



# CUSEC

CENTRAL U.S. EARTHQUAKE CONSORTIUM  
2630 E. HOLMES ROAD  
MEMPHIS, TENNESSEE 38118  
PHONE: (901) 544-3570  
FAX: (901) 544-0544  
EMAIL: [cusec@cusec.org](mailto:cusec@cusec.org)  
WEBSITE: [www.cusec.org](http://www.cusec.org)

## A PARTNERSHIP TO MITIGATE DISASTERS AND SAVE LIVES

*Mission Statement* - "...the reduction of deaths, injuries, property damage and economic losses resulting from earthquakes in the central United States..."

### CENTRAL U.S. EARTHQUAKE RISK

With little or no warning, an earthquake could strike in New Madrid, Wabash Valley or the East Tennessee seismic zones, causing major physical, social and economic disruption.

Most people associate the New Madrid seismic zone with the great earthquakes of 1811 and 1812 - which produced at least three temblors between magnitude 7-8, and thousands of aftershocks. Earthquakes of estimated magnitude 6.4, 6.8 and 5.5 also occurred in 1843, 1895 and 1968 respectively. The 1968 earthquake, a 5.5 in southern Illinois, caused damage in three states and was felt in 23 states. In 2002, Evansville, Indiana experienced a magnitude 4.6 earthquake that was produced by the Wabash Valley seismic zone, which toppled chimneys and caused other minor damages.

The central U.S. has the highest level of seismicity in the country east of the Rocky Mountains - approximately 250 earthquakes occur a year unknowingly to the public. The number of casualties in a damaging earthquake will depend on several factors including: time of day, depth of epicenter, location, magnitude, duration of quake and magnitude of aftershocks.

Also, potential losses from a major earthquake in the central U.S. are expected to be significant because:

1) the high population of the region, 2) the large structures that are not designed and constructed to withstand strong shaking, 3) the potential for liquefaction and 4) the large area that would be affected by damaging ground motion and associated ground failure (about 10 times larger than the area impacted by a California earthquake of comparable size).

Post-earthquake conditions will vary from state to state, and the following areas will most likely be impacted: Critical Facilities, Businesses, Transportation, Communication, Oil and Natural Gas Pipelines and Housing.

### OVERVIEW OF CUSEC

Established in 1983 with funding support provided by the Federal Emergency Management Agency (FEMA), the Central United States Earthquake Consortium (CUSEC) is an incorporated non-profit organization in partnership with the Federal Government and the eight states most affected by earthquakes in the Central U.S. Those states are Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee. Authority for CUSEC is vested in the Board of Directors, which is composed of the Directors of emergency management in each Member State.

CUSEC also includes nine Associate Member States: Georgia, Iowa, Louisiana, Nebraska, North Carolina, South Carolina, Ohio, Oklahoma and Virginia - which have their own hazards or could serve a vital role in supporting the impacted states from a damaging earthquake in the CUSEC region.

As a multi-state planning agency, CUSEC works with a variety of agencies and organizations to develop and implement programs to reduce the region's risk to earthquakes by addressing the hazard and its associated risks through its four goals which are:

- To raise the level of public awareness and education of the earthquake hazard
- To promote the adoption of mitigation programs, tools and techniques to reduce the vulnerability of the central United States to earthquakes
- To foster multi-state planning for response to and recovery from a damaging earthquake in the central United States
- To promote the application of research and lessons learned to improve the level of preparedness for earthquakes

## **CUSEC INITIATIVES AND ACTIVITIES**

*Mitigation* - actions taken to prevent or reduce the risk to life and property from natural hazards - is central to CUSEC's mission. With the help of other organizations, CUSEC works to ensure that key players understand the potential consequences of earthquakes and begin to incorporate mitigation into their daily decisions.

Following a large earthquake, damage to infrastructure, will present response and recovery teams with a unique set of challenges. In coordination with FEMA, CUSEC has initiated the New Madrid Seismic Zone Catastrophic Planning Initiative; a series of earthquake scenario-driven workshops conducted in each Member State. These workshops bring members of local, state and federal agencies together to address issues that will be faced in the time of a catastrophic earthquake.

CUSEC accomplishes its four primary goals with the help of its network of governmental and non-governmental partners. By working closely with the CUSEC State earthquake program managers, activities are scheduled during the year to ensure that communities throughout the central U.S. stay abreast on earthquake related information.

Using a variety of earthquake information, - online, brochures, newsletters, and pamphlets - CUSEC participates in several activities to help its Member States to promote earthquake awareness, mitigation, and preparedness.

### **SAMPLING OF ACTIVITIES**

- Earthquake 101 Seminars
- Earthquake Awareness Week Events
- Science, Safety & Health Fairs
- Earthquake Town Hall Meetings
- School Earthquake Presentations
- Earthquake Preparedness Summits
- Business Earthquake Presentations
- Earthquake Scenario Development
- Earthquake Mitigation Workshops
- Mitigation Pilot Projects (Schools, Hospitals, etc.)
- Media Facility Earthquake Planning Workshops
- Small Business Disaster Preparedness Workshops
- Post-Earthquake Safety Evaluation of Buildings Course

## **CUSEC PARTNERS**

CUSEC has a large network of partners that compliment the earthquake program in the central U.S. These partners provide expertise and knowledge that can be used to reduce casualties and losses from earthquakes and other disasters. Some of the partners that we work with are -

### **FEDERAL GOVERNMENT**

- Department of Homeland Security
- Federal Emergency Management Agency
- Centers for Disease Control and Prevention
- Federal Highway Administration
- U.S. Geological Survey
- U.S. Department of Energy
- U.S. Department of Transportation
- U.S. Army Corps of Engineers

### **STATE AFFILIATES**

- CUSEC State Earthquake Program Managers
- Association of CUSEC State Geologists
- CUSEC State Transportation Task Force
- CUSEC State Operations Officers
- CUSEC State Public Information Officers
- CUSEC State Technology Working Group

### **ASSOCIATION / NON-PROFIT / VOLUNTEER**

- American Red Cross
- American Society of Civil Engineers
- Arkansas Governor's Earthquake Advisory Council
- Cascadia Region Earthquake Workgroup
- Council of State Governments
- Insurance Institute for Business and Home Safety
- Institute for Gas Technology
- International Code Council
- Missouri Seismic Safety Commission
- National Association of Contingency Planners
- National Emergency Management Association
- National Institute for Urban Search and Rescue
- Northeastern States Emergency Consortium
- West Tennessee Seismic Safety Commission
- Western States Seismic Policy Council

### **RESEARCH / ACADEMIA**

- Center for Community Earthquake Preparedness
- Center for Earthquake Research and Information
- Earthquake Engineering Research Institute
- Multidisciplinary Center for Earthquake Engineering Research
- Mid-America Earthquake Center
- Murray State University
- Southern California Earthquake Center