




Catastrophic Hurricane Evacuation Plan Evaluation: Report to Congress

January 17, 2007





“The Secretary [of Transportation] and the Secretary of Homeland Security, in coordination with the Gulf Coast States and contiguous States, shall jointly review and assess Federal and State evacuation plans (including the cost of the plans) for catastrophic hurricanes and other catastrophic events impacting the Gulf Coast Region and report its findings and recommendations to Congress.”

*Section 10204 SAFETEA-LU and FY 2006 DOT
Appropriations Act*



Factors to Consider

- 1. All safe and practical modes of transportation available for evacuations;**
- 2. The extent to which evacuation plans are coordinated with neighboring states and adjoining jurisdictions;**
- 3. Methods of communicating evacuation plans and preparing citizens in advance of evacuations;**
- 4. Methods of coordinating communication with evacuees during plan execution;**
- 5. The availability of food, water, restrooms, fueling stations, and shelter opportunities along the evacuation routes;**
- 6. The time required to evacuate under the plan; and**
- 7. The physical and mental strains associated with the evacuation**



U.S. DOT Study Process

- 1. Identify Key Elements of Evacuation Planning and Implementation**
- 2. Review Current Evacuation Practices**
- 3. Develop Plan Evaluation Criteria**
- 4. Assess State and Local Evacuation Plans**
- 5. Conduct Site Visits**
- 6. Identify Lessons Learned and Best Practices**
- 7. Develop Findings and Recommendations**



Study Scope and Methods

- **Reviewed evacuation plans from Texas, Mississippi, Louisiana, Alabama, and Florida and 55 counties and parishes in those States.**
- **Reviewed sheltering plans from Oklahoma, Georgia, Tennessee and Arkansas**
- **Included plans from emergency management agencies, transportation agencies, state police, the American Red Cross, and other organizations involved in various aspects of evacuation and sheltering.**



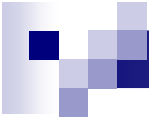
Evacuation Plan Assessment Methodology

- **Assessed plans in terms of how well they address seven key elements of mass evacuation planning and operations**
 - **Decision Making and Management**
 - **Planning**
 - **Public Communications and Preparedness**
 - **Special Needs**
 - **Operations**
 - **Sheltering**
 - **Training and Exercises**
- **20 criteria with a number of additional specific factors were used to evaluate evacuation plans**

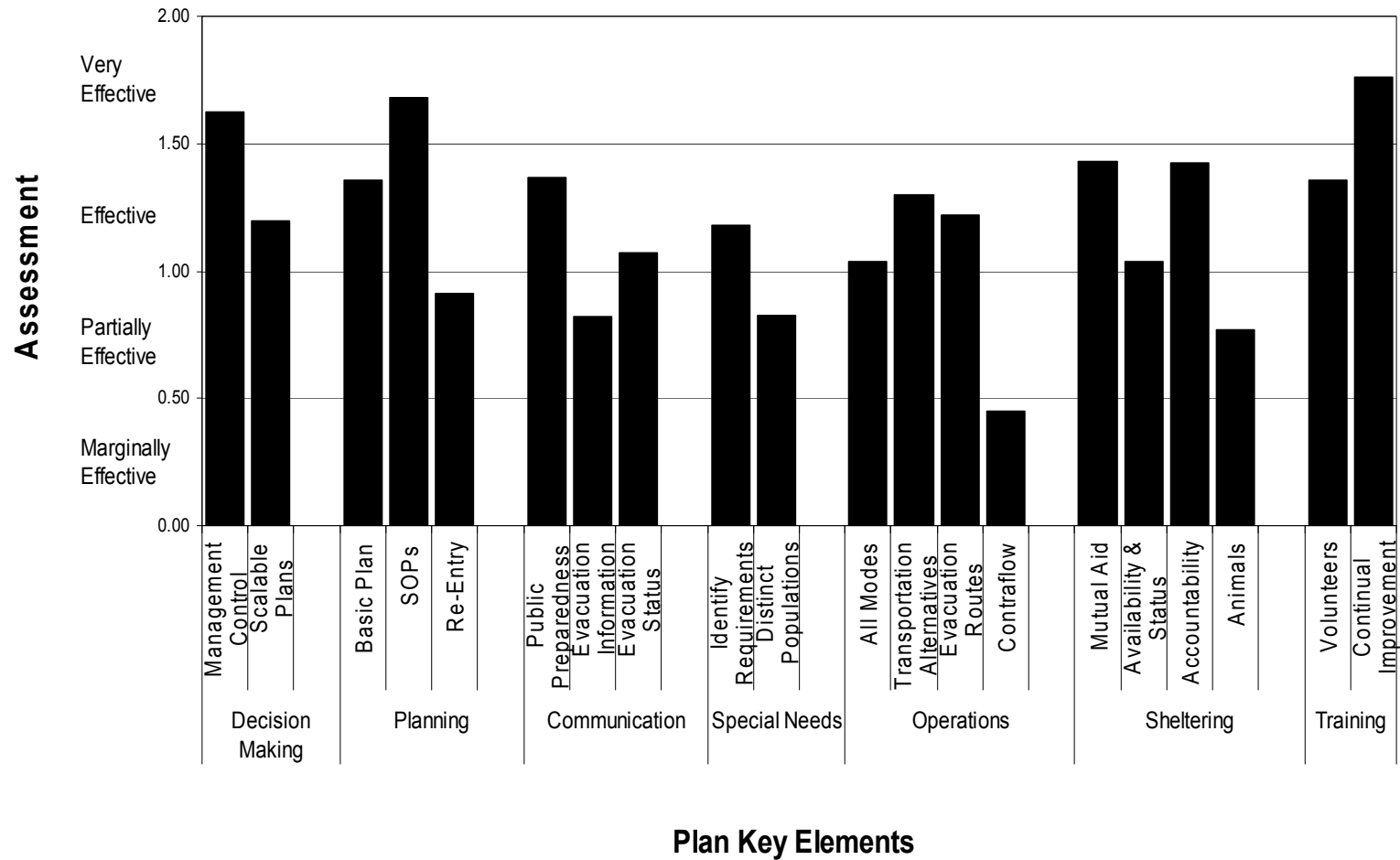


State and Local Evacuation Plan Assessment

- **Assessment identifies the overall strengths and weaknesses of evacuation plans in the Gulf Coast region**
- **Report audience not only Congress but also State and local emergency management community**
 - **Discusses specific aspects of State, county, and parish plans that generally need improvement**
 - **Discusses States, counties, and parishes whose plans are particularly good in different areas and what makes them good**
 - **Discusses lessons learned and best practices for each key element**



Status of Evacuation Plans in the Gulf Coast Region





Decision Making and Management

- **Federal, State, and local emergency plans and operations are not well integrated**
- **Some plans do not include sufficient detail to ensure their effective execution.**
- **Simple mutual aid agreements are not sufficient for an incident the magnitude of Katrina because neighboring jurisdictions also may be inundated and unable to provide timely assistance.**
- **During a catastrophic event involving many jurisdictions and several States, decision making regarding priorities, timing, and routes for evacuations are generally not coordinated throughout the impacted region, and critical decisions may be delayed.**



Planning

- **Evacuations involve many different agencies at both the State and local level. Each of these agencies typically has its own plans and standard operating procedures, and no one agency may have all the evacuation-related plans. This makes coordination difficult, especially for catastrophic events that include elements that may be in no one's plan.**
- **Transportation is a key part of evacuations, but emergency management or public safety agencies often do the planning and lead the decision-making without sufficient involvement from transportation agencies.**
- **There needs to be better planning for services en route for evacuees including fuel, water, food, shelter, and medical services.**



Public Communication and Preparedness

- **State and local governments must do more to educate their residents and visitors on who has to evacuate, when and why.**
- **They must also provide critical information on routes, services along the routes, shelter locations and other guidance to encourage evacuation.**
- **People need to understand the differences between hurricane watches and warnings, voluntary and mandatory evacuations and other terms emergency managers think are well understood but may not be.**
- **Communications must be in a form that is accessible to the disabled as well as those with little English proficiency and people who are hard to reach such as migrant workers and the homeless.**



Special Needs

- **More planning must be conducted to accommodate special needs populations in an evacuation**
 - **Most of the jurisdictions in the Gulf Coast Region do not have evacuation plans that include special needs people who are not in a medical facility or nursing home.**
 - **The plans often define special needs too narrowly.**
 - **Major institutions, such as prisons and hospitals, are responsible for evacuating their facilities, but the evacuation plans are often not coordinated with the emergency management agency—so they do not know whether the plans function together.**
 - **Transportation alone is not sufficient. It is critical to know the intended destinations for evacuees so proper provisions for transport can be made.**



Operations

- **Intelligent Transportation Systems (ITS) are very useful in an evacuation**
- **Expansion of traffic monitoring and motorist information services into more rural areas and along major evacuation routes could provide an excellent means of communicating with evacuees.**
- **Contraflow operations on freeways can be very effective but it requires substantial planning and coordination with adjacent States.**
- **Catastrophic evacuations can quickly overwhelm state and local transportation resources**
- **Evacuation plans need to give greater consideration to the use of all available modes of transportation**
- **Fuel, food, water, and emergency medical services should be provided along evacuation routes.**



Sheltering

- **Existing mutual aid agreements covering sheltering may be insufficient for a catastrophic event.**
- **Evacuees with special needs should be transported to shelters equipped to meet those needs**
- **Many shelters currently do not accept pets because of State health and safety regulations.**
- **Railroads and other modes of public transportation must have confirmed destinations where they will transport evacuees**



Training and Exercises

- **Training and exercises are critical to practice established procedures, processes and agency relationships**
- **All of the Gulf Coast States indicate a commitment to exercise, drill and training programs.**
- **Most training and exercise plans do not include representatives from other states or the federal government and do not test plans against catastrophic events.**



Recommendations

- 1. Develop regional plans for mass evacuations in connection with catastrophic events on the scale of Hurricane Katrina. Plans should be developed jointly by State and local officials in cooperation with officials from appropriate Federal agencies; transportation and shelter providers; managers of hospitals, nursing homes, jails, and other institutions with their own evacuation plans; and representatives of various special needs populations.**
- 2. Regional exercises to test plans and decision making structures for different mass evacuation scenarios should be conducted on a regular basis to assure that Federal, State, and local agencies are prepared to respond to different types of catastrophic incidents.**



Recommendations

- 3. Update National Response Plan, the State and Local Guide 101, concepts of operations for the various Emergency Service Functions and other appropriate planning guidance related to evacuations to cover the special requirements of mass evacuations from events the magnitude of Hurricane Katrina.**
- 4. Transportation agencies and operators should be more directly involved in key aspects of evacuation planning and implementation.**
- 5. Develop and deploy systems to provide information to evacuees and emergency managers during the course of evacuations on the status of traffic, shelters, fuel, and other services along evacuation routes.**



Recommendations

- 6. State and local agencies should work with the special needs communities to develop systems whereby those requiring specialized transportation or sheltering services during evacuations can make those needs known before evacuations.**
- 7. Sheltering requirements for all segments of the population and evacuees by all modes of transportation should be more directly integrated in the evacuation planning process.**



USDOT Activities to Improve Evacuation Capabilities

- **Improving coordination among those with evacuation and other emergency transportation responsibilities,**
- **Coordinating with the U.S. Army Corps of Engineers and FEMA to improve communications capabilities,**
- **Examining current regulations that may affect the transportation industry's ability to respond to catastrophic events and developing procedures to remove or dramatically reduce impediments,**
- **Coordinating with transportation industry representatives, the American Red Cross, the Humane Society, and other stakeholders to improve evacuation capabilities based on lessons learned in 2005,**
- **Conducting training and process improvements based on after action reviews.**



Implications for Sec. 1909 Commission

- **Adequacy of the physical transportation capacity depends on the type and severity of the incident.**
- **Not aware that State and local agencies are programming capacity improvements just to meet evacuation needs.**
- **Essential to use existing capacity of all modes to the fullest, to have plans that can be scaled to the severity of an incident, and to provide transportation system redundancy.**
- **Intelligent transportation systems technology is crucial to meeting traveler information, operational, and other evacuation needs.**
- **Regional planning and comprehensive joint exercises to test different elements of emergency management plans are important**