

★ Rolla

Preparing for a Significant Central U.S. Earthquake

*Science Needs of the Response
and Recovery Community*

August 12-14, 2008

MISSOURI UNIVERSITY
OF SCIENCE AND TECHNOLOGY
Rolla, Missouri

*Hosted by the U.S. Geological Survey
Mid-Centroid Geographic Science Center
and Missouri University of Science and Technology*

★ Memphis

New Madrid Seismic Zone Conference

Preparing for a Significant Central U.S. Earthquake

*Science Needs of the Response
and Recovery Community*

August 12-14, 2008

MISSOURI UNIVERSITY
OF SCIENCE AND TECHNOLOGY
Rolla, Missouri

Conference Sponsors:

U.S. Geological Survey Mid-Continent Geographic Science Center

Missouri University of Science and Technology

Geology and Land Survey Division of the
Missouri Department of Natural Resources

State of Missouri Emergency Management Agency

St. John's Health System

Society of American Military Engineers, Fort Leonard Wood Chapter

Center for Transportation Infrastructure and Safety

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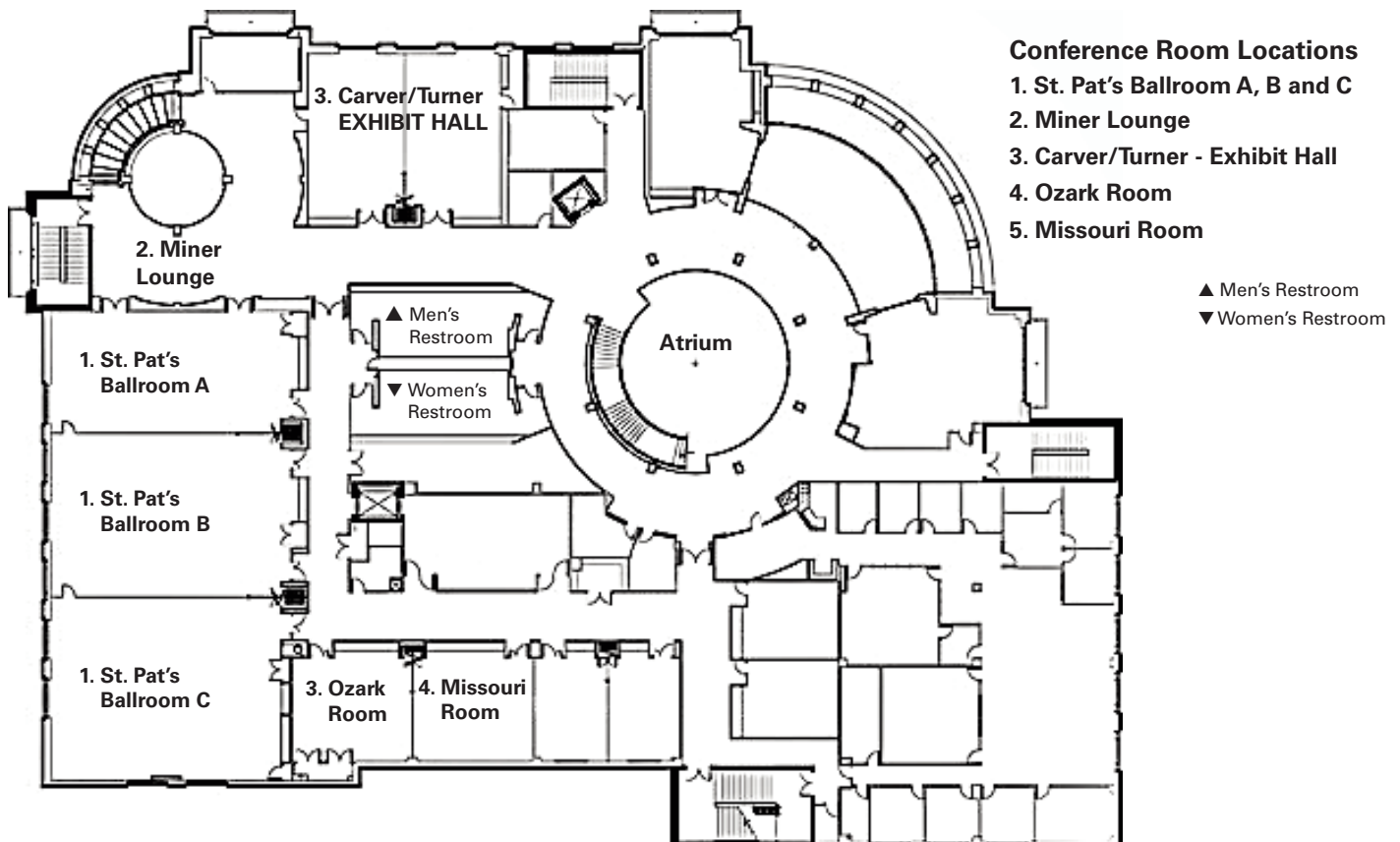
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Conference Facility - Havener Center (2nd Floor)



Conference Overview

Conference Vision

Provide a regional forum for the presentation, exchange of ideas, and potential solutions involved with preparing for a significant central U.S. earthquake.

The conference will open communication with academia, government, non-government agencies and the private sectors to address the current and forecasted needs of the response and recovery community.

Conference Objective

To facilitate relevant science in preparation for a significant central U.S. earthquake similar to the events of 1811-12, the United States Geological Survey Mid-Centroid Geographic Science Center, Missouri University of Science and Technology, Geology and Land Survey Division of the Missouri Department of Natural Resources, the State of Missouri Emergency Management Agency, St. John's Health System, Society of American Military Engineers - Fort Leonard Wood Chapter, and the Center for Transportation Infrastructure and Safety are hosting this three-day conference that will bring together academia, government, non-government agencies and the private sectors to address the current and forecasted needs of the response and recovery community.

Tuesday, August 12, 2008 - Training Opportunities

- Structural Assessment and Visual Evaluation Training
- Community Disaster Response Training
- Using Civil Support Teams (CSTs) For Seismic Event Responses
- The Central Plains EarthScope Partnership (CPEP)

Wednesday, August 13, 2008

During day one, the conference will specifically address the following topics related to a significant seismic event occurring within the New Madrid and Wabash Valley seismic zones:

- Consequences of a major earthquake
- Timing, reoccurrence and probability of the next major event
- Engineering effects and stresses
- Socioeconomic impacts
- Mitigation plans for transportation and infrastructure
- Geological and structural monitoring
- Geologic mapping activities

Thursday, August 14, 2008

Day two will be divided into two tracks to facilitate discussion and input into the needs of the response and recovery community. Presentations will focus on federal and state agency mapping activities and the lessons learned from natural disaster exercises. Both sessions will have a facilitated panel discussion to develop a list of challenges to response and recovery operations that can be supported through relevant science and engineering activities.

Track 1: Science, Maps and Engineering

- USGS geospatial data coordination within a new mapping discipline
- Age of current USGS topographic maps and what was done following Hurricane Katrina
- Missouri's plan for a new map product
- New data for a new age, LIDAR
- Plans and map needs of the federal, state and department of defense response and recovery community

Track 2: Federal and State Response and Recovery

- An overview of the 2007 Spill of National Significance Exercise
- State Emergency Management Agency statewide exercise lessons learned
- SEMA science needs
- FEMA science needs
- SEMA tabletop exercise employing tactics, techniques and procedures following a significant seismic event

Welcome



*Emmitt C. Witt, P.H., Director
U.S. Geological Survey
Mid-Continent Geographic
Science Center*

On behalf of the U.S. Geological Survey Mid-Continent Geographic Science Center, Missouri University of Science and Technology, the Geology and Land Survey Division of the Missouri Department of Natural Resources, the State of Missouri Emergency Management Agency, St. John's Health System, Fort Leonard Wood Chapter of the Society of American Military Engineers, and the Center for Transportation Infrastructure and Safety, welcome to "Preparing for a Significant Central U.S. Earthquake: Science Needs of the Response and Recovery Community" Conference.

Over the past year, your conference sponsors have been working hard to coordinate an event that aims to provide a regional forum for the presentation, exchange of ideas, and potential solutions involved with preparing for a significant central U.S. earthquake. Though unfortunate, the 5.2 magnitude earthquake of April 18, 2008, near Evansville, Indiana, should serve as a wakeup call to us all. And though the precise date and time of a future seismic event in the Wabash Valley/New Madrid Seismic Zone is virtually unpredictable, we know the threat of a serious earthquake is real. It will strike unannounced at possibly the worst time of the year and inflict an aftermath more devastating than anything we have experienced in our lifetime.

The preparation and coordination between all of the Region's stakeholders is critical. Thank you for being a part of this exciting event. We look forward to working together in the future on this important endeavor.

Sincerely,

A handwritten signature in black ink, appearing to read "Emmitt C. Witt". The signature is stylized and cursive.

*Emmitt C. Witt, P.H.
Conference Chairperson*

Conference Organizers

United States Geological Survey

Emitt Witt

Conference Chairperson
Director, Mid-Continent Geographic Science Center

Ray Fox

National Spatial Data Infrastructure Liaison for Missouri

Russ Caton

Supervisory Cartographer

Jeff Spooner

Geographer

Mark Newell

Public Affairs Manager

Krista Karstensen

Hydrologist

Buddy Schweig

Supervisory Geologist

Carl Shapiro

Economist

Missouri University of Science and Technology

David Hoffman

Associate Research Engineer

Steve Tupper

Fort Leonard Wood Liaison Officer (LNO)

J. David Rogers

Karl F. Hasselmann Missouri Chair in Geological Engineering, Department of Geological Engineering

Rick Stephenson

Professor, Department of Civil Engineering

Neil Anderson

Professor, Department of Geology and Geophysics

Sue Turner

Director, Distance and Continuing Education

Genda Chen

Professor, Department of Civil Engineering; Interim Director of the Center for Infrastructure Engineering Studies

Laura Grentz

Coordinator, Distance and Continuing Education

Ronaldo Luna

Associate Professor, Department of Civil, Architectural and Environmental Engineering

Missouri State Emergency Management Agency

Steve Bessemer

State Earthquake Program Coordinator

Allen "AJ" Lehmen

State Exercise Officer

Jim Pasley

SEMA Area Coordinator

Missouri Department of Natural Resources – Division of Geology and Land Survey

Joe Gillman

Director, Division of Geology and Land Survey and State Geologist

Larry Pierce

Geologist

Illinois State Geological Survey

Bob Bauer

Engineering Geologist

Central U.S. Earthquake Consortium

Brian Blake

Earthquake Program Coordinator

Federal Emergency Management Agency

Sue Evers

Natural Hazards Program Specialist/Earthquake, Dam Safety, HAZUS, DHS/FEMA Region VII

Consulting Geologist

Phyllis Steckel

Consulting Geologist

Innovative Emergency Management, Inc. (IEM)

Andrea Dargush

Consultant, Disaster Management Planning

Greg Reed

Senior Planner - Missouri New Madrid Seismic Zone Catastrophic Planning

Keynote Speakers



*U.S. Representative
Jo Ann Emerson,
Serving the Eighth
District of Missouri*

U.S. Representative Jo Ann Emerson

U.S. Representative Jo Ann Emerson has served the Eighth Congressional District of Missouri since 1996. She is the first female Republican to represent the state in the U.S. Congress, where she is a strong proponent for U.S. agriculture, strategic development of domestic energy resources, and health care reforms aimed at reducing costs for patients and taxpayers. In addition, Representative Emerson's congressional district includes the entire Missouri portion of the New Madrid Seismic Zone.

By forming partnerships with members of Congress in adjoining states, Representative Emerson started a group in the U.S. House of Representatives to focus on issues of preparedness at the local and governmental levels. As a member first of the House Appropriations Subcommittee on Homeland Security and now the Subcommittee on the Interior, Representative Emerson has worked to raise federal attention to the possibility of a severe earthquake in the New Madrid Seismic Zone. Though unfinished, her work on this subject has gained notice in Washington, DC, as well as in the State of Missouri.

After earning a bachelor of arts in political science from Ohio Wesleyan University in 1972, Emerson pursued an active career in public affairs and grassroots communications. In her professional career, Emerson has served as the Senior Vice President of Public Affairs for the American Insurance Association, Director of State Relations and grassroots programs for the small-business oriented National Restaurant Association, and Deputy Communications Director for the National Republican Congressional Committee.

Currently, Emerson serves as Vice President of the NATO Parliamentary Assembly, a legislative assembly of leaders from NATO member nations which deals with defense capabilities and foreign affairs. She also holds the post of Vice Chair of the Subcommittee on Democratic Governance. In the U.S. House of Representatives, Emerson serves as Vice Chair of the Center Aisle Caucus, a bipartisan group committed to working across party lines. She is also an Honorary and Life Trustee of Westminster College in Fulton, Missouri. A former Girl Scout, Emerson is a leading supporter of the organization in Congress. She is co-chair of the Board of Directors for the Congressional Hunger Center, one of the nation's leading hunger relief organizations. She is also a founding member of the Bipartisan Congressional Retreat, whose mission is to foster better relations in Congress with members from each party. Emerson was recognized as one of the American Bus Association's 2005 Legislators of the Year and earned the 2005 Committed Statesperson Award from the National MS Society. Each Thursday morning when Congress is in session, Emerson attends the Congressional Prayer Group, of which she has served as President. In February of 2005, Emerson chaired the National Prayer Breakfast in Washington.

Keynote Speakers

Major General King E. Sidwell

Major General Sidwell was born July 13, 1950, in Sikeston, Missouri. He received a bachelor of science degree in industrial and systems engineering from the Georgia Institute of Technology in 1972. In 1975 he earned a Juris Doctorate in Law from the University of Missouri-Columbia. Major General Sidwell completed a master of strategic studies through the United States Army War College in 2000. His military education includes: Engineer Officer Basic Course, Judge Advocate Officer Basic Course, Judge Advocate Officer Advanced Course, Engineer Officer Advanced Course, Command and General Staff College, Engineer Pre-command Courses, and the U.S. Army War College.

Major General Sidwell was prior enlisted from 1972 to 1974 until receiving his commission on August 10, 1974, upon completion of State Officer Candidate School at the Missouri Military Academy. Major General Sidwell's numerous assignments include: Engineer Reconnaissance Officer, Battalion Executive Officer, Detachment Commander, Group Trial Counsel, Group Operations Officer, Brigade Engineer Supply Officer, Battalion S-3, Group S-1, Environmental Officer, Area Damage Control Officer, Group S-3, Brigade Executive Officer, Chief Military Support Officer, and Director of Maintenance for Headquarters STARC in Jefferson City.

In addition to the above duties, Brigadier General Sidwell served as Company Commander for Charlie Company, 1140 Engineer Combat Battalion (Corps). As a Lieutenant Colonel he commanded the 1140 Engineer Battalion from August 1998 to February 2001. As a Colonel, he commanded the Engineer Brigade, Infantry Division from February 2002 to June 2004. Upon completion of his command assignment with the Engineer Brigade, 35th Infantry Division, he assumed the position of Assistant Corps Engineer, 35th Engineer Brigade (Corps) at Fort Leonard Wood, Missouri, until transfer to the Retired Reserves. He was recalled from the Retired Reserve to become the Adjutant General of the Missouri National Guard, in January 2005.

Major General Sidwell's awards and citation include: Legion of Merit, Meritorious Service Medal (2 Bronze Oak Leaf Clusters), Army Commendation Medal (1 Oak Leaf Cluster), Army Achievement Medal (1 Oak Leaf Cluster), Army Reserve Components Achievement Medal (1 Silver Oak Leaf Cluster and 1 Bronze Oak Leaf Cluster), National Defense Service Medal, Armed Forces Reserve Medal (1 Silver Hourglass Device), Army Service Ribbon, Army Reserve Components Overseas Training Ribbon (Numeral 7), and the Bronze Order of the De Fleury Medal (the Army Engineer Association).

Major General Sidwell's military affiliations include the National Guard Associations (MoNGA, NGAUS, and AGAUS), the Army Engineer Association, the Association of the United States Army, the United State Army War College Alumni Association, and the Military Officers Association of America.

Major General Sidwell's civic and professional affiliations include the American Bar Association, Missouri State Bar Association, American Trial Lawyers Association, Defense Research Institute, Sikeston Area Chamber of Commerce, Sikeston Area United Way Board of Directors, Southeast Missouri Boy Scout Council Board of Directors (past Scoutmaster and District Chairman), Kiwanis Club of Sikeston (Past President and District Lieutenant Governor), and the First United Methodist Church of Sikeston.



Major General King E. Sidwell, Adjutant General Missouri National Guard

Keynote Speakers



*Ronald M. Reynolds,
Director of Missouri
State Emergency
Management Agency*

SEMA Director Ron M. Reynolds

Missouri Governor Matt Blunt named Ronald M. Reynolds Director of Missouri State Emergency Management Agency in January 2005. Reynolds is a native of Central Missouri. He graduated from Lincoln University in Jefferson City, Missouri, with a bachelor's degree in education and later completed a master's degree in management from National University at San Diego, Calif. He retired as a Lieutenant Colonel in the United States Army after a 22-year career.

Reynolds is past Vice President Region VII for the National Emergency Management Association (NEMA) Board of Directors. He is the Secretary-Treasurer for the Central United States Earthquake Consortium (CUSEC) Board of Directors. CUSEC's mission is catastrophic planning and response to a New Madrid seismic event, which would impact Missouri, Arkansas, Illinois, Indiana, Kentucky, Tennessee, Mississippi and Alabama. Reynolds is the Past President of the Downtown Rotary Club, and a Paul Harris Fellow.

Throughout his military career, he served in a variety of staff and command positions and was responsible for logistical operations while in the Netherlands and Germany. He directed a diversified ocean terminal transporting ammunition and sensitive cargo worldwide. His last assignment was ROTC Professor of Military Science at Lincoln University.

After retirement, he joined the Dollar General Corporation's management staff working in distribution. There he managed workload planning, training and resources allocations.

Conference Schedule

Wednesday, August 13, 2008

Main Conference – St. Pat’s Ballroom C, Havener Center

Registration: Havener Center Atrium, 1st Floor (7 a.m. to 8 p.m.)

Time	Event/Session	Speaker/Facilitator/Moderator
8:00 a.m. - 8:45 a.m.	WELCOME	Session Moderator: Emitt C. Witt , P.H., Director, Mid-Continent Geographic Science Center, Rolla, Mo., and Conference Chairperson
	OPENING REMARKS	John F. Carney , Chancellor, Missouri S&T
8:45 a.m. - 9:15 a.m.	KEYNOTE SPEAKER	U.S. Representative Jo Ann Emerson <i>Introduction by Stan Ponce, USGS South Central Regional Executive</i>
9:15 a.m. - 9:45 a.m.	The USGS Earthquake Hazard Program	David Applegate , Ph.D., Senior Science Advisor for Earthquakes and Geologic Hazards, U.S. Geological Survey
9:45 a.m. - 10:00 a.m.	BREAK/EXHIBIT HALL Visit with Vendors (<i>Carver/Turner</i>)	
10:00 a.m. - 10:25 a.m.	Consequences Resulting from a Major Earthquake in the Central U.S.	Dave Rogers , Ph.D., P.E., R.G., Karl F. Hasselmann Missouri Chair in Geologic Engineering, Department of Geologic Engineering, Missouri University of Science and Technology
10:30 a.m. - 10:55 a.m.	Earthquake Hazard (Timing/Reoccurrence/Probability of an Event)	Oliver Boyd , Ph.D., Research Geophysicist, U.S. Geological Survey
11:00 a.m. - 11:25 a.m.	State and Regional Impact of Central U.S. Earthquakes on the Physical Infrastructure	Amr Elnashai , Ph.D., Director of the Mid-America Earthquake Center
11:30 a.m. - 11:55 a.m.	Resilience, Response and Recovery: Societal Components of Catastrophe	Dr. Arleen Hill , Assistant Professor, Department of Earth Sciences, University of Memphis
12:00 p.m. - 1:15 p.m.	LUNCH/KEYNOTE SPEAKER Sponsored by Fort Leonard Wood Society of American Military Engineers (<i>St. Pat’s Ballroom A&B</i>)	MG King Sidwell , Missouri National Guard, Adjutant General. <i>Introduction by Steve Tupper, Ft. Leonard Wood Liaison Officer, Missouri S&T; President Society of American Military Engineers, Ft. Leonard Wood Chapter; Session Moderator: Angela B. Rolufs, Director, Missouri Transportation Institute, Missouri University of Science and Technology</i>
1:30 p.m. - 2:00 p.m.	State-of-the-Art Earthquake Research for Critical Transportation Systems	Phillip Yen , Ph.D., Manager of Earthquake Hazard Mitigation Program

Conference Schedule

Wednesday, August 13, 2008 (Continued)

Main Conference – St. Pat's Ballroom C, Havener Center

Time	Event/Session	Speaker/Facilitator/Moderator
2:00 p.m. - 2:30 p.m.	Missouri Department of Transportation (MoDOT) Earthquake Preparedness	Don Hillis , Director, Systems Management and MoDOT
2:30 p.m. - 2:45 p.m.	BREAK - <i>Afternoon refreshments sponsored by Photo Science (Carver/Turner)</i>	
2:45 p.m. - 3:15 p.m.	Monitoring by the Science Community	Mitch Withers , Ph.D., Research Associate Professor, Center for Earthquake Research and Information, University of Memphis
3:15 p.m. - 3:45 p.m.	Critical Infrastructure Monitoring: The Bill E. Emerson Bridge	Genda Chen , Ph.D., P.E., Professor, Civil Engineering, Missouri University of Science and Technology; Interim Director of the Center for Infrastructure Engineering Studies
3:45 p.m. - 4:15 p.m.	Products and Capabilities of the Science/ Engineering Community for Emergency Response	Bob Bauer , Engineering Geologist, Illinois State Geological Survey
4:15 p.m. - 4:45 p.m.	Lessons Learned From the May 12, 2008, M8.0 Wenchuan Earthquake in China	Genda Chen , Ph.D., P.E., Professor, Civil Engineering, Missouri University of Science and Technology; Interim Director of the Center for Infrastructure Engineering Studies
4:45 p.m. - 5:00 p.m.	CLOSING REMARKS	Emitt C. Witt , P.H., Director, Mid-Continent Geographic Science Center, Rolla, Mo., and New Madrid Seismic Zone Conference Chair
5:30 p.m. - 8:00 p.m.	NETWORKING RECEPTION POSTER SESSION (<i>Miner Lounge</i>)	

Thursday, August 14, 2008

Track 1: Science, Maps and Engineering – Missouri/Ozark Room

8:30 a.m. - 8:45 a.m.	OPENING REMARKS	Session Moderator: Ray Fox , USGS Geospatial Liaison for Missouri
8:45 a.m. - 9:15 a.m.	National Map: Status of National Geospatial Base Data in the Central United States	Kari Craun , Director, U.S. Geological Survey National Geospatial Technical Operations Center
9:15 a.m. - 9:45 a.m.	USGS-State Partnerships and the Future of Standard Quadrangle Maps	Larry Moore , Branch Chief, U.S. Geological Survey Geospatial Information Operations
9:45 a.m. - 10:00 a.m.	BREAK /EXHIBIT HALL (<i>Carver/Turner</i>)	
10:00 a.m. - 10:30 a.m.	Data Sources and Development for the New Madrid Zone in Missouri	Tim Haithcoat , Program Director, University of Missouri Geographic Research Center, Geographic Information Officer for the State of Missouri

Conference Schedule

Thursday, August 14, 2008 (Continued)

Track 1: Science, Maps and Engineering – Missouri/Ozark Room

Time	Event/Session	Speaker/Facilitator/Moderator
10:30 a.m. - 11:00 a.m.	New Data for a New Age	Dean Gesch , Research Geographer, U.S. Geological Survey Earth Resources Observation and Science
11:00 a.m. - 11:30 a.m.	The Land Use Portfolio Model: A GIS-Based Decision Support System for Evaluating Seismic Risk Mitigation Policies	Paul Hearn , Senior Scientist, Eastern Geographic Science Center, U.S. Geological Survey
11:30 a.m. - 12:00 p.m.	Panel/Discussion: Geospatial Information. <i>This panel discussion will focus on current geospatial data sources and applications</i>	Facilitator: Ray Fox , USGS Geospatial Liaison for Missouri
12:00 p.m. - 1:15 p.m.	NETWORK LUNCH/ KEYNOTE SPEAKER (St. Pat's Ballroom A&B)	Ronald M. Reynolds , Director State of Missouri State Emergency Management Agency; <i>Introduction by COL Barry Fowler, United States Northern Command, FEMA Region VII Defense Coordinating Officer; Session Moderator: Larry Pierce, Geologist, Missouri Department of Natural Resources, Division of Geology and Land Survey, Geological Survey Program</i>
1:30 p.m. - 2:00 p.m.	Missouri's Catastrophic Event Planning	Greg Reed , FEMA/IEM, Inc. Sr. Planner (MO) NMSZ Catastrophic Planning Project
2:00 p.m. - 2:30 p.m.	U.S. Army Corps of Engineers Spatial Data and Capabilities	Terri Alberico , Emergency Management Specialist, Mississippi Valley Division, St. Paul District, U.S. Army Corps of Engineers
2:30 p.m. - 3:00 p.m.	BREAK /EXHIBIT HALL (Carver/Turner)	
3:00 p.m. - 3:30 p.m.	The Role of USNORTHCOM in Disaster Response	COL Barry Fowler , United States Northern Command, FEMA Region VII Defense Coordinating Officer
3:30 p.m. - 4:00 p.m.	FEMA Earthquake Response	Dianne Wilson , Sr. Emergency Management Program Specialist, Operations Integration Branch, Disaster Operations Division, DHS-FEMA-Region VII
4:00 p.m. - 4:30 p.m.	Panel/Discussion: Federal and State Government Resources. <i>This panel discussion will focus on the current roles and resources provided by federal and state government agencies</i>	Facilitator: Larry Pierce , Geologist, Missouri Department of Natural Resources, Division of Geology and Land Survey, Geological Survey Program
4:30 p.m. - 4:45 p.m.	CLOSING REMARKS	Larry Pierce , Geologist, Missouri Department of Natural Resources, Division of Geology and Land Survey, Geological Survey Program

Conference Schedule

Thursday, August 14, 2008

Track 2: Federal and State Response and Recovery – St. Pat’s Ballroom C

Time	Event/Session	Speaker/Facilitator/Moderator
8:30 a.m. - 8:45 a.m.	OPENING REMARKS	Steve Bessemer , State Earthquake Program Coordinator, Missouri State Emergency Management Agency
8:45 a.m. - 9:15 a.m.	SONS07 Overview	Paul Hogue , Exercise and Training Officer, CUSEC
9:15 a.m. - 9:45 a.m.	USGS Lessons Learned from SONS07	David Russ , Eastern Region Executive for the Northeast, USGS
9:45 a.m. - 10:00 a.m.	BREAK/EXHIBIT HALL Visit with Vendors (Carver/Turner)	
10:00 a.m. - 10:30 a.m.	SEMA '07 Statewide Earthquake Exercise	AJ Lehmen , State Exercise Officer, Missouri State Emergency Management Agency (SEMA)
10:30 a.m. - 11:15 a.m.	The Role of Missouri National Guard to Civil Authorities Following A Seismic Event	COL Mark McCarter , Missouri National Guard, Strategic Plans, Policy, Joint Training and Exercises
11:15 a.m. - 12:00 p.m.	Panel/Discussion: Federal and State Response and Recovery <i>This panel discussion will focus on federal and state response and recovery efforts and strategies, as well as lessons learned from earthquake exercises</i>	Facilitator: Steve Bessemer , State Earthquake Program Coordinator, Missouri State Emergency Management Agency
12:00 p.m. - 1:15 p.m.	NETWORK LUNCHEON/ KEYNOTE SPEAKER (St. Pat’s Ballroom A&B)	Ronald M. Reynolds , Director State of Missouri State Emergency Management Agency; <i>Introduction by COL Barry Fowler, United States Northern Command, FEMA Region VII Defense Coordinating Officer</i>
1:30 p.m. - 2:00 p.m.	Draft National Catastrophic Earthquake Plan	Michel S. Pawlowski , Chief Catastrophic Planning Branch, Disaster Operations Directorate (FEMA)
2:00 p.m. - 4:30 p.m.	Panel/Discussion: New Madrid Earthquake Tabletop Exercise <i>This tabletop exercise will employ the tactics, techniques and procedures used before and after a significant seismic event.</i>	Presenter and Facilitator: AJ Lehmen , State Exercise Officer, Missouri State Emergency Management Agency (SEMA)
4:30 p.m. - 4:45 p.m.	CLOSING REMARKS	Emitt Witt , Director, Mid-Continent Geographic Science Center, Rolla, Mo.

Poster Session

Poster Session available for viewing throughout conference Miner Lounge, Havener Center

Structures

Development of Composite Dispersion Curves for the Determination of Shear Wave Velocity Profiles
Scott Stovall (spstovll@memphis.edu), Andy Kizzee (akizzee@memphis.edu), and Shahram Pezeshk (spezeshk@memphis.edu), Department of Civil Engineering, The University of Memphis

Analytical and Experimental Studies on Seismic Behavior of RC Bridge Columns Subjected to Combined Loadings
Abdeljelil Belarbi (belarbi@mst.edu), Suriya Prakash Shanmugam (spsg33@mst.edu) and Young-min You (youngmin@mst.edu), Department of Civil, Environmental and Architectural Engineering, Missouri University of Science and Technology

Geotechnical

Geotechnical Earthquake Instrumentation at the Bill Emerson Memorial Bridge, Cape Girardeau, Missouri
Scott M. Olson, PhD, PE, (olsons@illinois.edu), Youssef M.A. Hashash, PhD, PE (hashash@illinois.edu), and Oscar Moreno-Torres (omoreno2@illinois.edu), Department of Civil & Environmental Engineering, University of Illinois at Urbana-Champaign

Surface Wave Velocity Measurements in the Deep Sediments of the Mississippi Embayment
Brent L. Rosenblad (rosenblad@missouri.edu), Jonathan Bailey, and Jianhua Li, Department of Civil Engineering, University of Missouri-Columbia

Promises and Challenges Presented by Data Collected From Outside Sources in Assisting With the Geologic Characterization of the Subsurface for the St. Louis Area Earthquake Hazards Mapping Project
Conor Watkins (cwatkins@usgs.gov), U.S. Geological Survey, Mid-Continent Geographic Science Center, Rolla, Mo.

Sociological Impacts

Community and Regional Resilience Initiative: Revealing Resilience in the Memphis Area
Arleen A. Hill (aahill@memphis.edu), Department of Earth Science, The University of Memphis; Dave Lannom (lannomwdjr@ornl.gov) and Thomas J. Wilbanks (wilbankstj@ornl.gov), Oak Ridge National Laboratory; Sarah Walen (skwalen@merid.org), Meridian Institute

Determining Social Impacts and Needs Assessments Based Upon HAZUS-MH Damage and Loss Estimates
Theresa Jefferson (tjeff@vt.edu) and John Harrald (jharrald@vt.edu), Center for Technology, Security, and Policy, Virginia Polytechnic Institute and State University; Frank Fiedrich (fiedrich@gwu.edu), Institute for Crisis, Disaster, and Risk Management, The George Washington University

Hazards Assessment of St. Charles County – Earthquake and Flood
Amy Krauch (alkdz@mst.edu) and Ronaldo Luna (rluna@mst.edu), Department of Civil, Architectural & Environmental Engineering, Missouri University of Science and Technology

Federal, State and Local Government Agencies

The U.S. Geological Survey 2008 Update to the National Seismic Hazard Maps for the Central and Eastern United States
Oliver S. Boyd (olboyd@usgs.gov), United States Geological Survey - Memphis, Tenn.; Mark D. Petersen (mpetersen@usgs.gov), Arthur D. Frankel (afrankel@usgs.gov), Stephen C. Harmsen (harmsen@usgs.gov), Charles S. Mueller (cmueller@usgs.gov), Russell L. Wheeler (wheeler@usgs.gov), United States Geological Survey - Golden, Colo.

Detailed Surficial Material Geologic Maps Over Existing Columbia Bottoms and Granite City 7.5' Quadrangles Within the St. Louis Area Earthquake Hazard Mapping Project
Scott Kaden (scott.kaden@dnr.mo.gov), Missouri Division of Geology and Land Survey - Rolla, Mo.

MoDOT Earthquake Preparedness
Don Hillis (Don.Hillis@modot.mo.gov) and Rick Bennett (Richard.Bennett@modot.mo.gov), Missouri Department of Transportation

ARCHER- Airborne Real-time Cueing Hyperspectral Enhanced Reconnaissance – Lt Col Carolyn S. Rice
(ricecs@hughes.net), Civil Air Patrol, House Springs, Mo.

Seismic Hazard, Risk, and Mitigation Policy

Seismic Hazard, Risk, and Mitigation Policy in the New Madrid Seismic Zone
Zhenming Wang (zmwang@uky.edu), Kentucky Geological Survey

Multi-State Technical Information Clearinghouse
Jim Wilkinson (jwilkinson@cusec.org), and Norman C. Hester (nhester@cusec.org), Central United States Earthquake Consortium; Theresa Jefferson (tjeff@vt.edu), Center for Technology, Security, and Policy, Virginia Polytechnic Institute and State University; Stephen Patrick Horton (shorton@memphis.edu), Center For Earthquake Research and Information, University of Memphis

The New Madrid Earthquake Scenario
Greg Hempen, PhD, PE, RG (hempen69@sbcglobal.net), URS Corporation, St. Louis, Mo.

Communicating Earthquake Mitigation with the Health/Hospital Community: Moving from Information to Action and Closing the Loop
Sue L. Evers (sue.evers@dhs.gov), and Cathleen Carlisle (cathleen.carlisle@dhs.gov), Federal Emergency Management Agency HQ & Region VII, Kansas City, Mo.

Academic Institutions

The Central Plains EarthScope Partnership (CPEP)
Tina M. Niemi (niemit@umkc.edu), Department of Geosciences, University of Missouri-Kansas City; Stephen S. Gao (sgao@mst.edu), Department of Geological Sciences and Engineering, Missouri University of Science and Technology; Ross A. Black (black@ku.edu), Department of Geology, University of Kansas



Missouri
Department of
Natural Resources



University of
Science & Technology



ST. JOHN'S
POWERFUL MEDICINE



CTIS CENTER FOR TRANSPORTATION
INFRASTRUCTURE AND SAFETY

EXHIBITORS

Please visit our exhibitors during the conference (*Carver/Turner*)

**Worksafe Technologies
Midwest**

<http://www.worksafetech.com/>

Sanborn

<http://www.sanborn.com/>

Western Air Maps, Inc.

<http://www.westernair.com/>

Photo Science

<http://www.photoscience.com/>

**Mid-America
Earthquake Center**

<http://mae.cee.uiuc.edu/>

Merrick & Company

<http://www.merrick.com/>

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