**Statement for the Record**

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Chairman Pryor, Ranking Member Sununu, and Members of the Subcommittee, I am Glenn Cannon, the Assistant Administrator for Disaster Operations at the U.S. Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA). Thank you for this opportunity to discuss FEMA's Catastrophic Disaster Response Planning Initiative for a potential earthquake along the New Madrid seismic fault zone, which is a 150-mile long, 50-mile wide earthquake fault covering four FEMA regions and eight states--Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee. The fault extends southward from Cairo, Illinois through New Madrid and Caruthersville, Missouri, down though Blytheville, Arkansas to Marked Tree, Arkansas. It extends into Kentucky near Fulton and into Tennessee near Reelfoot Lake, and extends southeast to Dyersburg, Tennessee.

Successfully responding to the anticipated effects of a catastrophic disaster is one of the greatest challenges Federal, State, and local governments face. Historic and recent events, such as Hurricane Katrina, demonstrate that a catastrophic disaster can impact the United States at any time. Using funding appropriated for catastrophic planning in Fiscal Year 2006 and 2007, FEMA implemented a Catastrophic Disaster Response Planning Initiative (Initiative) that is designed to ensure that FEMA and its Federal, Tribal, State, and local partners plan and prepare to effect an appropriate, timely, and efficient response to a catastrophic disaster.

This Initiative will significantly enhance Federal disaster response planning activities by focusing on catastrophic disasters: those disasters that by definition will immediately overwhelm the existing disaster response capabilities of Tribal, local and State governments. In cooperation with State and local governments, this initiative will identify high risk areas, develop loss estimates for such incidents, assess and inventory current disaster response capabilities, anticipate response shortfalls, and develop comprehensive planning strategies for addressing such shortfalls and enhancing capabilities. Products developed by the Initiative will include incident-specific response plans for pre-selected geographic regions, based upon loss estimating models and capability inventories of affected Tribal, local, State, and Federal responders.

FEMA's Initiative is focused on integrated emergency preparedness which is an evolving core competency of FEMA. It is based on principles from the National Incident Management System (NIMS) and the National Response Plan (NRP). [The latter is under revision as the new National Response Framework (NRF).] The Initiative will help further the development of the National Preparedness System by developing detailed, site-specific, geographically-based, and operationally-focused Federal, State, local, tribal, and private sector plans; will improve overall prevention, protection, response and recovery capabilities at all levels of government; and bolster Tribal, State and local planning activities.

FEMA's Disaster Operations Directorate, Disaster Assistance Directorate, Mitigation Directorate, and National Preparedness Directorate are collaborating closely on this important Initiative. The Disaster Operations Directorate is continuing its venue-specific catastrophic planning and disaster readiness initiatives. The Mitigation Directorate's risk modeling and earthquake mitigation programs provide invaluable guidance. The Disaster Assistance Directorate is planning for capability enhancements in the areas of evacuation/mass migration, congregate sheltering, housing, debris management, and other recovery operations. And, the National Preparedness Directorate will apply lessons learned to the preparedness assistance programs it is responsible for administering.

This Initiative applies a collaborative planning approach that involves all levels of government, the private sector, voluntary organizations, non-governmental organizations, academia, and

members of the critical infrastructure sectors to address specific functional response planning in multiple, critical disaster response categories such as: search and rescue, communications, command and control, temporary medical care, special needs, debris, schools, evacuation, sheltering, mass care, pets, temporary housing, transportation, staging and distribution of critical resources, access control, reentry, power, water, and ice distribution, volunteer and donations management, critical incident stress management, hazardous materials, temporary emergency protective local ordinances and State statutes, and public information and dissemination. FEMA has coordinated closely with its State and local partners to facilitate the identification of the highest risk areas, develop important loss estimates, assess response capabilities and gaps, and develop comprehensive strategies to enhance capabilities at all levels of government. Initiative objectives include:

- Improving overall capabilities to respond to and recover from a catastrophic New Madrid Seismic Zone (NMSZ) earthquake and related hazards;
- Developing integrated Federal, State, local, and private sector plans and operational coordination;
- Incorporating lessons from the Hurricane Katrina response, Southeast Louisiana Catastrophic Hurricane Planning, and previous earthquake planning and responses;
- Identifying issues that cannot be resolved based on current capabilities; and
- Proposing recommended courses of action for decision makers.

The Initiative includes four geographically-specific venues that provide cross-planning opportunities: Southeast Louisiana, Florida, California and the NMSZ.

**DISASTER OPERATIONS DIRECTORATE: Venue Specific Catastrophic Disaster Response Planning**

**New Madrid Seismic Zone (NMSZ) Planning**

The NMSZ Catastrophic Disaster Response Planning Initiative was selected as a venue to address one of the 15 National Planning Scenarios, "natural disasters-major earthquake" as identified in the National Preparedness Guidelines dated September 2007. The NMSZ Catastrophic Disaster Response Planning Initiative focuses on a "no-notice" major earthquake along the NMSZ. The NMSZ Initiative uses a bottoms-up, grass-roots planning approach with broad stakeholder participation that will help ensure comprehensive plan development, plan enhancements, and a sustainable planning process.

## Initiative Participants

Through engaged partnership, FEMA is coordinating with and taking advantage of a broad base of public, private, and academic expertise to develop meaningful catastrophic disaster response plans for the NMSZ.

Key participants include:

- Central United States Earthquake Consortium (CUSEC) and the eight member States;
- Federal Departments and Agencies including the Department of Transportation, the Department of the Interior's U. S. Geological Survey (USGS), Environmental Protection Agency, Department of Health and Human Services, Department of Defense (US Army Corps of Engineers, NORTHCOM, and 5th Army);
- The National Earthquake Hazards Reduction Program (NEHRP) partnership of four Federal agencies: FEMA, the National Institutes of Science and Technology (NIST), the USGS, and the National Science Foundation (NSF);
- DHS: U.S. Coast Guard, National Infrastructure Simulation and Analysis Center (NISAC);

- Local governments in the eight impacted States;
- Business, industry, and voluntary organizations within the eight State NMSZ area;
- Mid-America Earthquake Center (MAEC) at the University of Illinois at Urbana-Champaign;
- Department of Energy's Sandia National Laboratory;
- George Washington University Center for Crisis Disaster and Risk Management;
- US Chamber of Commerce; and
- American Petroleum Institute.

**Risk Assessment: Consequences of a NMSZ Earthquake**

In the winter of 1811-1812, the central Mississippi River Valley near New Madrid, Missouri was struck by some of the most powerful earthquakes in U.S. history. Other major earthquakes occurred in 1843 and 1895. Today, this region of the central United States has more earthquakes than any other part of the Nation east of the Rockies. The consequences of an earthquake in the NMSZ, similar to those that occurred in 1811-1812 and 1895, would have a significant and wide-ranging impact on the Nation's economy. CUSEC, MAEC, USGS, and FEMA have completed preliminary modeling of the potential impacts of an earthquake in the NMSZ. Estimates of total building loss alone in the area from one earthquake today exceed $70 billion. Approximately 44 million people live in the eight State area, with 12 million in the highest risk areas. Commodities (crude oil and natural gas) which flow via pipeline, rail, highway, and barge through the impacted area would likely be disrupted for a significant period of time and the infrastructure for alternative modes of transportation would likely be damaged as well. Interstate commerce could be bisected at the Mississippi River. Alternative modes of transportation and commerce, even if available, would be resource constrained. Major fiber optic cable routes and the power grid could be disrupted. Economic sectors impacted would include fuel (oil) for the upper Midwest; coal supplies for generation plants in the Southeast and Midwest; food exports; and critical transportation facilities (e.g. Memphis, Tennessee FEDEX Super Hub). Transportation systems would be destroyed or disabled, and the ability to bring in emergency services personnel and supplies from outside the area could be very limited.

**Hazards U.S. - Multi-Hazard (HAZUS-MH): Methodology for Estimating Loss**

Estimating losses is essential to decision making at all levels of government; it provides a basis for developing mitigation plans and policies, emergency preparedness, and response and recovery planning. FEMA's Mitigation Directorate directed the development of the HAZUS-MH program to estimate potential losses from earthquakes, hurricane winds, and floods. HAZUS-MH uses state-of-the-art Geographic Information Systems (GIS) software to map and display hazard data and the results of damage and economic loss estimates for buildings and infrastructure. It also allows users to estimate the impacts of earthquakes, hurricane winds, and floods on populations. HAZUS-MH is used to identify vulnerabilities and develop mitigation strategies in the New Madrid region. The MAEC uses HAZUS-MH, in combination with state-of-the-art earthquake science funded through the National Science Foundation, and other tools, to develop the earthquake loss scenarios. The USGS provides ground motion data that is based on a potential repeat of the 1811-12 New Madrid earthquakes. NISAC assesses potential seismic impacts to the Nation's critical infrastructure and economy. FEMA conducts HAZUS-MH user workshops and distributes workshop results to various groups. HAZUS-MH products are used to support disaster activities and are available through the Homeland Security Information Network (HSIN) web portal for information sharing, work product tracking, and guidance development.

**Response Initiative Planning Workshops**

In March 2007, FEMA kicked off the NMSZ Initiative with the four impacted FEMA Regions, eight States, and CUSEC. FEMA's Regional Interagency Steering Committee (RISC) meetings are used to help coordinate the project with partner Federal Departments and Agencies and the States. FEMA also created an Interagency/Intergovernmental Steering Committee to help ensure coordination and synchronization of planning activities. Additional Federal catastrophic disaster planning efforts with the States have been integrated into this Initiative, and FEMA is providing contractor and planning support to the States, regions, and CUSEC.

The NMSZ Initiative uses unique, scenario-driven, plan development processes carried out through a series of multi-level, functional, and area-specific workshops, including city/geographic area workshops in both urban and rural areas. To guide the development of hazard-specific annexes for the involved States and regions, the workshops bring together local, State, and Federal response operators with emergency planners and other subject matter experts to develop catastrophic response plans based on real-world modeling. Representatives from the entire spectrum of the emergency management community are involved in plan development, which ensures maximum ownership and effectiveness of the plans they may ultimately have to implement. Workshop participants collaborate on development of the plans as if they were responding to an actual incident. This scenario-driven planning concept intersperses planning with exercise phases to test and refine the plans and results in operational and functional plans that are ready for immediate use. The resulting hazard-specific annexes will supplement existing base plans for response and recovery.

Several key products already produced in the NMSZ Initiative include the following:

- ***Capabilities Assessment Summary:*** Overview and summary of the capabilities and shortfalls of the eight NMSZ States, based on detailed assessments for each State.

- ***Federal Interim Contingency Plan:*** Plan developed at the beginning of the NMSZ project to provide interim guidance and structure for a Federal response to a NMSZ earthquake in case one occurs before the project is completed. This Plan will eventually evolve into a more comprehensive, integrated Federal, State, and local plan.

- ***NMSZ Scenarios:*** State-specific "worst case" earthquake scenarios developed to support planning workshops. MAEC developed a report that laid the groundwork for the scenarios.

- ***State and Local Planning Templates:*** Templates to provide the framework for the State and local jurisdictions to develop their specific NMSZ Catastrophic Earthquake Response Plans, either as stand-alone plans or as annexes to existing plans. A template has been completed for Arkansas local jurisdictions and draft templates have been developed for Illinois, Indiana, Kentucky, Mississippi, and Missouri local jurisdictions.

- ***U.S. Chamber of Commerce Workshop & Report:*** A workshop, based on a catastrophic NMSZ earthquake scenario, conducted in June 2007 as a joint effort between the U.S. Chamber of Commerce and FEMA in coordination with the DHS Private Sector Office. The Workshop drew more than 100 participants from the private sector (including Microsoft,

Wal-Mart, Verizon, United Parcel Service, Home Depot, Office Depot, General Electric, and Anheuser-Busch) and voluntary agencies. The Chamber has requested additional opportunities to coordinate with FEMA on the NMSZ Initiative.

- ***Workshop Execution Plans*:** Plans to guide the conduct of each State's Workshop.

- ***Strategic Plan for Execution*:** Plan for carrying out the overall NMSZ Catastrophic Planning Initiative supported by a Joint Project Development Plan.

To date, local workshops and planning activities have been conducted in Arkansas, Indiana, Missouri, Illinois, Kentucky, and Tennessee. Workshops are scheduled in the remaining States next year. These efforts continue today. Regional and final integration workshops are tentatively scheduled for mid-2008. Moving into FY 2009-2010, the NMSZ Initiative will continue with scenario-based training and exercises of the plans. A major command exercise of the NMSZ plans is tentatively scheduled for FY 2011 as the culminating event to coincide with the 200th Anniversary of 1811 New Madrid Earthquake.

In summary, the NMSZ Initiative will ultimately produce a number of highly beneficial products, including:
• A comprehensive catastrophic earthquake planning plan for the central U.S.;
• State, as well as local and regional, NMSZ Catastrophic Earthquake Response Annexes;
• Federal Regional NMSZ Catastrophic Earthquake Response Annexes;
• An overall national plan for a NMSZ earthquake scenario that integrates all of the plans into a single system that can be applied in principle to similar efforts in other States; and
• A plan maintenance schedule and materials for training and exercises of the individual plan annexes and the overall national plan

## DISASTER ASSISTANCE DIRECTORATE: Recovery Catastrophic Planning

As the component of FEMA that oversees the delivery and implementation of recovery programs that facilitate the recovery of individuals and State and local governments in the immediate aftermath of a Presidentially-declared disaster, FEMA's Disaster Assistance Directorate's contribution to the Catastrophic Planning Initiative includes evacuation/mass migration, congregate sheltering, housing, debris management, and other recovery operations.

The Robert T. Stafford Disaster Relief and Emergency Assistance Act authorizes the President to issue emergency or major disaster declarations in advance of, or following a natural or terrorist disaster. In October 2006, Congress authorized the Post-Katrina Emergency Management Reform Act, outlining new recovery assistance requirements in the areas of mass care, evacuation support, housing, and human services. FEMA looks at these requirements as enhancements to existing underlying authorities, and recognizes that while some of these solutions may work in one disaster scenario, such as a New Madrid event, in other cases, the needs of the community and the resource and coordination capabilities of State, local, and Federal partners will also contribute to the overall successful implementation of these initiatives.

**Evacuation Support Planning**

In situations where the State or local government has advance warning of a hazard or disaster event, evacuating the affected population and supporting the displaced disaster victims is of paramount importance. FEMA's Evacuee Support Planning initiative focuses on developing strategies and guidelines for support of mass evacuations and displaced disaster victims through development of planning guidance and a Host-State Evacuee Support Plan template. These planning efforts will enhance operational effectiveness to provide recovery assistance to individuals and households, as well as public assistance to State and local governments in the event of an extraordinary or catastrophic disaster. To ensure the guidance and template realistically address State concerns and operational perspectives, the template will be created and refined from host-State evacuee support plans developed in select States. The host-State evacuee support plans are developed through workshops that employ realistic catastrophic scenarios and consequence estimates which drive discussion and planning, and ultimately the creation of functional, integrated evacuee support plans. The project integrates concurrent catastrophic planning efforts in the New Madrid Seismic Zone (NMSZ) and south Florida. The States which are participating in this project – Arkansas, Georgia, Tennessee, Oklahoma, and Texas – provided significant evacuee support following Hurricane Katrina. As well as being located north of the gulf coast States, they are located in and near the NMSZ and would likely be called upon to assist evacuees in the event of a NMSZ earthquake disaster.

**Mass Sheltering and Housing Assistance Recovery Strategy**

A catastrophic incident may well result in a self-directed or organized large-scale evacuation, resulting in large displaced populations.

Traditionally, mass care operations are provided by non-profit and local voluntary organizations, such as the American Red Cross, Salvation Army, etc. Our voluntary partners play a critical role in helping applicants find temporary shelter and distributing disaster commodities to meet emergency needs, which are often urgent and magnified. In an effort to improve shelter management and accountability, FEMA and the American Red Cross developed the National Shelter System (NSS). The NSS is a web-based data system that supports shelter management, reporting, and facility identification activities. The system is intended for use by all agencies that provide shelter services during disasters to ensure a comprehensive understanding of the shelter populations and available shelter capacity. In addition, the system provides visibility on large shelter populations and positions FEMA to deliver targeted registration assistance to disaster victims.

Once residents have been evacuated, meeting their immediate emergency needs becomes the next challenge. In July 2006, FEMA announced a Mass Sheltering and Housing Assistance Recovery Strategy which provided guidance and protocols for providing sheltering and housing assistance. While this strategy focuses on assistance associated with large hurricane evacuations, the procedures and underlying processes also may apply to no-notice events, such as major earthquakes. Key elements of the strategy are advance identification of Congregate and Transitional Shelters to provide short-term lodging and Temporary Housing facilities for an extended period of time. Contained within the strategy is a Shelter Registration Protocol which will allow FEMA field personnel to proactively register evacuees at designated congregate shelter locations and organized evacuee reception sites, including those out-of-State. FEMA also

has a Transitional Sheltering Protocol, which may be implemented when large numbers of evacuees are being housed in congregate shelters and will not be able to return to their homes for an extended period of time. In addition to the sheltering protocol, FEMA has an initiative to offer Evacuee Return Transportation, which can be used if FEMA, in support of the affected State, coordinates the out-of-State evacuation of State residents, and the evacuees are able to return to and occupy their homes within a short period of time, FEMA will organize a reverse, mass relocation effort. If evacuees are not able to return to their homes for an extended period of time, eligible evacuees may be reimbursed for independent transportation expenses to return to their homes.

**National Emergency Family Registry Locator System and National Child Locator Center**

In a large-scale evacuation, families may become unwillingly separated due to urgency of the evacuation, loss of communication systems, and/or the method and type of evacuation assistance made available. To assist displaced disaster victims reconnect with family members and locate missing children, FEMA has established the National Emergency Family Registry Locator System and the National Emergency Child Locator Center. Families and friends will be able to call an 800 number or go to the internet to send or receive messages for selected friends or family members including those in medical facilities. The National Center for Missing and Exploited Children and FEMA have partnered to facilitate the search and the reunification of missing children due to a disaster or evacuation. A Memorandum of Understanding was signed in 2006 by FEMA, the Department of Justice, the National Center for Missing and Exploited Children, and the American Red Cross to further develop and implement methods for quickly identifying and reunifying missing and separated children and family members following a disaster.

**Donation Network**

In catastrophic incidents, State and local officials may find it difficult to identify, manage, and match donated offers of products, services, and volunteers that pour into disaster stricken areas. FEMA and other components within the Department of Homeland Security worked collaboratively to develop a secure, web-based Aidmatrix network that connects Federal and State/Local Governments, the Private Sector and the Voluntary Sector to incoming donations of donated goods and volunteers. The network provides real-time visibility of donations and enables donors to view the specific needs of voluntary agencies, so that donations can be targeted as appropriate. It also provides real-time visibility into relief warehouse inventory levels, assisting local and State officials to make more informed decisions regarding the donations distribution.

**National Disaster Housing Strategy (NDHS)**

One of the greatest challenges presented by the scope and scale of catastrophic disasters is the ability to house displaced evacuees. While FEMA facilitated the means for hundreds of thousands of evacuees to quickly secure interim accommodations, and transition those individuals and families into longer-term, and more stable, housing solutions, it was a process filled with difficult decisions and lessons learned.

To further enhance housing capabilities, FEMA has engaged Federal, Tribal, State, and local partners to develop a National Disaster Housing Strategy (NDHS). The purpose of the NDHS is

to convey national guidance, operating principles, and a vision for public (Federal, State, tribal, local), private, and non-profit cooperation in providing disaster housing assistance. It defines the roles, programs, authorities, and responsibilities of all entities, detailing shared responsibilities and emphasizing the cooperative efforts required to provide disaster housing assistance. The NDHS further outlines the most efficient and cost-effective options for meeting disaster housing needs. The NDHS is in the final development stages.

**Joint Housing Solutions Group (JHSG)**

In 2006, FEMA also launched a Joint Housing Solutions Group (JHSG) charged with identifying viable alternatives to FEMA travel trailers and manufactured homes, and recommending improvements for conducting disaster housing operations. The Joint Housing Solutions Group has developed housing evaluation criteria, a Housing Assessment Tool, and screened, tested and rated more than 100 alternative housing providers and their products ranging from panelized, manufactured, and modular homes to shipping container prototypes. In October 2007, the JHSG released a one year report to identify the milestones of the JHSG Steering Committee. The next step is to pilot test select housing units in order to gauge field performance. We feel this effort is paramount in our ability to offer alternatives to traditional disaster housing modes.

**Debris Removal**

Following a large-scale disaster, debris removal is a complex operation that requires significant resources and capable officials to manage and accomplish the work. The debris generated can be of such large quantities and varied forms that it stretches, and sometimes exceeds, the limits of a community's capability to effectively and efficiently respond. Debris may be in the form of downed trees, destroyed personal property to include home contents and automobiles, hazardous waste, construction and demolition material, or even boats and vessels that obstruct waterways. Environmental considerations, damage to historic buildings, debris on private property, and demolition of private residences and other facilities are just a few of the issues that further complicate an already challenging task. Creating and executing a plan to remove and dispose of these materials with respect to the myriad of considerations that must be taken into account is a daunting task that requires coordination with numerous governmental entities at all levels of government and, most importantly, with the citizenry of the community.

In most circumstances, debris operations are the responsibility of Tribal, State and local governments. Typically, FEMA is not directly involved and does not contract for or complete any of the debris removal work. In most disasters, FEMA's role is one of providing technical assistance and grant funding through the Public Assistance Program to reimburse the Tribal, State and local governments. While FEMA does not directly manage Tribal, State and local debris operations, it does take an active role in providing technical assistance and oversight and has issued a strategic framework for providing debris removal assistance in support of a Presidentially declared emergency or major disaster. To assist State and local governments identify available debris removal contractors, FEMA created a web-based Debris Removal Contractor Registry. State and local governments, tribal authorities and other eligible Public Assistance applicants such as private nonprofit organizations can use the database registry to find contractors who can do the debris removal work they need. Information is provided and maintained by contractors and their representatives, and allows contractors to describe the equipment and staff they have available. The Federal effort may also include the provision

Direct Federal Assistance, usually in the form of US Army Corps of Engineers (USACE) support. This assistance is designed to address situations where the level of debris is catastrophic in scale, or where the capabilities of the State and/or local government to effectively manage such operations are overwhelmed. Finally, FEMA encourages, and assists States with planning for, coordinating, and managing debris removal operations. FEMA works with States to encourage the use of pre-event contracts and/or arrangements with local or regional debris removal contractors, to assure the immediate availability of coordinated debris removal support following a disaster.

**Conclusion**

The NMSZ Initiative offers significant benefits including extensive cross-disciplinary and inter-disciplinary participation. Our planning process is helping to broaden the scope of existing planning to include economic stabilization and post-disaster redevelopment and is fostering the development of more integrated and cohesive plans that can address all hazards. The lessons learned from the NMSZ Initiative will be exported to other catastrophic planning venues across the Nation. This concludes my testimony, and I am pleased to answer your questions.