pregnant women, senior citizens, and other individuals who have "special needs." Under the provisions of this law, the needs of "at-risk" individuals should be taken into account in managing several preparedness initiatives such as the Strategic National Stockpile (SNS) and grants to states.

**Paratransit:** This is the family of transportation services that falls between the single-occupant automobile and fixed-route transit. Examples of paratransit include taxis, carpools, vanpools, minibuses, jitneys, demand responsive bus services, and specialized bus services for the mobility impaired or transportation disadvantaged.

**People with Medical Conditions:** Many people throughout the United States may have one or more existing medical conditions, some more severe than others. This primer defines people with medical conditions as individuals who have one or more medical diagnoses that may or may not interfere with activities of daily living, but who may need assistance during an emergency evacuation. If a person with a medical condition becomes debilitated, limited, or otherwise impaired, that person may be protected under the ADA.

**People with Mobility Disabilities:** Mobility disabilities can range from those who experience difficulty moving to those who use assistive devices such as canes, walkers, wheelchairs, or scooters or who may need to remain in beds or similar conveyances.

**People with No Access to a Vehicle:** This primer defines people with no access to a vehicle as individuals and families in a community that do not have a car and generally rely on public transportation on a daily basis. Individuals and families may not have a car for several reasons including economic factors, geographic location (i.e., people who live in urban environments may not own a vehicle), health conditions (e.g., those with physical disabilities, some of the very elderly), environmental conscientiousness, and lack of a license.

**People with Sensory Disabilities:** People with sensory disabilities may experience varying levels of vision impairment or may be deaf or hard-of-hearing. Levels of functioning may vary from blind people who travel easily through urban areas or seniors with macular degeneration who have not acclimated to their declining vision.

**PETS** Pet Evacuation Transportation Standards Act

**PHMSA** Pipeline and Hazardous Materials Safety Administration

**PSA** Public Service Announcement

**Reasonable Accommodations:** In general, an accommodation is any change to the rules, policies, procedures, or environment or in the way things are customarily done that enables an individual with a disability to enjoy greater participation. A requested accommodation is unreasonable if it poses an undue financial or administrative burden or a fundamental alteration in the program or service.

**RFID** Radio Frequency Identification

**SAFETEA-LU:** Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users

**SART** State Animal Response Team

**Service Animal:** A service animal is defined under the ADA as “a guide dog, signal dog, or other animal individually trained to provide assistance to an individual with a disability.” Service animals assist people with disabilities in various activities such as sight (seeing-eye dogs) and hearing (hearing dogs). Often, a service animal enables a person with a disability to live independently.

**Service Patrol:** Transportation workers dispatched to support law enforcement, fire, and rescue personnel in addressing traffic incidents and other roadway emergencies.

**Sign Language Interpreter:** A person who has been trained to use a system of conventional symbols or gestures made with the hands and body to help people communicate who are deaf or hard of hearing, or have speech impairments.

**SNETS** Special Needs Evacuation Tracking System

**SNS** Strategic National Stockpile

**SOP** Standard Operating Procedure



**Special Needs or Medical Needs Shelters or Units:** Definitions for special needs or medical needs shelters can vary and depend on the resources available and if jurisdictions have established such a shelter system. Generally, the special needs shelter may be a stand-alone shelter or a special needs unit within the general population shelter. By offering skilled medical staff, medical supplies, specialized equipment, and special dietary provisions, the special needs shelter will provide a higher level of care than at a general population shelter. All special needs shelters must be accessible.

**Special Needs Populations:** No singular definition of the term “special needs” exists, although the term is widely used within the disaster services and emergency management field and is often primarily focused on persons with disabilities. In fact, the term “special needs” is currently under debate in the disability, healthcare, and emergency management communities. “Special needs” can be narrowly defined or seen as a broad and overarching concept.

**Stafford Act:** The Stafford Act establishes the Presidential Disaster Declaration system, which triggers federal financial and resource assistance to eligible states and local authorities through FEMA. Through the Stafford Act, FEMA is the designated coordinating agency during federally declared disasters. Although part of DHS since 2003, FEMA remains the federal agency that establishes guidelines and grants for state and local emergency management; however, the state often administers guidelines and grants to local jurisdictions and local jurisdictions are expected to carry out the guidelines.

**TCL** Target Capabilities List

**TCRP** Transit Cooperative Research Program

**Text Telephone (TTY):** TTY is also sometimes called a TDD, or Telecommunication Device for the Deaf. TTY is the more widely accepted term, however, as people who are not deaf also use TTYs. A TTY is a special device that allows people who are deaf, hard of hearing, or speech-impaired to use the telephone to communicate by typing messages back and forth to one another instead of talking and listening. A TTY is required at both ends of the conversation in order to communicate ([AboutTTY.com](http://AboutTTY.com)).

**TIM** Traffic Incident Management

**Traffic Control Devices:** Traffic control devices can help transportation managers to maximize evacuation efficiency and allow designated vehicles to move more freely on otherwise gridlocked roads. Traffic control devices include traffic signals and signs, pavement markings, ramp meters, ramp gates, reverse lanes, and ITS components.

**Traffic Management Center (TMC):** The TMC or Traffic Operations Center (TOC) is the hub of a transportation management system, where information about the transportation network is collected and combined with other operational and control data to manage the transportation network and to produce traveler information. It is the focal point for communicating transportation-related information to the media and the motoring public, a place where agencies can coordinate their responses to transportation situations and conditions. The TMC links various elements of ITS such as variable message signs, closed-circuit video equipment, and roadside count stations, enabling decision makers to identify and react to an incident in a timely manner based on real-time data.

**Transfer Trauma:** It has been documented that when older people with medical conditions are moved during an evacuation, the chances of “transfer trauma” increase. Transfer trauma can affect patients both mentally and physically. Although transfer trauma is more indicative of the frail elderly, conditions of heat, extreme cold, and high humidity

can cause those with chronic conditions to deteriorate quickly. Transfer trauma can result in death and must be taken seriously.

**Variable Message Signs (VMS):** VMS, also known as changeable message signs (CMS) or dynamic message signs (DMS), are electronic road signs that display messages to system users.

**VMAT**    Veterinary Medical Assistance Team

## ANNEX 2: LEGISLATION, REGULATIONS, AND POLICY

As outlined in Chapter 2, there are many existing laws, regulations, and policies related to special needs populations. This annex provides more detailed information on those subjects introduced in Chapter 2.

### Disaster Preparedness in Federal Legislation, Regulations, Policy

#### *Robert T. Stafford Disaster Relief and Emergency Assistance Act (P.L. 93-288, as amended, 1988)*

The Stafford Act amended the Disaster Relief Act of 1974 and established the Presidential Disaster Declaration system, which triggers federal financial and resource assistance to eligible states and local authorities through FEMA. Through the Stafford Act, FEMA is the designated coordinating agency during federally declared disasters. Although part of the DHS since 2003, FEMA remains the federal agency that establishes guidelines and grants for state and local emergency management. However, the state often administers guidelines and grants to local jurisdictions; and local jurisdictions are expected to carry out the guidelines.

Historically, special needs issues have fallen under the purview of disaster human services within the emergency management system. This changed after the events of Hurricanes Katrina and Rita, as the Stafford Act was amended and special needs issues were fully integrated into all phases of emergency management.

#### *Pet Evacuation Transportation Standards Act of 2006 (P. L. 109-308, 2006) (PETS Act)<sup>89</sup>*

The PETS Act of 2006 was enacted following the events of Hurricane Katrina. PETS amends the Stafford Act to include requirements for jurisdictions to include planning for people with animals. The legislation specifically states that all cities and states must have a pet plan in place to receive FEMA funding. This law is meant to address the problematic issue of people refusing to evacuate because they do not want to leave household pets behind as witnessed during Hurricane Katrina and other disasters. FEMA funding eligibility will be dependent on compliance. Although service animals are mentioned in the legislation, household pets should not be confused with service animals, which are protected under the ADA. Service animals are not considered household pets. Regardless, all emergency evacuation plans must include policies and procedures for evacuating both service animals and household pets.

---

<sup>89</sup> PETS Act, Public Law 109-308, "Pets Evacuation and Transportation Standards Act of 2006," [http://www.hsus.org/press\\_and\\_publications/press\\_releases/president\\_bush\\_signs\\_pets\\_Act.html](http://www.hsus.org/press_and_publications/press_releases/president_bush_signs_pets_Act.html), October 6, 2006.

### *HHS, Pandemic and All-Hazards Preparedness Act (P.L. 109-417, 2006) (PAHPA)<sup>90</sup>*

In 2006, the PAHPA was passed, which focuses on public health and medical bioterrorism preparedness as well as all hazard medical surge capacity. The Act addresses special needs or “at risk populations” including children, pregnant women, senior citizens, and other individuals who have “special needs.” Under the provisions of this law, the needs of “at-risk” individuals should be taken into account in managing preparedness initiatives such as the SNS and grants to states.

### *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, 2005 (SAFETEA-LU) (P.L. 109-59)<sup>91</sup>*

The SAFETEA-LU Act continues the requirements for MPOs and state DOTs to address the needs of environmental justice and Title VI populations in their systems planning processes (as codified under 23 CFR Part 450). SAFETEA-LU added a security requirement to these transportation planning processes, which, by inference, requires state and local agencies to address special needs populations in their long-range transportation plans and their transportation improvement programs.

### *Executive Order 13347: Individuals with Disabilities in Emergency Preparedness (2004)<sup>92</sup>*

On July 22, 2004, President Bush signed Executive Order 13347 to strengthen emergency preparedness with respect to individuals with disabilities. This Executive Order directs the federal government to address the safety and security needs of people with disabilities in emergency situations including natural and man-made disasters. To this end, the Executive Order created a Federal Interagency Coordinating Council of Emergency Preparedness and Individuals with Disabilities<sup>93</sup> chaired by the DHS and comprised of several federal agencies.

### *ADA of 1990 (P.L. 101-336)<sup>94</sup>*

The ADA of 1990 does not specifically address the issue of compliance in emergency planning and response. However, it does mandate that all public and private sector facilities come into and remain in compliance, provide reasonable accommodations, and be accessible.<sup>95</sup> Essentially, special needs populations cannot be excluded because of disability with regard to emer-

<sup>90</sup> S. 3678 [109th] Pandemic and All-Hazards Preparedness Act 2006: <http://www.govtrack.us/congress/bill.xpd?bill=s109-3678>

<sup>91</sup> SAFETEA-LU (2005) [www.fhwa.dot.gov/safetealu/legis.htm](http://www.fhwa.dot.gov/safetealu/legis.htm)

<sup>92</sup> Executive Order 13347: Individuals with Disabilities in Emergencies 2004: <http://edocket.access.gpo.gov/2004/pdf/04-17150.pdf>

<sup>93</sup> [http://www.dhs.gov/xprepresp/committees/editorial\\_0591.shtm](http://www.dhs.gov/xprepresp/committees/editorial_0591.shtm)

<sup>94</sup> Americans with Disabilities Act 1990: <http://www.ada.gov/>

<sup>95</sup> Davis & Sutherland, 2005

agency plans. “While not specifically articulated within many of the authorities mentioned [ADA], in a post-September 11 United States, the interpretations are now shaped by a ‘big picture’ approach and extend the rights of people with disabilities to share in access to services and programs, to include emergency preparedness planning and response.”<sup>96</sup> Access must be both physical (e.g., architectural barriers) and programmatic.

In the last few years, the Federal Communications Commission (FCC) has aggressively held broadcasters responsible for not complying with emergency information accessibility requirements in place under the Telecommunications Act of 1996 (P.L. 104-104), Section 79.2—Accessibility of Emergency Programming.<sup>97</sup>

The events of September 11, 2001, prompted emergency management policy changes for the special needs population including landmark lawsuits about the ADA and emergency evacuation planning, which ruled that, under the ADA, public facilities should consider the needs of people with disabilities in emergency evacuation planning.<sup>98</sup>

#### *Older Americans Act of 1965 (OAA) (P.L. 89-73)*<sup>99</sup>

The OAA of 1965 has undergone subsequent revisions with the most recent reauthorization in 2006. Although the OAA is not a disaster-specific piece of legislation, much like the ADA, it can be used to authorize funds to assist older Americans in the recovery process primarily because the act provides grants to states for community planning and services. The OAA is an anti-discrimination law that classifies older Americans as a legally protected class.

#### *Health Insurance Portability and Accountability Act (HIPAA) (P.L. 104-191)*

HIPAA of 1996 addresses the issue of health privacy for patients. The law requires uniform federal privacy protections for individually identifiable health information. HHS issued final regulations implementing the privacy provisions of HIPAA and provided a new tool called *Disclosures for Emergency*

<sup>96</sup> Davis & Sutherland, 2005, p. 13

<sup>97</sup> P.L. 104-104, 110 Stat. 56 (1996), [www.fcc.gov/telecom.html](http://www.fcc.gov/telecom.html); US DOJ: <http://www.usdoj.gov/crt/ada/adahom1.htm>. This is codified in 47 CFR 79.2.

<sup>98</sup> On December 28, 2004, a landmark settlement in Montgomery County, Maryland, involving the national retail store Marshall's was decided in favor of employee Katie Savage, who has a disability and was trapped in the store during an emergency evacuation. During the evacuation, Ms. Savage was instructed to proceed to an underground area where she was unable to evacuate because the elevators were shut down, thus trapping her for the duration of the emergency. Ms. Savage filed a suit under the ADA challenging Marshall's lack of emergency planning for people with disabilities. Under the ruling of Judge Debelius, the Circuit Court of Montgomery County found that, “the ADA requires places of public accommodation to consider the needs of people with disabilities in developing emergency evacuation plans.” This extends to all public places indicating that evacuation plans need to include people with disabilities as well as the general public. Those in the disability advocacy community saw this case as a critical step toward mandating inclusion of special needs issues into all levels of emergency management. (Washington Lawyers' Committee for Civil Rights & Urban Affairs, 2005)

<sup>99</sup> Older Americans Act 1965: [http://www.aoa.gov/about/legbudg/oa/legbudg\\_oaa.aspx](http://www.aoa.gov/about/legbudg/oa/legbudg_oaa.aspx).



*Preparedness – A Decision Tool* (available at <http://www.hhs.gov/ocr/privacy/hipaa/understanding/special/emergency/decisiontoolintro.html>).

### ***Animal Welfare Act of 1966, (P.L. 89-544)***

The Animal Welfare Act of 1966<sup>100</sup> governs humane treatment of animals during transportation and other emergency situations. According to the act, all handlers should keep detailed records to ensure compliance and proof of such treatment. This applies to all animals including household pets, service animals, livestock, and institutional animals.<sup>101</sup> The act covers specific issues such as transporting animals when separated from owners. In this case, if animals are separated from owners, it is important to work with “second parties” such as veterinarians and animal rescue volunteers to assist with matching owners and animals after the disaster. The legislation addresses other concerns regarding vaccinations, special medical needs, aggressive animals, and safety of drivers and handlers.<sup>102</sup>

## **Federal Guidance Documents on Special Needs and Emergency Management**

### ***National Response Framework***<sup>103</sup>

The NRF presents the guiding principles that enable all response partners to prepare for and provide a unified national response to disasters and emergencies—from the smallest incident to the largest catastrophe. The NRF establishes a comprehensive, national, all-hazards approach to domestic incident response. It evolved from the *Federal Response Plan* and its successor, the *National Response Plan*. The NRF incorporates roles and responsibilities for various response and support functions and under certain planning scenarios and provides best practices and procedures from professional emergency managers and responders. The NRF provides a basis for how the federal government coordinates with state, local, and tribal governments; voluntary agencies; and the private sector during emergencies and disasters.

### ***FEMA and DHS Office for Civil Rights and Civil Liberties Planning***

As a result of the 2007 Homeland Security Appropriations Act (H.R. 5441)<sup>104</sup>, FEMA and the DHS Office for Civil Rights and Civil Liberties Planning are developing guidelines for accommodating individuals with disabilities in

<sup>100</sup> P.L. 89-544, Animal Welfare Act, 1966: <http://www.nal.usda.gov/awic/legislat/usdaleg1.htm>.

<sup>101</sup> The State of Maine (Maine “SMART”) has a planning template online that serves as a comprehensive example for local planning, and has guidance addressing a variety of animal types and situations. [www.mainesmart.org](http://www.mainesmart.org).

<sup>102</sup> LSU Emergency Animal Shelter Disaster Response Manual.

<sup>103</sup> NRF Resource Center: [www.fema.gov/emergency/nrf](http://www.fema.gov/emergency/nrf).

<sup>104</sup> H.R. 5441 [109th] Department of Homeland Security Appropriations Act, 2007: <http://thomas.loc.gov/cgi-bin/query/z?c109:H.R.5441>.

disaster mass care, housing, and human services. Some recent developments include:

- **National Incident Management System (NIMS)**<sup>105</sup> – The DHS is revising NIMS to include the role of a special needs adviser within the command structure. There is also emphasis being placed on the accessibility of outreach, education, and communications with special needs populations.
- **Homeland Security Target Capabilities Lists (TCL)** – The DHS and several of its partners worked at the national level to develop target capabilities for state and local emergency management to accompany the National Preparedness Guidelines. “Target capabilities describe the capabilities related to the four Homeland Security mission areas: Prevent, Protect, Respond, and Recover. It defines and provides the basis for assessing preparedness. It also established guidelines for preparing the Nation for major all-hazards events. The current version of the TCL contains 37 core capabilities.”<sup>106</sup>
- **Accommodating Individuals with Disabilities in the Provision of Disaster Mass Care, Housing, and Human Services Reference Guide** – FEMA released *Accommodating Individuals with Disabilities in the Provision of Disaster Mass Care, Housing, and Human Services Reference Guide*, which states, “Federal civil rights in Section VI of this Guide require equal access for, and prohibit discrimination against, people with disabilities in all aspects of emergency planning, response, and recovery. To comply with Federal law, those involved in emergency management should understand the concepts of accessibility and nondiscrimination and how they apply in emergencies.” The guide outlines key nondiscrimination points for emergency management including:
  1. *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. Including people with various types of disabilities in planning, training, and evaluating programs and services will ensure they are given appropriate consideration during emergencies.
  2. *Integration* – Emergency programs, services, and activities typically must be provided in an integrated setting. Providing services such as sheltering, information intake for disaster services, and short-term housing in integrated settings keeps individuals connected to their support system, including caregivers, and avoids the need for disparate service facilities.

<sup>105</sup> FEMA’s National Integration Center (NIC) Incident Management Systems Integration Division, [www.fema.gov/emergency/nims](http://www.fema.gov/emergency/nims).

<sup>106</sup> Homeland Security Target Capabilities List (September 2007): <https://www.rkb.us/hspd8.cfm>

3. *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 where medical care or human services are provided, and paths of travel to and between these areas.
4. *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.
5. *Effective Communication* – People with disabilities must be given information comparable in content and detail to that given to the general public, as well as the information being accessible, understandable, and timely. Auxiliary aids and services may be needed to ensure effective communication. These may include pen and paper or sign language interpreters through on-site or video interpreting for individuals who are deaf, deaf-blind, hard of hearing, or have speech impairments. Individuals who are blind, deaf-blind, have low vision, or have cognitive disabilities may need large print information or people to assist with reading and completing forms.

## ANNEX 3: EVACUATION CHECKLIST

TASK	DATE COMPLETED	NOTES
<b>Planning and Preparedness (Chapter 3)</b>		
What local groups did you bring into the planning forum to address evacuations (e.g., local health, EMA, transportation, CRCFs, NGOs)?		
Does the plan clearly define roles for staff?		
<ul style="list-style-type: none"> <li>Which staff received a briefing and copy of their roles?</li> </ul>		
How does the plan identify people with special needs?		
Do you have a registry of people with special needs that may need to be evacuated and does it address their:		
<ul style="list-style-type: none"> <li>Medical equipment needs</li> <li>Companion caregiver/attendant</li> <li>Service animal</li> <li>Household pet</li> <li>Communication needs</li> </ul>		
What agency is responsible for maintaining/updating the registry of those with special needs who may need evacuation?		
How often is the registry updated and disseminated to agencies responsible for evacuating those on the registry?		
How is the need to register communicated to those with special needs?		
How does the plan address the timeline for evacuating those with special needs?		
How does the plan address coordinating transport of those with special needs with the special needs shelters?		
Do you have copies of all agreements with CRCFs, hospitals, jails, etc.?		
<ul style="list-style-type: none"> <li>Where are they located?</li> <li>Who do you have agreements with?</li> <li>Who do you not have agreements with?</li> <li>Have you ensured that your agency is not the sole transportation provider?</li> <li>Is there the potential for competition for transportation resources between your agency and CRCFs?</li> </ul>		

TASK	DATE COMPLETED	NOTES
Describe your system of communication with your local EMA. ■ When was it last tested? ■ How do plans differ between the planning phase and operations phase?		
How does the plan address communicating with people who have special needs such as: ■ Speakers of other languages and those with limited English proficiency ■ People with disabilities ■ People with medical needs		
How does the plan address communicating information/outreach to people with special needs about: ■ Pick-up locations for transportation ■ What they can bring with them ■ What services/facilities are available at special needs shelters		
Do you have an inventory of available vehicles for an evacuation and does it address: ■ Contact information ■ Number and types of vehicles		
Describe your staff notification system. ■ When was it last updated? ■ When was it last tested?		
Describe your agency's staff personal and family preparedness plans for essential personnel. ■ Describe your back-up plans to fill essential functions if staff cannot fulfill their duties.		
When were the plans tested and exercised? (Annual exercises are recommended.)		
Which transportation staff received training?		



TASK	DATE COMPLETED	NOTES
<p><b>Communication Needs (Chapter 4)</b></p> <p>When communicating with CRCFs, have you:</p> <ul style="list-style-type: none"> <li>■ Identified the types of communication resources available prior to an event?</li> <li>■ Ensured that as many agencies and facilities as possible know the communications plan and use the same equipment?</li> <li>■ Conducted routine tests, if using a radio system?</li> <li>■ Tested all communication resources on a regular basis?</li> <li>■ Developed a phone-tree of key people to contact for transportation during an evacuation             <ul style="list-style-type: none"> <li>— Do numbers include supervisors, medical staff, facility directors and others?</li> <li>— Do you test these phone numbers on a regular basis to update accordingly?</li> </ul> </li> <li>■ Conducted a communications drill at least once a year?</li> </ul>		
<p>When preparing for communication with people who have limited English proficiency or are non-English speaking, have you:</p> <ul style="list-style-type: none"> <li>■ Developed written and pictorial illustrations of various words and phrases that may need to be used during the evacuation process and included copies on board all transportation vehicles?</li> <li>■ Did you create consistent, easily readable photo identification badges and shirts for the transportation staff?             <ul style="list-style-type: none"> <li>— Color-code the shirts and/or badges to identify supervisors, drivers, and other key staff</li> <li>— Give a printed handout in relevant languages and/or with illustrations to each evacuee being transported.</li> </ul> </li> </ul>		

TASK	DATE COMPLETED	NOTES
<b>Transportation Needs During Activation and Operations (Chapter 5)</b>		
How and when do you notify transportation providers to activate the evacuation?		
How do you track requests for transportation to ensure requests are responded to and to support future planning for transportation?		
How do you monitor the status of the evacuation and report it to your EMA?		
How do you provide staff at the transportation pick-up locations?		
How do you use ITS components to support the evacuation and who is responsible for the operation and monitoring of those components?		
Are transportation dispatchers keeping track of the following: <ul style="list-style-type: none"> <li>■ Driver names/contact information</li> <li>■ Vehicle information (owner; number; license plate, type, capacity, etc.) and assignment</li> <li>■ Route maps</li> <li>■ Locations of fuel</li> <li>■ Contact information for interpreters and translators</li> <li>■ Evacuee information (where available through evacuation registries)</li> <li>■ Contact information for liaisons and other people/agencies that will provide critical up-to-date information</li> <li>■ Names and contact information for people assisting with evacuations (mechanics, personnel at fuel depots, staging area workers, assistants traveling with vehicles)</li> </ul>		
Are checklists placed in all vehicles for field drivers to use?		

TASK	DATE COMPLETED	NOTES
<p>Does the field checklist include:</p> <ul style="list-style-type: none"><li>■ Driver ID (name, contact information)/credentials</li><li>■ Location of mustering areas/staging areas</li><li>■ Location of vehicle keys and back-up keys</li><li>■ Emergency contact for drivers and format (e.g., CB radio, Push-to-talk)</li><li>■ Dispatch contact and alternate</li><li>■ Route maps and alternate route maps</li><li>■ Lists of evacuees per vehicle with contact information</li><li>■ Shelter locations and types (e.g., general population, special medical needs, pet-friendly)</li><li>■ Specialized equipment required (e.g., lifts, foreign language information)</li><li>■ Fuel locations</li><li>■ Instructions for breaks and shift changes</li><li>■ Local information sources (211/511 systems, Highway Advisory Radio (HAR) locations, etc.)</li><li>■ Point-of-contact for rumor control (e.g., to verify road closures or shelter changes that may be announced by the media or purported by evacuees)</li><li>■ Worksheets for trip times (departure/arrival), mileage, passenger names/counts, driver name and company/contact information, staging areas, pick-up points, and shelter locations. Detailed records must be kept for any potential reimbursements.</li></ul>		

TASK	DATE COMPLETED	NOTES
<b>Congregate and Residential Care Facilities (Chapter 6)</b>		
Have all the CRCFs identified a like-to-like facility to which to evacuate, and what agreements are in place to support such an action?		
How does the plan address communications with CRCFs before, during, and after an evacuation?		
<p>Have you considered, during the planning phase, some of the challenges that transportation agencies should include, such as:</p> <ul style="list-style-type: none"> <li>■ Transporting adequate supplies on a continuous basis during an emergency when medical supplies and equipment may be at high demand</li> <li>■ Transporting adequate food supplies</li> <li>■ Coordinating transportation resources that include vehicles with accommodations for people with special needs during evacuations, re-entry, and recovery</li> <li>■ Procurement of medical equipment, supplies, and medication that takes into consideration the full age, disability, and medical needs spectrum</li> <li>■ Working with emergency officials on credentialing issues for “essential transportation personnel” in the context of special needs/CRCF patients</li> </ul>		
<p>Have you considered different scenarios to help with contingency planning including:</p> <ul style="list-style-type: none"> <li>■ Timing of the evacuation (should special needs populations be evacuated prior to others)</li> <li>■ Specialized equipment to assist with the process</li> <li>■ Different scenarios and the types of evacuation that would occur</li> <li>■ Dealing with medically fragile people who are at high risk</li> </ul>		

TASK	DATE COMPLETED	NOTES
How does the plan for CRCFs address: <ul style="list-style-type: none"><li>■ Vehicle types</li><li>■ Fuel for vehicles</li><li>■ Vehicle operators</li><li>■ Security</li><li>■ Transport of service animals</li><li>■ Medical emergencies en route</li><li>■ Vehicle identification</li><li>■ Credentialing</li><li>■ Dispatch and tracking</li></ul>		
How does the plan address transportation of CRCF support items including: <ul style="list-style-type: none"><li>■ Durable medical equipment</li><li>■ Food supplies</li><li>■ Medical records</li><li>■ Medicine</li><li>■ CRCF staff</li></ul>		



TASK	DATE COMPLETED	NOTES
<b>Animal Needs (Chapter 7)</b>		
<p>How does your plan address transporting different types of animals including:</p> <ul style="list-style-type: none"> <li>■ Service animals</li> <li>■ Household pets</li> <li>■ Farm animals/livestock</li> <li>■ Institutional animals (theme parks, zoos, research labs, pet stores, animal shelters)</li> </ul>		
How are drivers trained for transporting various animal types?		
How are the animals being transported and tracked to their destination, and who is responsible for that tracking?		
<p>Some key elements must be present in vehicles that transport animals. Have you considered the following:</p> <ul style="list-style-type: none"> <li>■ Ventilation</li> <li>■ Security from attack or disease spread from other animals</li> <li>■ Crates or units that are secured and will not move about or slip from the vehicle</li> <li>■ Crates or units that are not subject to winds and projectiles from driving during transport</li> </ul>		

TASK	DATE COMPLETED	NOTES
<p>When transporting animals, have you considered containers that have the following components:</p> <ul style="list-style-type: none"><li>■ Locking bolts to secure the container</li><li>■ Metal doors since animals can chew through plastic</li><li>■ Four metal rods that fasten and secure the door into the container</li><li>■ No wheels since airlines will not accept such crates</li><li>■ Sturdy construction with no weak points</li><li>■ Adequate ventilation</li><li>■ Enough space for the animal to turn around</li><li>■ Access and room for food and water</li><li>■ Access and room for cleaning</li></ul>		
<p>Does your plan encourage owners to provide animal travel kits that contain the following:</p> <ul style="list-style-type: none"><li>■ Proof of vaccination and veterinary records</li><li>■ Licenses, rabies, and ID tags</li><li>■ Two weeks of food, water, and medications</li><li>■ Bedding and toys</li><li>■ Litter box, litter, and a scoop</li><li>■ Food and water bowls</li><li>■ Information on medication and feeding schedules</li><li>■ Newspapers, pee pads, cleaning supplies</li><li>■ Collars, leashes, muzzles, harnesses</li><li>■ First-aid kit</li><li>■ A manual can opener and spoons</li><li>■ Stakes and a break-proof rope or tie down</li></ul>		

TASK	DATE COMPLETED	NOTES
<b>Re-entry and Return to Readiness (Chapter 8)</b>		
<p>How does the plan address re-entry needs including:</p> <ul style="list-style-type: none"> <li>■ Assessment of road conditions</li> <li>■ Identification of re-entry routes</li> <li>■ Fuel availability on re-entry routes</li> <li>■ Security</li> <li>■ Availability of rest areas</li> <li>■ Availability of food and water</li> <li>■ Use of ITS components to support re-entry</li> </ul>		
<p>During re-entry how does your agency track and report to the EMA:</p> <ul style="list-style-type: none"> <li>■ Road conditions and status of whether they are open or closed</li> <li>■ Need for vehicles to transport returning evacuees with special needs</li> <li>■ Status of shelters – open or closed</li> </ul>		
<p>Post-event, how is your transportation agency taking the following actions:</p> <ul style="list-style-type: none"> <li>■ Conduct an after-action debriefing soon after the event (within a week)</li> <li>■ Develop an after-action report to capture lessons learned and actions that worked</li> </ul>		
<p>Did the after-action debriefing include a facilitator who:</p> <ul style="list-style-type: none"> <li>■ Includes everyone involved in the operation</li> <li>■ Ensures all issues are addressed fully and thoughtfully</li> <li>■ Has participants focus on both positive and negative actions and outcomes, as well as suggested corrections</li> <li>■ Ensures that participants do not feel intimidated or pressured to say something or to silence themselves about events that happened</li> </ul>		

TASK	DATE COMPLETED	NOTES
Did the debriefing and after-action report result in revisions of the plan, and how have those revisions been disseminated?		
Did the debriefing and after-action plan identify revised or new training needs, and has that training been completed?		
Did the debriefing and after-action plan identify revised or new contracts or agreements, and have those contracts and agreements been executed?		
How does the plan address seeking reimbursement for the costs of the evacuation?		
<p>As with evacuation procedures, transportation dispatchers should track the following:</p> <ul style="list-style-type: none"> <li>■ Driver names/contact information</li> <li>■ Vehicle information (owner, number, license plate, type, capacity, etc.) and assignment</li> <li>■ Route maps</li> <li>■ Location of fuel</li> <li>■ Contact information for interpreters and translators</li> <li>■ Evacuee information (where available through evacuation registries)</li> <li>■ Contact information for liaisons and other people/agencies that will provide critical up-to-date information, including medical support personnel who cared for an evacuee prior to the exodus</li> <li>■ Names and contact information for people assisting with evacuations (mechanics, personnel at fuel depots, staging area workers, assistants traveling with vehicles)</li> </ul>		

TASK	DATE COMPLETED	NOTES
<p>Driver checklists for re-entry should mirror those used during evacuation, to include:</p> <ul style="list-style-type: none"> <li>■ Driver ID (name, contact information)/credentials</li> <li>■ Location of collection points/ staging areas</li> <li>■ Location of vehicle keys and back-up keys</li> <li>■ Emergency contact for drivers and format of communication used by the drivers (e.g., CB radio, Push-to-talk)</li> <li>■ Dispatch contact and alternate contacts</li> <li>■ Route maps and alternate route maps</li> <li>■ Lists of evacuees per vehicle with their contact information</li> <li>■ Shelter locations and types (e.g., general population, special medical needs, pet-friendly)</li> <li>■ Specialized equipment required (e.g., lifts)</li> <li>■ Fuel locations</li> <li>■ Instructions for breaks and shift changes</li> <li>■ Local information sources (211/511 systems, HAR locations, etc.)</li> <li>■ Point-of-contact for rumor control (e.g., to verify road closures or shelter changes that may be announced by the media or reported by evacuees)</li> </ul>		
<p>Due to potential hazardous road conditions on re-entry, have the vehicles also been equipped with:</p> <ul style="list-style-type: none"> <li>■ Flashlights</li> <li>■ Spare tires</li> <li>■ Flat tire fixative</li> <li>■ Shovel</li> <li>■ Heavy-duty gloves</li> </ul>		



TASK	DATE COMPLETED	NOTES
Have vehicles used in the evacuation been: <div><input type="checkbox"/> Cleaned</div> <div><input type="checkbox"/> Refueled</div> <div><input type="checkbox"/> Repaired</div> <div><input type="checkbox"/> Restocked</div>		

ANNEX 4: SAMPLE WORKSHEET FOR TRIP TIMES<sup>107</sup>

Driver Name: \_\_\_\_\_

Date: \_\_\_\_\_ Total Passenger Count: \_\_\_\_\_

Company/Agency Name: \_\_\_\_\_

Company/Agency Contact Information: \_\_\_\_\_

DEPARTURE TIME	DEPARTURE LOCATION	ARRIVAL TIME	SHELTER LOCATION OR RECEIVING FACILITY	PASSENGER NAME	STAGING AREA LOCATION	ADDITIONAL PICK-UP POINTS (IF ANY)	CAREGIVER NAME IF TRAVELING TOGETHER	LIST ANY SERVICE ANIMAL, PET, OR DME WITH PASSENGER	BEGINNING & ENDING MILEAGE	OTHER (ADD IN AS NECESSARY)

<sup>107</sup> This is a sample worksheet; agencies should modify, add, and/or delete categories as necessary.

## ANNEX 5: CONGREGATE AND RESIDENTIAL CARE FACILITIES CASE STUDIES

The following three case studies focus on a hazardous materials fire at the Teris, LLC facility in El Dorado, Arkansas, on January 2, 2005, which involved evacuating two nursing homes and a county jail facility.<sup>108</sup>

### Case Study #1: Oakridge Nursing Home

On Sunday at 9:30 am, the Assistant Administrator was contacted at home and informed by the 911 system that the Teris plant was exploding. Within 10 minutes of the phone call, the Assistant Administrator arrived at the nursing home. At this point, it was decided to start shelter-in-place procedures.

The air conditioning was turned off, windows and doors were closed, and the building was secured. In preparation for an evacuation, staff were instructed to get residents out of their rooms, place them in the hallway, and place wet towels in the doorways to prevent contaminated air from coming into the facility. Bed-ridden residents were moved to the front of the line, while ambulatory residents were moved to the back of the building where they were met with buses.

After this initial activity, the Assistant Administrator was waiting for the word to evacuate Oakridge. Approximately 1 hour after the initial call, someone from a church arrived to help Oakridge evacuate. This individual informed the Assistant Administrator that “everyone was evacuating,” and the evacuation started at this point.

A local church offered the use of its facility as an evacuation site. This facility was located 5 miles away, and has an auditorium, restroom, and kitchen facility. Residents were evacuated to this location. However, not all residents were evacuated to the church; a few residents were evacuated by ambulance to the hospital or another nursing home due to their condition.

Since the church did not have cots, staff went to a former nursing home, 17 miles south of town, and took the beds from that facility.

The evacuation took approximately 2.5 hours for 176 residents and 100 staff.

### Concerns

The Assistant Administrator was concerned that Oakridge did not receive an official call to evacuate the facility. He feels it may have been due to a mistake in their address, which is on Hudson, and he feels the Hudson Memorial Nursing Home may have received the notice to evacuate by mistake. However, the Hudson Memorial Nursing Home was contacted, and no evacuation call was received by them.

---

<sup>108</sup> Technical Memorandum for Federal Highway Administration (ITS-JPO) on Case Studies: Assessment of the State of the Practice and the State of the Art in Evacuation Transportation Management, Booz Allen Hamilton, February 6, 2006.

There was no official call from the local emergency management officials for an evacuation, nor were there Red Cross officials assisting in the evacuation. The Assistant Administrator would have liked to have emergency officials helping during the evacuation. "If not for the churches and family members, we would have had a problem."

The Assistant Administrator would have liked to know who they could call on and who would call on them for any future event. He did not like volunteers informing him of the need to evacuate. There needs to be "better communication from an official person." He called after the incident and received an apology.

### *Focus*

At the beginning of the evacuation, the focus was on "do we shelter in place or evacuate." There was no worry about Teris exploding, but there was worry about the fumes, since Oakridge is located 5,000 feet from the Teris facility. In addition, the focus was on keeping the communication lines open since people were calling in seeking information, tying up the telephone lines.

During the evacuation, the focus was on the safety of the residents and the transportation of the wheelchair-bound residents. There was a concern with the slowness of the ambulances used to transport the wheelchair-bound residents.

During the evacuation, volunteers arrived and helped transport ambulatory residents to the church.

After the evacuation, the focus was on making residents comfortable and taking care of them. Staff volunteered to come in and help out, and there was a concern to make sure that the facility could handle the crowd.

### *Procedures*

There are written procedures for the evacuation of the facility, and they may not have been followed. However, Oakridge self-evacuated, and it went smoothly without injury or death.

Every month, Oakridge practices a fire drill, along with semi-annual disaster drills for tornadoes and a shelter-in-place scenario. In addition, the county has a tape on sheltering in place, and the video has been seen several times by the staff and is incorporated into their training.

### *Shelter*

Oakridge has a contract with a nearby church for evacuation purposes in case of a fire or a tornado. However, since the church was in the evacuation zone, residents could not be evacuated to that site. Upon re-examination of their needs after the incident, Oakridge determined that the facility was not big enough for them.

### *Transportation*

A total of six church and school buses were used to evacuate the residents. One of the school buses was wheelchair lift-equipped, and Oakridge could have used more of those types of buses.

### *Lessons Learned*

- Examine the space of a facility to be used as a shelter and ensure it meets your needs for space, accommodations, restrooms, and a kitchen.
- Not everything needed for an overnight evacuation was taken initially, such as diapers, supplies, feeding pumps, and other supplies. Have re-thought the need to gather up supplies during an evacuation and have assigned staff to gather up the supplies.

### *Why A Success*

Oakridge staff have received training on evacuation and have reviewed the shelter-in-place video. That information combined with the knowledge of how to handle other types of emergencies led to a successful self-evacuation.

### **Case Study #2: Hillsboro Manor Nursing Home**

The Director of Nursing received a page from the 911 system while attending church and was told (a) to be prepared to evacuate and (b) to prepare for a return call to evacuate. After this initial contact, Hillsboro started to evacuate the residents before the order to evacuate was received. Shortly thereafter, a call was received to evacuate the nursing home. Upon arrival at the nursing home, the Director coordinated the evacuation of residents and staff.

### *Transportation*

In the meantime, the Police Department and volunteers from the community acquired buses for the transportation of residents to their designated public shelter. There were approximately 96 patients and over 50 staff that needed to be evacuated. Most of the residents could be moved by either school or church bus (regular and wheelchair accessible), but residents who could not walk were transported by ambulances to the hospital or other nursing homes.

One man from a church brought a truck that was used to move wheelchairs, bedding, linen, the medicine carts, and food prepared for lunch.

The Police Department provided an escort to the public shelter.

### *Timeline*

The evacuation started at approximately 11:00 and by 13:00 was completed. However, due to possible explosions at the Teris facility, residents were not allowed to return to Hillsboro until the next afternoon.

### *Drills/Practice*

Hillsboro conducts an annual emergency response drill. With this drill, procedures are followed and steps are taken to complete an evacuation of the home without an actual evacuation.

In the past, parts of the home have been evacuated due to smoke or electrical issues, but never on a full-scale evacuation basis.

### *Focus*

The focus during the start of the evacuation was to get patients out of the facility, and gather up bedding, linen, other items, and food. The Supervisor of Housekeeping was charged with gathering linen, bedding, medicine, and other items. Others were charged with gathering toiletries and adult diapers. The kitchen staff was charged with gathering formula and food. "Everyone was assigned a job and everyone completed it well."

During the evacuation, the focus was on trying not to upset the residents, contacting family members, and not fielding calls from outside the facility. Some of the residents do not take well to strangers and a break in their routine, so they needed to be reassured. In addition, staff were assigned to contact families to inform them of the situation. People were asked to defer calling the facility until the evacuation was completed, since it interfered with the evacuation.

After arrival at the public shelter, the focus was on contacting the Red Cross for the cots, setting up the cots, and feeding and calming the residents. During the evacuation, residents were told that there was a fire and it was better to leave the nursing home. Some residents thought of it as a picnic outing since some do not get out often.

### *Public Shelter*

Hillsboro was directed to a public shelter in a church located a few miles away from the nursing home. When the residents and staff arrived at the public shelter, the Red Cross was contacted for cots and Wal-Mart was contacted for pillows and blankets for the evacuees.

Initially, two to three residents were picked up by their families during the initial evacuation, but when they found out where they went and the level of comfort achieved, the residents were returned to the public shelter and the care of the nursing home.

During the evacuation, homebound citizens and other citizens in need were taken into the public shelter and treated like the nursing home residents.

Initially, the Director was informed that the public shelter they were to go to was the Municipal Auditorium. The Director sent staff as part of the first team. In the meantime, she voiced concern over the facility due to the location of bathrooms (not on the same level as the sleep facilities) and because there



was no place to cook food. They listened to her advice and the evacuation point was moved to a church. The first team staff was contacted and informed of the new location.

Police officers were assigned to stay with the residents at the public shelter. They stopped curious people from entering the facility and provided security. At least two officers spent the night at the public shelter.

### *Lessons Learned*

- Be prepared and delegate responsibility to others to help during an emergency.
- Give people a designated assignment.
- Have drills and know what everyone's role is.
- "It was a good experience, something deadly could have happened. It makes you understand and appreciate who you rely on. Take care of your own."
- Next time, request wheelchair lift-equipped buses. This type of equipment facilitates the entry and exit of the residents onto and off the buses.
- Through firsthand experience, Hillsboro knows their own abilities, which churches have what form of transportation, and who to contact first.

### *Why a Success*

There are numerous reasons why the evacuation was a success.

- Community volunteers assisted in the evacuation, such as providing a truck to transport items or church buses to transport residents and staff.
- There was easy access to transportation.
- Hillsboro had written procedures on evacuations. The nursing home had practiced, at least annually, an emergency drill for evacuation of the nursing home.
- The delegation and assignment of activities to staff kept the staff focused on the evacuation and not on what-if scenarios.
- There was the experience of previous partial evacuations.

### **Case Study #3: El Dorado County Jail Facility**

The Teris facility is located on the edge of the city limits, and the county jail facility is approximately 400 yards from it. The Sheriff found out about the incident by either hearing or seeing the explosion and fire. The Sheriff directly went to the Teris facility for information on the incident and was told of the recommendation to evacuate the jail facility. Upon receipt of this information, the Sheriff contacted the Local Emergency Planning Committee, and it

was determined that the county jail needed to be evacuated and his staff was needed for that purpose.

When the decision was made to evacuate the jail, the Sheriff called the local school district regarding school buses for the transportation of the 170 prisoners and the use of a temporary detention facility. Six school buses were provided by the school district, in addition to the offer of the use of an unused school at Old Union, Arkansas, built for 400 students, approximately 8 to 10 miles away.

Prior to the school buses arriving, the Sheriff's staff, through an earlier purchase, cuffed each of the prisoners with plastic handcuffs such as those currently being used by American troops overseas.

The evacuation took approximately 1 hour.

The school buses arrived, and the prisoners boarded with a police escort of 12 police cars. At the school, the prisoners were placed in the school gym, since it could accommodate a large crowd, and were separated to maintain control.

While the county jail was being evacuated, the Sheriff determined that the facility still needed to provide dispatch services to the community. The Sheriff and one deputy remained at the office to man the phones, while the other remaining staff of 59 was evacuated. At this time, the ventilation was turned off at the jail facility to ensure that contaminated air was not brought in from outside.

After approximately 6 to 8 hours, the Sheriff determined that the situation was not as bad as it initially appeared and asked for volunteers to return to help operate dispatch. A few staff volunteered to return.

The Sheriff knew that the prisoners could not be kept in the school gym overnight, so he contacted another Sheriff in Farmerville, Louisiana, to ask if they had enough space to accommodate the prisoners overnight. They did, and the prisoners along with their jailers were transported approximately 30 miles to Louisiana. The Sheriff felt that there was not a close-by Arkansas jail facility that could accommodate the prisoners.

The next day, the all clear was received from Teris, and the prisoners and jailers returned to El Dorado. However, the Sheriff brought back the prisoners before the public was allowed to return because he did not want to have the prisoners on the road with the general public due to the possibility of an incident.

The Sheriff's impressions of the experience, "No failure in the mission, protected the prisoners and took calls from the community, while the jail was evacuated."

### *Transportation Impacts*

When the Sheriff decided to evacuate the jail facility, a choice of roadways to use was also made. It was determined that the convoy would proceed down state roadways rather than county roadways due to several factors: (a) the state roadways were felt to be more secure; (b) there were wide shoulders and, in case of an accident, the buses could be moved off to the shoulder or, in the case of an automobile accident, the automobile could be moved off to the shoulder not impeding the movement of the buses; and (c) there are more lanes allowing for faster speeds and allowing for the movement past an accident.

### *Lessons Learned*

There were some lessons learned regarding “little bitty things such as how to coordinate prisoners and separate them and secure them.”

After the evacuation of the jail facility, the Sheriff looked into the feasibility of providing a separate air supply for the emergency dispatch center, but it was determined to be too costly. However, approximately four to five self-breathing apparatuses were purchased and are on site at the county jail in case of need.

### *Why a Success*

The Sheriff felt that there has always been the threat of an evacuation, and he had “years to think about it.” He communicated the plan with two others on his staff, the Chief Deputy and the Jail Administrator, so they knew what to do in case the Sheriff was incapacitated. To ensure someone is available who knows the plan, the Sheriff requires that all three people are not off duty at the same time. There is at least one of them on site at all times. The Sheriff realizes that the evacuation plan should be written down and taught to others of his staff, but this may not happen in the foreseeable future due to a lack of resources.

## ANNEX 6: REFERENCES AND RESOURCES

### References

- American Correctional Association, [www.aca.org](http://www.aca.org).
- Agency for Healthcare Research and Quality, *Emergency Preparedness Atlas: US Nursing Home and Hospital Facilities*, <http://www.ahrq.gov/prep/nursinghomes/atlas/nhatlas4.htm>.
- Agency for Healthcare Research and Quality, *Nursing Homes in Public Health Emergencies: Special Needs and Potential Roles*, <http://www.ahrq.gov/prep/nursinghomes/reportappb.htm>.
- Americans with Disabilities Act 1990, <http://www.ada.gov>.
- American Red Cross, *Disaster Preparedness for People with Disabilities Brochure*, Washington, DC, American Red Cross.
- American Red Cross, "Prepare.org," [www.prepare.org/disabilities/animaltips.htm](http://www.prepare.org/disabilities/animaltips.htm).
- American Military University, <http://www.amu.apus.edu>.
- American Veterinary Medical Association, *US Pet Ownership and Demographics Sourcebook*, [www.avma.org/disaster](http://www.avma.org/disaster), 2002.
- Animal Welfare Act, <http://www.nal.usda.gov/awic/legislat/usdaleg1.htm>, 1966.
- American Society for the Prevention of Cruelty to Animals, [www.asPCA.org](http://www.asPCA.org).
- Federal Highway Administration, Batelle, *Managing Pedestrians during Evacuation of Metropolitan Areas*, Washington, DC, 2007.
- Berber et al, "Lessons Learned from Hurricane Andrew: Recommendations for the Care of the Elderly in Long-Term Care Facilities", *Southern Medical Journal, Journal of the Southern Medical Association*, Volume 88, Number 5, Birmingham, Alabama, Southern Medical Association, June 1995, p. 603-608.
- Boorstein, Michelle, "Fairfax Rehearses Evacuation of Jail," *The Washington Post*, June 6, 2004, p. C08.
- Byrnes, Michael, and Davis, Elizabeth, "Preparedness for All: Why Including People with Disabilities in Drills is a Learning Tool: Interagency Chemical Exercise (I.C.E)," *International Association of Emergency Managers Bulletin*, April vol. 22 (4) 7-8, 2005.
- California Independent Living Council, "The Impact of Southern California Wildfires on People with Disabilities," [www.calsilc.org](http://www.calsilc.org), 2004.
- Kailes, June Isaacson, *Evacuation Preparedness: Taking Responsibility for Your Safety: A Guide for People with Disabilities and Other Activity Limitations*, Pomona, CA, Center for Disability Issues and the Health Professions, Western University of Health Sciences, <http://www.cdihp.org/evacuation/toc.html>, 2002.
- Code 3 Associates, <http://www.code3associates.org>.
- Consortium for Citizens with Disabilities' Emergency Management (CCDEM) Task Force, Association of University Centers on Disability, [http://209.85.165.104/search?q=cache:czXd5n6VmzsJ:www.aucd.org/docs/policy/emergency\\_mgmt/ccd\\_emergency\\_mgmt\\_reform\\_act\\_092106.doc+post-katrina+legislation+and+special+needs&hl=en&ct=clnk&cd=1&gl=us](http://209.85.165.104/search?q=cache:czXd5n6VmzsJ:www.aucd.org/docs/policy/emergency_mgmt/ccd_emergency_mgmt_reform_act_092106.doc+post-katrina+legislation+and+special+needs&hl=en&ct=clnk&cd=1&gl=us), September 21, 2006.
- Davis, Elizabeth, "Emergency Evacuation: Safe Egress of Persons with Disabilities from Transit Systems," Washington DC, National Organization on Disability/Easter Seals, 2004.

- Davis, Elizabeth, and Sutherland, Daniel, "It's the Law: Preparedness and People with Disabilities," *International Association of Emergency Managers Bulletin*, vol. 22 (3), March 13-14, 2005.
- Disability Rights Section, Civil Rights Division, US Department of Justice and ADA. *Making Community Emergency Preparedness and Response Programs Accessible to People with Disabilities*, Washington DC, GAO, <http://www.ada.gov/emergencyprep.htm>.
- Federal Emergency Management Agency, *A Reference Guide for Accommodating Individuals with Disabilities in the Provision of Disaster Mass Care, Housing and Human Services* <http://www.fema.gov/oer/reference/index.shtm>
- Federal Emergency Management Agency, Emergency Management Institute (EMI), *Evacuation and Re-entry Planning* (G-358), 2006.
- Federal Emergency Management Agency, EMI, *Hurricane Readiness for Coastal Communities* (G-363), 2006.
- Interim Emergency Management Planning Guide for Special Need Populations* (Version 1.0) <http://www.fema.gov/pdf/media/2008/301.pdf>
- Federal Emergency Management Agency, EMI, *IS-111: Livestock in Disaster Training Course*, <http://training.fema.gov/emiWeb/IS/IS111st.asp>.
- Federal Emergency Management Agency, EMI, *Special Needs Populations and Emergency Management* (G-197), <http://training.fema.gov/EMIWeb/pub/register.asp>, 1997.
- Federal Interagency Forum on Aging Related Statistics, <http://www.agingstats.gov>, retrieved May 4, 2005.
- Federal Emergency Management Agency/American Red Cross, *Disaster Preparedness for People with Disabilities*, <http://www.redcross.org/www-files/Documents/Preparing/A4497.pdf>.
- Federal Emergency Management Agency, Robert T. Stafford Disaster Relief and Emergency Assistance Act (PL. 93-288, as amended), <http://www.fema.gov/about/stafact.shtm>.
- Fernandez, L., et al, "Frail Elderly as Disaster Victims," *Prehospital Disaster Medicine*, 17, 2, p. 67-74, 2002.
- General Accounting Office, *Disaster Preparedness: Preliminary Observations on the Evacuation of Vulnerable Populations Due to Hurricanes and Other Events*, GAO Report #06-790, <http://www.gao.gov/new.items/d06790r.pdf>, 2006.
- GovTrack.us. S. 3678--109th Congress, Pandemic and All-Hazards Preparedness Act, *GovTrack.us (database of federal legislation)*, <http://www.govtrack.us/congress/bill.xpd?bill=s109-3678>, 2006.
- GovTrack.us. S. 3721--109th Congress, Post-Katrina Emergency Management Reform Act of 2006, *GovTrack.us (database of federal legislation)*, <http://www.govtrack.us/congress/bill.xpd?bill=s109-3721>, 2006.
- Harvard School of Public Health. "Hurricane Readiness in High-Risk Areas," (PowerPoint presentation) [http://www.hsph.harvard.edu/news/press-releases/files/Hurricane\\_07\\_Charts\\_Overall.ppt#271.1](http://www.hsph.harvard.edu/news/press-releases/files/Hurricane_07_Charts_Overall.ppt#271.1), Slide 1, 2007.
- Humane Society of the United States, [www.hsus.org](http://www.hsus.org).
- Humane Society of the United States, "No Pet Left Behind: The PETS Act Calls for Disaster Plans to Include Animals," [http://www.hsus.org/pets/pets\\_related\\_news\\_and\\_events/no\\_pet\\_left\\_behind\\_the\\_pets.html](http://www.hsus.org/pets/pets_related_news_and_events/no_pet_left_behind_the_pets.html).

- Irvine, Leslie, "Providing for Pets during Disaster: An Exploratory Study," *Quick Response Report QRI 71*, Boulder, Colorado, Natural Hazards Research Center, University of Colorado, 2004.
- Jefferson Parish Evacuation Re-entry Plan, <http://www.jeffparish.net/downloads/5288/5691-EvacuationReEntryPlan.pdf>, May 10, 2007.
- Johnson, Neil, "State Fine-Tunes Evacuation Plan," *The Tampa Tribune*, [www.tbo.com/news/metro/MGBD8F3GVI.html](http://www.tbo.com/news/metro/MGBD8F3GVI.html), May 19, 2007, Retrieved August 24, 2007.
- Kailes, J., *Evacuation Preparedness: Taking Responsibility for Your Safety: A Guide for People with Disabilities and Other Activity Limitations*, Pomona, CA, Center for Disability Issues and the Health Profession, Western University of Health Sciences, [www.cdihp.org](http://www.cdihp.org), 2002.
- Kirkpatrick, D. et al, "Hurricane Emergency Planning by Home Health Providers Serving the Poor," *Journal of Health Care for Poor and Underserved* 18, p. 299-314, 2007.
- Landers, Mary, "Transportation a Weak Link in Nursing Home Evacuations," *Savannah Morning News*, June 24, 2007, <http://savannahnow.com/node/311005>.
- Leonard, H.A., and Scammon, D.L., "No Pets Left Behind: Accommodating Pets in Emergency Planning," *Journal of Public Policy and Marketing*, Spring 2007, vol. 26, Issue 1, p. 49, 2007.
- Lindell, M., and Perry, R., *Communicating Risk to Multi-Ethnic Communities*, Newbury Park, CA, Sage, 2004.
- Litman, Todd, Victoria Transport Policy Institute, "Lessons from Katrina and Rita: What Major Disasters Can Teach Transportation Planners," *Journal of Transportation Engineering*, Vol. 132, p. 11-18, January 2006.
- Louisiana State University Emergency Animal Shelter Disaster Response Manual, <http://www.lsuemergencyanimalshelter.org>.
- McGinness, Katherine, and Associates, Inc., *MBTA Equal Access to Safe Egress*, Waltham, MA, undated manuscript.
- McGuire, L., et al, "Natural Disasters and Older US Adults with Disabilities: Implications for Evacuation," *Disasters* 31, 1, p. 49-56, 2007.
- Metz, W., et al, "Identifying Special Needs Populations That Require Assistance for Emergency Planning," *International Journal of Mass Emergencies and Disasters* 20, 2, p. 255-281, 2002.
- Mileti, D., *Disasters by Design*, Washington, DC, Joseph Henry Press, 1999.
- "Minneapolis Bridge Collapse Provides Early Test of Wi-Fi Network," *Government Technology*, <http://www.govtech.com/gt/129401>, August 7, 2007.
- Missouri Department of Transportation, *News on Wheels*, [http://www.modot.org/mcs/documents/newsletters/NOW\\_Dec\\_05.pdf](http://www.modot.org/mcs/documents/newsletters/NOW_Dec_05.pdf), December 2005.
- Monmouth County Sheriff's Office, "Sheriff's Office Tests Emergency Procedures with Jail Evacuation Exercise," [http://tritown.gmnews.com/news/2006/0504/Front\\_page/004.html](http://tritown.gmnews.com/news/2006/0504/Front_page/004.html) 2007, Retrieved August 24, 2007.
- National Council on Disability, "The Needs of People with Psychiatric Disabilities During and After Hurricanes Katrina and Rita: Position Paper and Recommendations," 2006.



- National Coalition for the Homeless (NCH), *How Many People Experience Homelessness?* NCH Fact Sheet #2, [http://www.nationalhomeless.org/publications/facts/How\\_Many.pdf](http://www.nationalhomeless.org/publications/facts/How_Many.pdf), 2007, Retrieved August 25, 2007.
- National Fire Protection Association, *Emergency Evacuation Planning Guide for People with Disabilities*, 2007.
- National Institute of Corrections, [www.nicic.org](http://www.nicic.org).
- National Institute of Corrections (USDOJ), *Proceedings of the Large Jail Network Meeting*, Washington, DC, National Institute of Corrections, [www.nicic.org/pubs/2004/019466.pdf](http://www.nicic.org/pubs/2004/019466.pdf), 2004, Retrieved August 24, 2007.
- National Institutes of Health, Medline Plus: <http://www.nlm.nih.gov/medlineplus/assistivedevices.html>.
- National Sheriff's Association, [www.sheriffs.org](http://www.sheriffs.org).
- National Institute on Disability and Rehabilitation Research (NIDRR), *Assessing the Impact of Hurricane Katrina on Persons with Disabilities*, <http://www.ed.gov/about/offices/list/osers/nidrr/index.html?src=mr>.
- National Organization on Disability, *Emergency Preparedness Initiative*, <http://www.nod.org/index.cfm?fuseaction=Page.ViewPage&PageID=11&>.
- National Organization on Disability, *S.N.A.K.E. Report Special Needs Assessment of Katrina Evacuees*, [www.nod.org](http://www.nod.org), 2005.
- National Organization on Disability, *Emergency Preparedness Initiative: Guide on the Special Needs of People with Disabilities for Emergency Managers, Planners and Responders*, 2nd Edition, Washington DC, National Organization on Disability, 2004.
- National Research Council, *Alerting America*, Washington DC, National Academies, 2002.
- Office of the Press Secretary, *Executive Order 13347: Individuals with Disabilities in Emergencies*, <http://www.whitehouse.gov/news/releases/2004/07/20040722-10.html>, July 22, 2004.
- Palm Beach County Board of County Commissioners, *Disabled Transportation Assistance Program for Hurricane Evacuations*, Palm Beach, Florida, <http://www.co.palm-beach.fl.us/images/Hurricane/2002Eng.pdf>.
- Office of the White House, *The Federal Response to Hurricane Katrina: Lessons Learned*, Washington, DC, 2006.
- Oklahoma's Assistive Technology Program, Oklahoma ABLE Tech, *Fire Safety Solutions Grant Etiquette Guide*, [http://www.ok.gov/abletech/Fire\\_Safety/Fire\\_Safety\\_Solutions\\_Grant\\_Etiquette\\_Guide.html](http://www.ok.gov/abletech/Fire_Safety/Fire_Safety_Solutions_Grant_Etiquette_Guide.html).
- Older Americans Act 1965, [http://www.aoa.gov/about/legbudg/aaa/legbudg\\_aaa.asp](http://www.aoa.gov/about/legbudg/aaa/legbudg_aaa.asp).
- O'Shaughnessy, C., *Older Americans Act: Disaster Assistance for Older Persons After Hurricane Katrina*, Congressional Research Service Report for Congress, <http://digital.library.unt.edu/govdocs/crs/permalink/meta-crs-7647:1>, 2005.
- Oxley, Joseph W., "NSA WMD Initiative Complements Monmouth County Terrorism Efforts," *Sheriff* 55(5): 36, 2004.
- PETS Act, Public Law 109-308, "Pets Evacuation and Transportation Standards Act of 2006," [http://www.animallaw.info/statutes/stusfd2006pl109\\_308.htm](http://www.animallaw.info/statutes/stusfd2006pl109_308.htm), October 6, 2006.
- Pierson, Jeffrey L., "New Jersey Jail Benefits from Emergency Evacuation Exercise," *Corrections Today* 65(4): 86-89, 2003.

- Pinellas County, FL, *Homeless Evacuation/Sheltering Plan*, <http://www.pinellashomeless.org/ez375/index.php?ph/content/download/355/1418/file/Homeless%20Hurricane%20Plan%20-%20FINAL%20-%2020061406.pdf>, 2006, Retrieved August 25, 2007.
- Phillips, B., and B. Morrow, "Social Science Research Needs: A Focus on Vulnerable Populations, Forecasting, and Warnings," *Natural Hazards Review* 8, 3, p. 61-68, 2007.
- Polk County Wisconsin Administration, *County Emergency Plans – Jail*, Policy 501.G. 09-18-01, <http://www.co.polk.wi.us/upload/CountyEmergencyPlans-Jail.pdf> Retrieved August 24, 2007.
- Rosenketter, M., et al, "Perceptions of Older Adults Regarding Evacuation in the Event of a Natural Disaster," *Public Health Nursing* 24, 2, p. 160-168, 2007.
- Schmid, R, "US Must Prepare for Growing Disabled Population, Study Says," *Orlando Sentinel*, April 25, 2007.
- Schwartz, Jeffrey A., and Cynthia Berry, *A Guide to Preparing for and Responding to Prison Emergencies: Self-Audit Checklists, National Survey Results, Resource Materials, Case Studies*, Washington, DC, National Institute of Corrections, <http://www.nicic.org/pubs/2005/020293.pdf>, 2005, Retrieved August 24, 2007.
- Schwartz, Robert M., *Examination of the American Red Cross and FEMA following Hurricanes Charley and Ivan*, Quick Response Research Report 179, Boulder, CO, University of Colorado Natural Hazards Center, <http://www.colorado.edu/hazards/qrr/qrr179/qrr179.html>, 2005.
- Spence, P. et al, "Media Use and Information-Seeking Needs of the Disabled During a Natural Disaster," *Journal of Health Care for the Poor and Underserved* 18, p. 394-404, 2007.
- State of Florida Regional Evacuation Procedure, [http://www.floridadisaster.org/dem/DOCUMENTS/EvacSOP/regional\\_evac.pdf](http://www.floridadisaster.org/dem/DOCUMENTS/EvacSOP/regional_evac.pdf).
- State of Florida Department of Elder Affairs, *Disaster Preparedness Guide*, <http://elderaffairs.state.fl.us/english/disaster.php>, 2006.
- State of Florida, *Governor's Hurricane Evacuation Task Force Final Report*, www11.myflorida.com/publicinformationoffice/evacuationstudy/report.html (originally retrieved from currently inactive Web site), Chapter 4.
- State of Kentucky, H.B. 258, Chapter 69, General Assembly, Commonwealth of Kentucky, 2006 Regular Session, House Bill 258 as Enacted March 17, 2006. An ACT related to the evacuation and relocation of prisoners in jails and regional jails, <http://apps.sos.ky.gov/Executive/Journal/EJimages/2006-Reg-HB-0258-478.pdf>, Retrieved August 24, 2007.
- State of Maine Animal Response Team, *County Template: Animal Disaster Response and Protection Plan*, <http://mainesmart.org/Brochures/Maine%20County%20Plan%20Template.doc>.
- State of Texas, *Final Report to the Governor: Task Force on Evacuation, Transportation and Logistics*, <http://governor.state.tx.us/news/press-release/2487/> 2006.
- Stofle, Corine, "Behind Bars," *Government Technology*, <http://www.govtech.com/em/articles/118640>, May 9, 2007, Retrieved August 24, 2007.
- Transit Cooperative Research Program, *Public Transportation Emergency Mobilization and Emergency Operations Guide*, Public Transportation Security Volume 7, [http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp\\_rpt\\_86v7.pdf](http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_86v7.pdf).
- Tierney, K., Presentation remarks, As summarized in *Alerting America*, National Research Council, Washington DC, National Academies, 2002.

- Tierney, K. et al, *Facing the Unexpected*, Washington DC, Joseph Henry Press, 2001.
- Tokesky, G.M., and Weston, M., *Impacts and Contributions of Older Persons in Emergency Situations: A Case Study of Hurricane Katrina in the United States of America*, 2006.
- Topsail Beach, NC, Hurricane Evacuation and Re-Entry Guidelines,  
[http://www.topsailbeach.org/index.asp?Type=B\\_BASIC&SEC=%7B977A7C51-1725-4B1D-9539-1B2175EF46C0%7D](http://www.topsailbeach.org/index.asp?Type=B_BASIC&SEC=%7B977A7C51-1725-4B1D-9539-1B2175EF46C0%7D).
- Town of Fort Myers Beach, "Evacuation and Re-Entry Guidelines," Fort Myers Beach, FL,  
[http://www.preparefortmyersbeach.com/index\\_files/Page1702.htm](http://www.preparefortmyersbeach.com/index_files/Page1702.htm).
- Urbina, Elba Alicia, "A State-of-the-Art Review of Hurricane Evacuation Plans and Policies," Master's Thesis, Department of Civil and Environmental Engineering, Louisiana State University, 2002.
- US Department of Health and Human Services, "Dealing with Disability: Tips for First Responders," <http://www.hhs.gov/od/tips.html>, Retrieved August 10, 2007.
- US Department of Homeland Security, Office of State and Local Government Coordination and Preparedness, *Homeland Security Target Capabilities List 1.1*, [http://www.ojp.usdoj.gov/odp/docs/TCLI\\_1.pdf](http://www.ojp.usdoj.gov/odp/docs/TCLI_1.pdf), 2005.
- US Health and Human Services, Office of Inspector General, *Nursing Home Emergency Preparedness and Response During Recent Hurricanes*, <http://www.oig.hhs.gov/oei/reports/oei-06-06-00020.pdf>, Retrieved August 2006.
- US Department of Homeland Security, *Working Conference on Emergency Preparedness Functional Needs Planning*, Washington DC, [http://www.add-em-conf.com/quarterly\\_reports/2006\\_Oct\\_Dec\\_Reports/New%20Hampshire%20Jan07%20Quarterly%20Report.pdf](http://www.add-em-conf.com/quarterly_reports/2006_Oct_Dec_Reports/New%20Hampshire%20Jan07%20Quarterly%20Report.pdf), 2006.
- US Department of Homeland Security Appropriations Act, 2007: H.R. 5441 [109th], <http://www.govtrack.us/congress/bill.xpd?bill=h109-5441>.
- US Department of Homeland Security, *Nationwide Plan Review: Phase 2 Report*, Washington, DC, GAO, [https://www.dhs.gov/xlibrary/assets/Prep\\_NationwidePlanReview.pdf](https://www.dhs.gov/xlibrary/assets/Prep_NationwidePlanReview.pdf), 2006.
- US Department of Justice, Civil Rights Division, *Commonly Asked Questions About Service Animals in Places of Business*, <http://www.usdoj.gov/crt/ada/qasrvc.htm>, 1996.
- US Department of Justice, Civil Rights Division, Disability Rights Section, *ADA Business Brief*, 2002.
- US Department of Transportation, *Checklist for Transportation and Emergency Preparedness*, <http://www.dotcr.ost.dot.gov/Documents/Emergency/Emergency%20Checklist.doc>.
- US Department of Transportation, Civil Rights, <http://www.dotcr.ost.dot.gov>.
- US Department of Transportation, Federal Highway Administration, *Using Highways During Evacuation Operations for Events with Advance Notice*, Washington, DC, US DOT, [http://www.ops.fhwa.dot.gov/publications/evac\\_primer/primer.pdf](http://www.ops.fhwa.dot.gov/publications/evac_primer/primer.pdf), 2007.
- US Department of Transportation, National ITS Architecture Team, *Disaster Response and Evacuation User Service*, [http://www.itsdocs.fhwa.dot.gov/jpodocs/repts\\_pr/14064.html](http://www.itsdocs.fhwa.dot.gov/jpodocs/repts_pr/14064.html), 2003.
- US Department of Transportation, US Department of Homeland Security, *Catastrophic Hurricane Evacuation Plan Evaluation: A Report to Congress*, Washington, DC, US DOT, <http://www.fhwa.dot.gov/reports/hurricanevacuation>, 2006.
- US Department of Transportation, National Consortium on the Coordination of Human Services Transportation, *Strategies in Emergency Preparedness for Transit-Dependent*

Populations, <http://www.dotcr.ost.dot.gov/Documents/Emergency/Emergency%20Preparedness%20Strategy%20Paper.doc>.

- US House of Representatives, Pets Evacuation and Transportation Standards Act, [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109\\_cong\\_public\\_laws&docid=f:publ308.109.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_public_laws&docid=f:publ308.109.pdf), 2005.
- Van Willigen, M., et al, "Riding out the Storm: Experiences of the Physically Disabled during Hurricanes Bonnie, Dennis and Floyd," *Natural Hazards Review* 3, 3, p. 98-106, 2002.
- Washington Post, Kaiser Family Foundation, Harvard University, *Survey of Hurricane Katrina Evacuees*, [www.kff.org/newsmedia/upload/7401.pdf](http://www.kff.org/newsmedia/upload/7401.pdf), 2005.
- White, Glen W., et al, "Assessing the Impact of Hurricane Katrina on Persons with Disabilities," <http://www.rollinggrains.com/archives/001460.html>, 2007.
- Wise Research Ltd/Using RFID, "Texas to Use RFID to Manage Citizen Evacuations," December 11, 2007.
- Wolshon, Brian, et al, "Review of Policies and Practices for Hurricane Evacuation: I Transportation Planning, Preparedness, and Response; II Traffic Operations, Management and Control," *Natural Hazards Review*, August 2005, p. 143-161.

## Resources

### Correctional Facility Information

- American Correctional Association: [www.aca.org](http://www.aca.org).
- National Institute of Corrections: [www.nicic.org](http://www.nicic.org).
- National Sheriff's Association: [www.sheriffs.org](http://www.sheriffs.org).
- Polk County Wisconsin, County Emergency Plans: Jail Polk County Policies and Procedures: <http://www.co.polk.wi.us/upload/CountyEmergencyPlans-Jail.pdf>.

### Disability and Aging Information (Background, Planning and Preparedness)

- Americans with Disabilities Act 1990: <http://www.ada.gov>.
- A Guide to Disability Rights Laws (DOJ Civil Rights Division): <http://www.ada.gov/cguide.htm>
- Center for Disability Issues and the Health Professions Evacuation Preparedness Guide: <http://www.cdihp.org/evacuation/toc.html>.
- Disability Rights Section, Civil Rights Division, US Department of Justice and ADA. Making Community Emergency Preparedness and Response Programs Accessible to People with Disabilities: <http://www.ada.gov/emergencyprep.htm>.
- Disabled Transportation Assistance Program for Hurricane Evacuations brochure, Palm Beach, Florida: <http://www.co.palm-beach.fl.us/images/Hurricane/2002Eng.pdf>.
- Executive Order 13347: Individuals with Disabilities in Emergencies 2004: <http://edocket.access.gpo.gov/2004/pdf/04-17150.pdf>.
- Health Insurance Portability and Accountability Act (HIPAA) Disclosures for Emergency Preparedness – A Decision Tool: <http://www.hhs.gov/ocr/privacy/hipaa/understanding/special/emergency/decisiontoolintro.html>).
- Older Americans Act 1965: [http://www.aoa.gov/about/legbudg/oa/legbudg\\_oaa.aspx](http://www.aoa.gov/about/legbudg/oa/legbudg_oaa.aspx).

### Emergency Evacuation and Congregate Care Facilities

- Agency for Healthcare Research and Quality, Emergency Preparedness Atlas: US Nursing Home and Hospital Facilities <http://www.ahrq.gov/prep/nursinghomes/atlas/nhatlas4.htm>.
- Agency for Healthcare Research and Quality, Mass Evacuation Transportation Model <http://www.ahrq.gov/prep/massevac/description/>
- Agency for Healthcare Research and Quality, Nursing Homes in Public Health Emergencies: Special Needs and Potential Roles <http://www.ahrq.gov/prep/nursinghomes/reportappb.htm>.

### Institutional Planning

- National Organization on Disability's Emergency Preparedness Initiative: *Guide on the Special Needs of People with Disabilities for Emergency Managers, Planners & Responders* [www.nod.org/emergency](http://www.nod.org/emergency).
- Easter Seals s.a.f.e.t.y. *first: Working Together for Safer Communities*: [www.easterseals.com](http://www.easterseals.com) will provide the project materials for this workplace evacuation and safety measures planning.
- Job Accommodation Network – a service of the Office of Disability Employment Policy of the US Department of Labor: <http://www.jan.wvu.edu> will provide a document for employee emergency evacuation and also provide free guidance recommendations about workplace evacuation plans customized for a specific employee's special need.
- FEMA/USFA: [www.fema.gov](http://www.fema.gov)
  - *Emergency Planning and Special Needs Populations G197* (offered via SEMO Training Office)
  - *Emergency Procedures for Employees with Disabilities in Office Occupancies* (publication FA-154)
  - *Orientation Manual for First Responders on the Evacuation of People with Disabilities* (publication FA-235).
- US Access Board: [www.access-board.gov](http://www.access-board.gov) has posted its agency's own planning methodology and plan criteria as an example as well as provided guidance on the structural requirements under the ADA pertaining to evacuation.
- US Department of Justice: <http://www.ada.gov/emergencyprep.htm> will provide guidance about basic areas of emergency preparedness and response, which must be accessible to people with disabilities as developed and implemented by local authorities.
- US Health and Human Services and Department of Homeland Security 2006 Conference: <http://www.add-em-conf.com>, Working Conference on Emergency Management and Individuals with Disabilities and the Elderly, has many resources, presentations, and information on special needs issues and emergency management.

### Individual Planning Level

- National Organization on Disability's Emergency Preparedness Initiative: [www.nod.org/emergency](http://www.nod.org/emergency) is a repository of continuously updated information for both the disability community and the emergency professional.
- FEMA in coordination with the ARC has published many documents for individual disaster preparedness. Those most helpful for people with special needs are listed and may be

obtained from your local Red Cross chapter or the FEMA Distribution Center 1-800-480-2520 or [www.fema.gov/library](http://www.fema.gov/library); alternate formats are also available.

- *Disaster Preparedness for People with Disabilities* (ARC – 5091)
- *Preparing for Disaster for People with Disabilities and other Special Needs* (FEMA 476 A 4497) Note: replaces ARC – A4497
- *Disaster Preparedness for Seniors by Seniors* (ARC – A5059)
- *Your Family Disaster Plan* (FEMA/ARC – A4466)
- *Your Family Disaster Supply Kit* (FEMA/ARC – 4463).
- Center for Disability Issues and the Health Professions: <http://www.cdihp.org/products.html#eeguide> *Emergency Evacuation Preparedness: Taking Responsibility for Your Safety – A Guide for People with Disabilities and Other Activity Limitations.*
- Prepare Now [www.preparenow.org](http://www.preparenow.org) is a California site but links information about disaster preparedness for specific special needs.
- Three city agencies (New York City Office of Emergency Management, Department for the Aging, and the Mayor's Office for People with Disabilities) sponsored the publication of *New York City's Guide to Emergency Preparedness for Seniors and People with Disabilities* found at [www.nyc.gov/oem](http://www.nyc.gov/oem).
- [www.ready.gov](http://www.ready.gov) is a comprehensive general emergency planning site maintained by the federal government and the DHS.
- [www.EmergencyEmail.org](http://www.EmergencyEmail.org) is one of several free sign-up services that will forward customized geographic emergency information to subscribers via e-mail or alpha pager systems as the information breaks.
- National Fire Protection Association Emergency evacuation planning guide for persons with disabilities. [www.nfpa.org](http://www.nfpa.org).

### *Transportation (Information and Planning)*

- EPA Public Involvement: [www.epa.gov/publicinvolvement](http://www.epa.gov/publicinvolvement)
- Connecting Communities: <http://ntionline.com/news.asp>
- Federal Transit Administration's Disaster Response and Recovery Resource: [www.fta.dot.gov](http://www.fta.dot.gov)
- Federal Transit Administration's Emergency Response and Preparedness Program (ERPP): [www.aptaerpp.com](http://www.aptaerpp.com).
- Ft. Myers Beach, FL, Evacuation and re-entry guidelines: [http://www.preparefortmyersbeach.com/index\\_files/Page1702.htm](http://www.preparefortmyersbeach.com/index_files/Page1702.htm).
- Jefferson Parish Evacuation Re-entry Plan: <http://www.jeffparish.net/downloads/5288/5691-EvacuationReEntryPlan.pdf>.
- Missouri DOT Newsletter (information on transporting people with oxygen tanks and federal guidelines), December 2005: [http://www.modot.org/mcs/documents/newsletters/NOW\\_Dec\\_05.pdf](http://www.modot.org/mcs/documents/newsletters/NOW_Dec_05.pdf).
- National Conference on Disaster Planning for the Carless Society (proceedings from 2007 conference) <http://www.carlessevaccuation.org> (originally retrieved from currently inactive Web site).



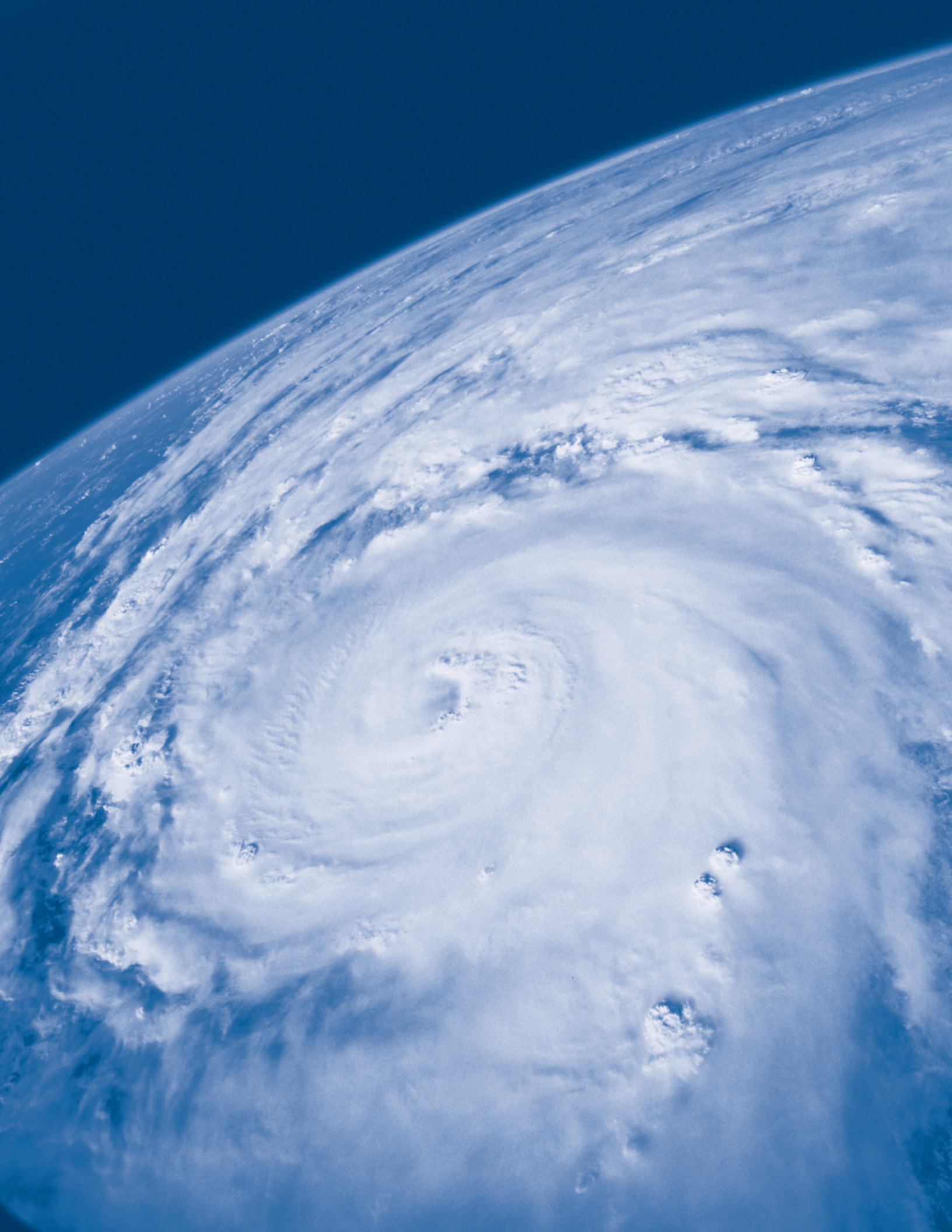
- Service Patrol Handbook <http://ops.fhwa.dot.gov/publications/fhwahop08031/index.htm>
- State of Florida disaster planning and evacuations:  
[http://www.floridadisaster.org/dem/DOCUMENTS/EvacSOP/regional\\_evac.pdf](http://www.floridadisaster.org/dem/DOCUMENTS/EvacSOP/regional_evac.pdf).
- State of Florida, Regional evacuation procedures: [http://www.floridadisaster.org/dem/DOCUMENTS/EvacSOP/regional\\_evac.pdf](http://www.floridadisaster.org/dem/DOCUMENTS/EvacSOP/regional_evac.pdf).
- State of Texas Final Report to the Governor: Task Force on Evacuation, Transportation and Logistics: <http://governor.state.tx.us/news/press-release/2487/>.
- Topsail Beach, NC, Hurricane Evacuation and Re-entry Guidelines:  
[http://www.topsailbeach.org/index.asp?Type=B\\_BASIC&SEC=%7B977A7C51-1725-4B1D-9539-1B2175EF46C0%7D](http://www.topsailbeach.org/index.asp?Type=B_BASIC&SEC=%7B977A7C51-1725-4B1D-9539-1B2175EF46C0%7D).
- Transportation Research Board. *The Role of Transit in Emergency Evacuation*:  
<http://onlinepubs.trb.org/Onlinepubs/sr/sr294.pdf>
- US Department of Transportation (DOT):
  - DOT Disaster Response and User Service (ITS):  
[http://www.its.dot.gov/arch/archnew\\_dsastr.htm](http://www.its.dot.gov/arch/archnew_dsastr.htm)
  - DOT Disaster Related Responsibilities:  
<http://www.fhwa.dot.gov/reports/hurricanevacuation/appendixi.htm>
  - DOT, FHWA Disaster Response and Recovery Resource for Transit Agencies: <http://transit-safety.volpe.dot.gov/publications/safety/DisasterResponse/PDF/DisasterResponse.pdf>
  - DOT, FHWA, Using Highways During Evacuation Operations for Events with Advance Notice:  
[http://ops.fhwa.dot.gov/publications/evac\\_primer/00\\_evac\\_primer.htm](http://ops.fhwa.dot.gov/publications/evac_primer/00_evac_primer.htm)
  - Using Highways for No-Notice Evacuations:  
[http://ops.fhwa.dot.gov/publications/evac\\_primer\\_nn/index.htm](http://ops.fhwa.dot.gov/publications/evac_primer_nn/index.htm)
  - DOT FTA, Planning and Environment: [http://www.fta.dot.gov/planning\\_environment.html](http://www.fta.dot.gov/planning_environment.html)
  - DOT, DHS Catastrophic Hurricane Evacuation Plan Evaluation: A Report to Congress:  
<http://www.fhwa.dot.gov/reports/hurricanevacuation>
  - DOT Checklist for Transportation and Emergency Preparedness:  
<http://www.dotcr.ost.dot.gov/Documents/Emergency/Emergency%20Checklist.doc>
  - DOT Guidance on Emergency Preparedness for People with Disabilities  
[www.disabilityinfo.gov](http://www.disabilityinfo.gov)
  - DOT Strategies in Emergency Preparedness for Transit-Dependent Populations:  
<http://www.dotcr.ost.dot.gov/Documents/Emergency/Emergency%20Preparedness%20Strategy%20Paper.doc>
  - DOT Civil Rights: <http://www.dotcr.ost.dot.gov>.
  - FHWA Public Involvement/Public Participation:  
[www.fhwa.dot.gov/environment/pubinv2.htm](http://www.fhwa.dot.gov/environment/pubinv2.htm)
  - FHWA/FTA Transportation Planning Capacity Building:  
[www.planning.dot.gov/technical.asp#pub](http://www.planning.dot.gov/technical.asp#pub)
  - FHWA/FTA Transportation Planning Capacity Building Peer Programs:  
[www.planning.dot.gov/peer.asp#pi](http://www.planning.dot.gov/peer.asp#pi)

- FHWA/FTA Transportation Planning Capacity Building Training: [www.planning.dot.gov/training.asp#pub](http://www.planning.dot.gov/training.asp#pub)
- FTA Office of Civil Rights: [http://www.fta.dot.gov/civilrights/civil\\_rights\\_6343.html](http://www.fta.dot.gov/civilrights/civil_rights_6343.html)

## Pet and Animal Preparedness

- American Red Cross' "Prepare.org": [www.prepare.org/disabilities/animaltips.htm](http://www.prepare.org/disabilities/animaltips.htm).
- American Society for the Prevention of Cruelty to Animals (ASPCA): [www.asPCA.org](http://www.asPCA.org).
- Humane Society of the United States (HSUS) Pets and Evacuation: [http://www.hsus.org/pets/pets\\_related\\_news\\_and\\_events/no\\_pet\\_left\\_behind\\_the\\_pets.html](http://www.hsus.org/pets/pets_related_news_and_events/no_pet_left_behind_the_pets.html) and HSUS general information: [www.hsus.org](http://www.hsus.org).
- Louisiana State University Emergency Animal Shelter Disaster Response Manual: <http://www.lsuemergencyanimalshelter.org>.









# VOLUNTARY HURRICANE EVAC FOR GALVESTON



U.S. Department of Transportation  
**Federal Highway Administration**

U.S. Department of Transportation  
Federal Highway Administration  
Office of Operations  
1200 New Jersey Avenue, SE  
Washington, DC 20590  
[www.ops.fhwa.dot.gov](http://www.ops.fhwa.dot.gov)

Pub# FHWA-HOP-09-022  
April 2009