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Multi-State Planning: A Critical Element in Effective Earthquake Response and Economic Recovery in the Central U.S.

Multi-State Planning has been one of the four key goal areas for the CUSEC since its establishment in 1983. This goal area along with CUSEC's three other goal areas —Public Outreach and Education, Research and Mitigation— was established by the CUSEC Board of Directors and supported by the Federal Emergency Management Agency (FEMA), one of four lead agencies under the National Earthquake Hazards Reduction Program (NEHRP). NEHRP was created by Congress as a result of the enactment of the Earthquake Hazards Reduction Act in 1977. The passing of this act was in recognition of the fact that earthquakes pose the greatest potential threat of any single-event natural hazard confronting the nation.

The reason for highlighting multi-state planning as a goal area is simply because of the nature of the earthquake hazard in the central U.S. This earthquake hazard, primarily known for the New Madrid Seismic Zone (NMSZ), is a series of faults beneath the continental crust in a weak spot known as the Reelfoot Rift. It cannot be seen on the surface. The fault system extends 150 miles southward from Cairo, Illinois, through New Madrid and Caruthersville, Missouri, down through Blytheville, Arkansas, to Marked Tree, Arkansas. It dips into Kentucky near Fulton and into Tennessee near Reelfoot Lake, and extends southeast to Dyersburg, Tennessee. It crosses five state lines and the Mississippi River in at least three places, according the Center for Earthquake Research and Information.

With an earthquake hazard that has no respect for state boundaries, the CUSEC Board of Directors established seven multi-state planning priorities -



Participants at the FEMA Region IV New Madrid Seismic Zone Catastrophic Planning Workshop in May 2009 help shape plans that address responding to earthquakes in the central U.S.

(1) multi-state coordination, (2) communications, (3) search and rescue, (4) emergency medical, (5) transportation, (6) public information and education and (7) response coordination - as a starting point for a concentrated planning effort with its partner FEMA. Plans on how to address these priorities have been ongoing through the New Madrid Catastrophic Planning Project, which began in 2007. Because of this initiative, greater emphasis was placed on the region's earthquake hazard, prompting many to become actively involved in earthquake response planning.

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AROUND THE REGION

CUSEC Member State Seismic Safety Advisory Boards Key Players in the Earthquake Awareness Effort in the Central U.S.

Among the many central US governmental and non-governmental organizations, state seismic safety advisory boards have proven to be of great value in addressing the New Madrid Seismic Zone earthquake hazard. Six out of eight CUSEC member states have a seismic safety advisory board; and although they operate under different names, they each have a common goal to promote greater earthquake awareness and preparedness among the region's residents.

- Since 1984, the Arkansas Governor's Earthquake Advisory Council's (AGEAC) accomplishments include: (1) the passage of Act 247 of 1989, which established the Arkansas Earthquake Preparedness Program, (2) the passage of the State Seismic Building Code, Act 1100 of 1991, which is an act to safeguard life, health and property by requiring earthquake resistant design for all public structures to be constructed or remodeled within the boundaries of the state, (3) continuous earthquake preparedness and mitigation presentations to the public, (4) and continuous earthquake related interviews with the media when necessary.



Shown here in July 2009, Jim Wilkinson addressing the Arkansas Governor's Earthquake Advisory Council. The AGEAC is the oldest seismic advisory council in the central United States.

- One month after the 5.2M earthquake at the Illinois-Indiana border in April of 2008, government officials announced the creation of the Illinois Seismic Safety Task Force. Co-chaired by the State Director of the Illinois Emergency Management Agency (IEMA) and the Director of the Illinois Division of Insurance, this task force works to find better ways to monitor seismic events as well as enhance protections for home and business owners who need earthquake insurance. Future projects include: (1) the review of relevant public, commercial and residential building codes and the performance of non-structural components, particularly in high earthquake risk zones, (2) assessing and providing guidance on consumer education on earthquake insurance for public, commercial and residential properties, particularly in high earthquake risk zones, (3) considering the creation of Illinois Earthquake Risk Zones and an Illinois Seismic Research Network to determine how Illinois seismic monitoring
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can be enhanced, (4) exploring public-private partnerships to heighten individual and business awareness of earthquake risk and related mitigation practices, (5) and providing recommendations to the governor for enhanced preparedness.

- Established in 1984, the Indiana Fire Prevention and Building Safety Commission has proven itself to be an efficient body for adopting fire safety and building codes. This group has written a completely revised version of the state's fire, building, mechanical, fuel, gas, plumbing, electrical, swimming pool and 1 and 2 family dwelling codes. With the combination of the 2006 International Building Code (IBC) and Indiana's amendments, the commission successfully created the 2008 Indiana Building Code.
- Revitalized in 2007 as an advisory group to the Director of the Kentucky Division of Emergency Management (KyDEM), the Kentucky Earthquake Technical Workgroup (KETW) is composed of representatives from state and local government, educational institutions and non-governmental agencies. Its predecessors include the Governor's Earthquake Risk Reduction Council and the Governor's Earthquake Hazards and Safety Technical Advisory Panel. KETW is currently developing the group's objectives and has assisted with the state and local activities related to the NMSZ Catastrophic Planning Project. KETW also plans to play a major role in preparations for and the execution of the National Level Exercise in 2011 (NLE 2011).
- The Missouri Seismic Safety Commission (MSSC) was formed in 1993 with the specific mission to review the "State of State" in earthquake preparedness and make recommendations for the government, private sector and citizens to better mitigate the effects of a major seismic event within the state or an event that will affect the state. MSSC continues to reach out to the community through earthquake awareness and preparedness campaigns to the general public, state legislators, insurance companies, local agencies, and emergency

responders and planners; as well as support courses and workshops for engineers, architects and other design professionals. The commission also promoted and supported adoption of the 2003 International Building Code (IBC) by St. Louis and St. Charles Counties, which mandates seismic design provisions. Improved emergency response through more effective use of resources and personnel remains a top priority to ensure the reduction of injury, additional loss of life and further property destruction. Just as much as improved response, this group also places special emphasis on supporting a well-designed recovery process that will help Missourians resume their normal lives by reducing the long-term emotional and economic impact of a New Madrid catastrophic earthquake. Last but not least, MSSC also supports the assessment of the state's earthquake hazard through hazard mapping projects that will enhance emergency management's basic knowledge about expected earthquake locations, the effects of local site conditions on shaking and rapid notification of an earthquake occurrence.

- Increased concerns over the state's ability to respond to a natural disaster after Hurricane Katrina prompted the establishment of the West Tennessee Seismic Safety Commission (WTSSC) in 2006. Members of this commission have embarked on a mission to initiate a comprehensive program to prepare the state for response to a major earthquake with the assistance and participation of other state, federal and local government agencies. Accomplishments to date include: (1) developing of by-laws, (2) organizing committees, (3) and securing funds for a mass sheltering and evacuation study/plan. The WTSSC is currently developing a long-range strategic plan and has plans to secure funding for a seismic mitigation program.

Members of these seismic safety advisory boards are volunteers who represent various professional areas from government, academia and the corporate sector. Funding sources for each state seismic advisory board vary as well as terms of office for its members.

CUSEC Helps to Educate Mississippi and Tennessee Residents About the Central U.S. Earthquake Hazard

Representatives from the CUSEC recently participated in Safety/Preparedness Expos held in Desoto County, MS and Shelby County, TN. The focus of both expos was to increase earthquake awareness and promote preparedness among central US residents living in the area of the New Madrid Seismic Zone.

Expo visitors got the chance to view and take home earthquake related information from the CUSEC display, as well as talk with representatives of CUSEC about their concerns pertaining to the region's earthquake hazard, how this issue is being addressed and what they can do to prepare.



CUSEC & CDC Cohost a Post-Earthquake Medical Issues Course

CUSEC presented a class called "Disaster Medicine 201: Post-Earthquake Medical Challenges in the New Madrid Seismic Zone" on May 7-8, 2009 in Memphis. The class, conducted at the University of Tennessee Health Sciences Center, was created in cooperation with the Centers for Disease Control and Prevention (CDC), and is a big-picture overview of medical issues related to the earthquake threat in the New Madrid Seismic Zone.

According to Miguel Cruz, of the Office of Terrorism Preparedness and Emergency Response at the CDC, "We feel fortunate that we are able to partner with an organization like CUSEC to present such an important and unique training opportunity." Cruz worked with CUSEC to develop the curriculum for the class.

The intended audience for the class was medical personnel, including EMT's, paramedics, nurses, and doctors concerned with medical and operational issues following an earthquake. The class is a follow-up to the successful "Disaster Medicine 101" class which was primarily concerned with public health issues following an earthquake. The class consisted of lectures on the initial hospital and medical establishment response, the field response in the first 24 hours (including state and federal efforts), longer-term concerns including public health efforts, and mass casualty management. Additionally, a discussion group examined mass casualty management at the local, state, and federal level to show what resources could be available to the medical community. Total attendance for the two days was 69 students.

One of the students attending was Saleh Fares MD, Disaster Medicine Fellow, Harvard Medical School. "Great course taught by world-renowned experts," said Dr. Fares. "I flew from Boston just for it and it was really worth it!"

"It was great to bring together such a stellar group of instructors and panelists," said Paul Hogue, Exercise/Training Officer for CUSEC. "I think the combination of knowledge and experience we had in that classroom was a fantastic opportunity for the students."

The class is a new version of another class called "Disaster Medicine 201" conducted by CUSEC in the 1990's, with funding support from FEMA. This new version is a complete redesign of the old class. It takes into consideration the development of the National Incident Management System (NIMS), new and modified federal resources, and advances in scientific knowledge of the earthquake threat.



RECENT CENTRAL U.S. EARTHQUAKE ACTIVITY

DATE	LOCATION	MAGNITUDE
4/4/09	Milledgeville, GA	3.1
4/21/09	Centreville, AL	3.8
4/22/09	Centreville, AL	2.9
4/24/09	Oak Hill, OH	3.4
5/6/09	Lincolville, SC	2.5
5/23/09	Vonore, TN	2.7
7/9/09	Fairfield Bay, AR	2.5
7/18/09	Ridgely, TN	2.6
7/31/09	Neelyville, MO	2.5
8/1/09	Ducktown, TN	3.2

IF YOU FEEL AN EARTHQUAKE, REMEMBER TO: DROP, COVER, & HOLD ON FOR MAXIMUM SAFETY



Visit <http://www.dropcoverholdon.org> to learn more ~ Image Courtesy Southern California Earthquake Center

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Primary instructors for the course included Dr. Mark Keim, Senior Advisor to the Director for the National Center for Environmental Health/Agency for Toxic Substances and Disease at the CDC; Dr. Joe Holley, Medical Director for Baptist-Collierville and for Tennessee Task Force One; and Dr. Robert Galli, Chairman of the Department of Emergency Medicine at the University of Mississippi Medical Center. Gary Patterson, Information Services Director for the Center for Earthquake Research and Information in Memphis briefed on the earthquake threat.

Panelists included CAPT Tom Bowman, Regional Emergency Coordinator, Region IV, Department of Health and Human Services; Dr. Tim Davis, Deputy Chief Medical Officer, National Disaster Medical System (NDMS); Dr. Narayan Nair, Senior Program Manager, Deployment Operations, Medical Reserve Corps; Joe Phillips, Director, Tennessee State Emergency Medical Services; and Kenneth E. Reeves, Division Chief of Special Operations, Memphis Division of Fire Services.

The Road to National Level Exercise 2011

by Paul Hogue

CUSEC Exercise/Training Officer



All of the CUSEC member-states conducted “Concepts and Objectives” meetings for the 2011 National Level Exercise (NLE 2011) in this past quarter. According to the Homeland Security Exercise and Evaluation Program (HSEEP) methodology, a Concepts and Objectives (or C&O) meeting is “... the formal beginning of the exercise planning process. It is held to agree upon already-identified type, scope, capabilities, objectives, and purpose of the exercise.” The outputs of these state meetings were fed up to a Multi-State C&O held in Memphis on April 22, 2009, involving CUSEC states and FEMA regional exercise officers. No similar regional meeting had ever been held for a National Level Exercise. This meeting helped insure the need for a bottom-up approach as well as underscoring the need to recognize the regional nature of the earthquake threat and response. The National C&O for NLE 2011 was held on May 19 in Washington, D.C.

Several of the CUSEC Member States held lead-up exercises this past quarter. Indiana held district and state-level functional exercises in April as well as a district-level discussion-based exercise in May. Arkansas held a state and local-level tabletop exercise on May 6. Kentucky also held a state-level tabletop exercise in May; and Missouri held a Command Exercise in the same month.

As a follow-up to the National C&O, CUSEC held two conference calls on June 10 and 11 for the CUSEC Exercise Officers’ Working Group to discuss possible comments from the states on the Exercise Directive presented at the C&O. Two calls were necessary to accommodate all eight states. Special thanks to John Aucott of the FEMA National Exercise Division for his leadership and continued support to the NLE2011.

NMSZ Catastrophic Planning Update: The Hardest Part Is Ahead of Us!

by Mike Calvert

CUSEC Emergency Planner

With the CUSEC member state and FEMA regional workshops behind us and earthquake plans in place, some would think the NMSZ Project is complete. Not so! The truth is: we’ve only just begun! According to CUSEC Executive Director Jim Wilkinson, “ The size and scope of dealing with the earthquake risk in the central U.S. is too large to address in a single planning effort. It must be divided up into manageable portions or a select number of priorities, of which the recent planning effort addressed in phase one of a multi-phased approach”.

Where We’ve Been

The CUSEC member state and FEMA Region New Madrid Seismic Zone Catastrophic Planning Project workshop effort that began two years ago is winding down as the states and FEMA put the finishing touches on their plans. Over 35 workshops were held. The affected FEMA Regions and their CUSEC states are Region IV (Alabama, Kentucky, Mississippi, and Tennessee), Region V (Illinois and Indiana), Region VI (Arkansas), and Region VII (Missouri). An integration workshop is planned for later this year where FEMA will work with their Regions and other government and private organizations to develop a national NMSZ catastrophic plan that rolls up the efforts of the eight CUSEC states and the four FEMA regions.. Additionally, many of the states worked individually with their counties and cities to help them with local earthquake plans.

At each recent Regional workshop, a breakout session focused on earthquake response issues within the scientific community. We wanted the response community to know what the earthquake science community can provide

after an earthquake and why their post-earthquake research is important. We also wanted to synchronize USGS, State Geological Survey, and State Emergency Management Agency NMSZ planning and operational response. USGS presentations addressed the NMSZ earthquake hazard, the products and tools the USGS offers the response community, and what their Center for Earth Resources Observation and Science (EROS) does. The USGS briefed workshop participants at three of the workshops. FEMA, the U.S. Geological Survey (USGS), CUSEC, CUSEC State Geologists and emergency management personnel worked together on this very successful effort.

Where We Are Today

CUSEC member states and FEMA are already heavily involved in planning National Level Exercise 2011 (NLE 2011), which will test the plans developed under this FEMA-funded project. NLE 2011 occurs during the bicentennial commemoration of the 1811-1812 NMSZ earthquakes. State and local governments, volunteer organizations, businesses, and other government agencies should get involved to gain full benefit of participating (test and validate earthquake plans under projected post-earthquake conditions; practice and refine response procedures; involve affected organizations; work with local, intrastate, interstate, regional, and national entities; exercise communications and reporting procedures; better understand the challenges posed by an earthquake; validate expected problems and discover additional ones).

The states and Regions will revise and update their plans as a result of state and local exercises and NLE 2011 lead-up exercises.

What Next?

We have current plans for post-earthquake operations as a result of FEMA's foresight and funding of the NMSZ Catastrophic Planning Project. But unlike floods and tornadoes, which occur frequently in many areas, we haven't had a major earthquake in the NMSZ in recent years. As a result, we haven't had to use our earthquake plans. Plans not used are plans forgotten. The day of an earthquake is not the time to find, read, and try to implement your earthquake plan.

It's important to exercise those plans and to keep the public aware of the NMSZ earthquake threat. Following are some thoughts for moving forward with earthquake preparedness.

We must continually strive to inform and keep our citizens aware of the earthquake threat and to encourage all (individuals, governments, industry, business, volunteer organizations, etc.) to prepare at home and on the job. Many in the NMSZ are only beginning to understand the impact of a series of earthquakes like those of 1811-1812. Many still aren't aware of the threat; few understand the potential national impact.

We must participate in coordinated, periodic multi-jurisdictional, multi-state, and national exercises. A major NMSZ earthquake will not affect just my city or your county; it will be a national event which quickly overwhelms relief resources at the local, state, and national levels.

We must work to obtain the necessary funds to continue to plan for, mitigate against, and recover from earthquakes in the central U.S. despite limited funding and a depressed economy.

Will You Be Ready for a Catastrophic Earthquake?

This nation has never faced the widespread devastation that major NMSZ earthquakes similar to those of 1811-1812 could bring. The devastation will be reminiscent of Europe after World War II. We cannot hope to be prepared without earthquake exercises on the local, state, and national levels.



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According to CUSEC Earthquake Program Coordinator, Brian Blake, “CUSEC tries to maintain a balanced earthquake program within our four primary goal areas - 1) Public Outreach & Education, 2) Earthquake Mitigation, 3) Multi-State Planning, and 4) the Application of Research and Lessons Learned.

Prior to the NMSZ Catastrophic Planning Initiative, the earthquake program in the central United States was focused more on Public Outreach and Education and Earthquake Mitigation programs. The planning initiative has significantly increased efforts that prepare for catastrophic events, and brought more balance to the earthquake program. One of the biggest benefits from the increased level of planning is that the level of public awareness about the earthquake hazard has increased dramatically. This would not have been possible without the planning initiative.”

As the coordinating hub for the eight CUSEC member states, helping to facilitate the multi-state planning approach has been challenging, but it’s a necessary task. Each state—and county—has its own particular need and jurisdictional standards. In spite of various challenges, credit can be given to the close collaboration of state and federal partners for accomplishments including:

- Observing Earthquake Awareness Week (EAW) by six of the eight CUSEC member states—five states planned earthquake related activities in February; one state planned activities in April as a reminder of the 5.2 earthquake on April 18, 2008
- Developing pre-scripted earthquake announcements and press releases, pre-earthquake mitigation tips, and also post-earthquake safety tips being used by all eight CUSEC Member State Public Information Officers; this presents unified messaging to the public
- A bottom (local) up planning effort that has resulted in the completion of more than 100 state and local planning workshops in support of the New Madrid Seismic Zone Catastrophic Planning Project and the completion of four FEMA regional planning workshops

- Developing a New Madrid Seismic Zone Multi-State Coordination Annex, which will be integrated into each member state’s emergency response plan
- Developing a coordination plan to address research response following a damaging New Madrid earthquake
- and productive working relationships with other local, state, and federal government agencies, the private sector and academia.



In the following statement, CUSEC Board of Directors Chairman and Tennessee Emergency Management Agency’s State Director, General James Bassham talks about the importance of multi-state planning, the shared challenges facing the region post-earthquake, the reason for the seven priorities selected by the CUSEC Board of Directors, and his review of the New Madrid Catastrophic Planning Initiative.

“In emergency management, complacency is an unaffordable luxury. It is vital that we, as emergency managers and leaders in our field, recognize that catastrophic emergencies should not be treated as just a big disaster. A catastrophic event, such as we would experience from a major earthquake on the New Madrid Seismic Zone, is a unique challenge of a scale and scope that will overwhelm our usual abilities; therefore we must adapt our thinking to a very different approach.

The dangers routinely faced and the challenges of common dangers typically take up a considerable amount of the planning and preparedness energies for emergency management. When emergency managers consider a catastrophe, those routine situations are all too often referenced as we make our plans.

I am thankful for the approach we, as Central U.S. Earthquake Consortium members, have taken with our catastrophic planning initiatives. This planning process has helped us break our pre-conceived notions

of catastrophes – as being just a larger version of our usual disasters. Never in our country's history will there have been a comparable disaster, that would affect the entire economy, cripple so much infrastructure and require decades of recovery.

Understanding that there will be competition for national resources, whether it be from the private sector or Department of Defense assets, needs to be explored as a region and each challenge resolved before we should feel comfortable that our planning is complete. All states involved will be recipients of Emergency Management Assistance Compact (EMAC) resources, as well as federal aid. We must develop our ability to manage that influx of material and manpower for our state or we will be quickly suffocated.

I am confident that our efforts at catastrophic planning are on target. It is a complex initiative involving state, local and a multiplicity of agencies from the federal government to each county official. I can not stress enough how important the bottom-up approach to the development of the catastrophic planning has been to its success. Local officials helped to develop the state's plan, and which also led to a template for the local jurisdictions. In turn, the states will use our seven CUSEC priorities (multi-state planning, communication, search and rescue, emergency medical, transportation, public information and education and the multi-state clearinghouse) to inform the federal government for its development of a national level exercise in 2011.

As I leave the chairmanship, I assure you it was a pleasure to work with all my counterparts in CUSEC. We learn so much from each other that we can take home and find ways to implement in our own states. The harmony in this organization is truly amazing."

In addition to CUSEC, the Delta Regional Authority (DRA) - a federal-state partnership that works to improve the economy for the residents in 252 counties and parishes in parts of the following states: Alabama, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri and Tennessee - has also made multi-state planning a priority, having co-hosted a conference on earthquakes in the recent past.

As a partner of CUSEC, the DRA is looking at the economic recovery issues that residents in the above mentioned states would possibly face after a major

New Madrid earthquake. Currently, this organization is participating on the rural communities planning committee for the New Madrid Bicentennial - the commemoration of the great New Madrid earthquakes that occurred the winter of 1811/1812.

In conclusion, circumstances such as disasters and economic decline influence the partnering of not only multiple states, but multiple organizations and agencies. Through the NMSZ Catastrophic Planning Project and earthquake related projects, CUSEC will continue to focus the organization's efforts within its four established key goal areas—multi-state planning, research, mitigation and public awareness and education— to fulfill its core mission which is "To help reduce deaths, injuries, damage to property and economic losses resulting from earthquakes occurring in the central United States."

Other News



National Earthquake Hazards Reduction Program Being Reauthorized

June 2009 - CUSEC is pleased to announce that the National Earthquake Hazards Reduction Program (NEHRP): R & D for Disaster Resilient Communities is in the process of being reauthorized. In a hearing on June 11th to review NEHRP and to determine future funding for this program, Dr. Jack Hayes, Director of NEHRP, along with several other colleagues testified before the Subcommittee on Technology and Innovation, the Committee on Science and Technology and the U.S. House of Representatives. Hayes focused his testimony on the four-agency NEHRP partnership, which is also called the Interagency Coordinating Committee (ICC). The ICC is a make up of the following agencies:

- the National Institute of Standards and Technology (NIST),
- the Federal Emergency Management Agency (FEMA),
- the US Geological Survey (USGS),
- the National Science Foundation (NSF)

Hayes also included contributions from the extended network of other federal agencies, state and local governments, private sector and academia in his testimony.

As a result of the program's last reauthorization (PL 108-360) in 2004, NEHRP designated NIST as its program lead agency, created the ICC, created the external Advisory Committee on Earthquake Hazard Reduction (ACEHR) and required a new strategic plan and program reports. Each of the previously mentioned changes helped to increase NEHRP's visibility among the ICC agencies and has allowed improvements in the program's coordination and efficiency due to increased involvement of agency leaders.

Since NEHRP's 2004 Reauthorization, one of the program's most notable accomplishments is :

a strategic plan that addresses the national need for improving the country's resilience from future damaging earthquakes through projects such as the New Madrid Catastrophic Planning Initiative, National Seismic Hazard Mapping and National Seismic Monitoring

For more information about the 2009 NEHRP Reauthorization, visit:

http://science.house.gov/publications/hearings_markup_details.aspx?NewsID=2483

The above website includes information about the actual hearing, testimony from the witness panel and background information about NEHRP.

Applied Technology Council and the Structural Engineering Institute to Co-Host Seismic Performance Conference at the end of the Year

Applied Technology Council (ATC) and the Structural Engineering Institute (SEI) of the American Society of Civil Engineers (ASCE) are rounding out 2009 as hosts of the first ever ATC-SEI Conference to be held in San Francisco, California on December 9-11.

With the theme of "Improving the Seismic Performance of Existing Buildings and Other Structures,"



conference organizers are aiming to provide a forum for the presentation and exchange of new information on the seismic evaluation and seismic rehabilitation of existing buildings, including case studies, new discoveries, innovative use of new technologies and materials, implementation issues, needed improvements to existing standards and methods, and socio-economic issues. The conference will include four concurrent tracks of technical sessions, four distinguished keynote speakers in the field of science and engineering and a special black-tie gala.

Presenters who would like to submit papers for publication must email them to <http://www.succeed.ufl.edu/atc-sei/> (Deadline August 17, 2009)

For more details about the ATC-SEI conference please view the conference website at <http://atc-sei.org/>

USGS to Award \$5 Million in Earthquake Research Grants

from the USGS Website

RESTON, VA - Five-million dollars in grants and cooperative agreements are being awarded in 2009 for earthquake research to 84 recipients including universities, state geological surveys and private firms, the U.S. Geological Survey (USGS) has announced. In addition, applications are being accepted for up to \$7 million in grants and cooperative agreements for earthquake research in 2010.

"These grants underscore once again the importance to our nation of the earth science work accomplished by the USGS," Secretary of the Interior Ken Salazar said. "Earthquakes are one of the most costly natural hazards faced by the nation, posing a risk to 75 million Americans in 39 states."

USGS supports research on earthquake hazards in at-risk regions nationwide, including effects from earthquake shaking and the physical conditions and processes that cause earthquakes. The research is helping to better understand how earthquake hazards change with time and to reduce losses through effective earthquake forecasts based on the best possible scientific information.

“These research grants help the government gain access to talented academic, state, and private-sector researchers whose investigations are critical to helping prevent earthquake hazards from becoming disasters,” said David Applegate, USGS Senior Science Advisor for Earthquake and Geologic Hazards.

USGS is currently reviewing grant applications. For more information contact the following persons:

Elizabeth Lemersal
703-648-6701
gd-erp-coordinator@usgs.gov

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DID YOU FEEL IT?

If you recently felt an earthquake, remember to go to the USGS website and log your experience on the “Did You Feel It?” webpage. The information you provide helps scientists understand how the ground shakes at different locations and helps show the wide reaching effects of earthquakes. Visit - <http://earthquake.usgs.gov> for more info



UPCOMING CONFERENCES, TRAINING, WORKSHOPS, ETC.

WHEN	WHAT	WHERE
August 17-20	Basic HAZUS-MH Course	Topeka, KS
August 31-Sep. 4	Arkansas Emergency Management Conference	N. Little Rock, AR
September 8-10	Illinois Emergency Management Conference	Springfield, IL
September 14-15	Arkansas Statewide Preparedness Conference	Little Rock, AR
September 22-24	CUSEC Board of Directors Meeting	Little Rock, AR
October 28-29	Central & Eastern US Earthquake Hazards Meeting	Memphis, TN
December 9-11	ATC & SEI Seismic Performance Conference	San Francisco, CA

Visit the CUSEC website at www.cusec.org to learn more about upcoming events...

Abstract Wins Best Paper Award from the International Emergency Management Society

The International Emergency Management Society (TIEMS) honored professors from two U.S. universities with the best paper award at its 16th annual conference in Istanbul, Turkey this past June. The abstract *A Framework to Integrate Social Vulnerability into Catastrophic Natural Disaster Preparedness Planning* focuses on the complex relationships between the factors that contribute to communities' social vulnerability to natural hazards. This paper explains the importance of:

- studying social vulnerability and the factors that influence it
- the tools and methods used to study social vulnerability
- and how research information is being used by disaster planners

This paper also explains the steps in the planning life cycle from the influencing factors of social vulnerability to people's selection of pre-disaster preparedness actions. To view the entire paper visit <http://www.tiems.org>.

NEMA and Partners Release White Paper to Support National Mitigation Efforts



The National Emergency Management Association (NEMA), in conjunction with the Federal Emergency Management Agency (FEMA), CUSEC and other organizations, have released a white paper titled “Recommendations for an Effective National Mitigation Effort,” highlighting the importance of mitigation efforts aimed at building disaster resiliency across the nation.

This paper was prompted by concerns from the emergency management community on how disasters weigh heavily on economically challenged states. It emphasizes how the long-term effects of successful mitigation plans can prove to be crucial investments for the safety and resiliency of any community.

“Mitigation is the least visible, but perhaps the most important concept that can be used to protect communities from disasters. Mitigation cannot completely eliminate the risk of disasters, but the process of identifying hazards should lead to effective, community-supported measures that can save lives, lower the overall cost of a disaster, and makes communities more resilient,” said James Mullen, Director of the Washington State Emergency Management Division and the NEMA Mitigation Committee chair. “That so many professional associations worked to develop this paper is a testament to their conviction that all-hazards mitigation is essential to effective national preparedness.”

As a contributor to this paper, CUSEC Executive Director Jim Wilkinson stated the importance of defining future mitigation at the local level. “I’m delighted to have been able to provide input to this important document. A solid mitigation study is essential to any substantial risk reduction effort.”

Funded through a cooperative agreement established between NEMA and FEMA, this paper originated from a meeting held in January between partnering organizations from many different sectors concerned with issues surrounding mitigation benefits and challenges.

The white paper is available at the NEMA website at www.nemaweb.org and click the “Mitigation White Paper” link on the NEMA homepage.

DATES TO MARK

Central and Eastern US Earthquake Hazards Meeting – October 28-29, 2009. This USGS led meeting will bring together earthquake hazard investigators and interested parties to present and discuss recent research, to seek input on future research priorities, and to promote planning related to the bicentennial of the 1811-1812 New Madrid earthquakes and to Earthscope related experiments. Call (901)678-4974 for more information.

Conference on Improving Seismic Design Performance of Existing Buildings – December 9-11, 2009. This conference, to be held in San Francisco, California, will provide a forum for the presentation and exchange of new information on the seismic evaluation and seismic rehabilitation of existing buildings. Contact ATC at atc@atccouncil.org for more information.

200th Anniversary of the 1811-1812 New Madrid Seismic Earthquakes - Ongoing throughout 2011-2012. In 2011-2012, there will be events held throughout the central United States observing the 200th anniversary of the great 1811-1812 New Madrid earthquakes. Many organizations will participate in the events, which will include national conferences, earthquake exercises, public outreach events, and more. For more information visit the CUSEC website.

The Central United States Earthquake Consortium is a not-for-profit corporation established as a partnership with the Federal government and the eight member states: Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee; and ten associate member states: Georgia, Iowa, Kansas, Louisiana, South Carolina, North Carolina, Ohio, Oklahoma, Nebraska and Virginia. The Federal Emergency Management Agency provides the basic funding for the organization.

CUSEC’s purpose is to help reduce deaths, injuries, damage to property and economic losses resulting from earthquakes occurring in the central United States. Basic program goals include: improving public awareness and education, mitigating the effects of earthquakes, coordinating multi-state planning for preparedness, response and recovery, and encouraging research in all aspects of earthquake hazard reduction.

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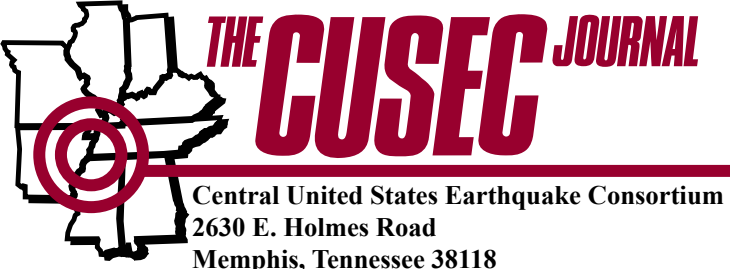
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- American Red Cross
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- Cascadia Regional Earthquake Workgroup
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