



MIKE BEEBE  
GOVERNOR

**STATE OF ARKANSAS  
DEPARTMENT OF EMERGENCY MANAGEMENT**



DAVID MAXWELL  
DIRECTOR

October 29, 2014

The Honorable Bill Sample, State Senator  
The Honorable John Charles Edwards, State Representative  
Co-Chairs, Arkansas Legislative Council  
c/o Bureau of Legislative Research  
Room 315, State Capitol Building  
Little Rock, AR 72201

Dear Sirs:

Enclosed is the annual Arkansas Earthquake Program report as required per ACA 12-77-107. An electronic version has also been sent to each of you, with a courtesy copy to Ms. Marty Garrity, Director of the Bureau of Legislative Research.

Please do not hesitate to contact me if I or my staff may be of further assistance.

Sincerely,

A handwritten signature in blue ink, appearing to read "David Maxwell".

David Maxwell  
Director and State Homeland Security Advisor

To the Co-Chairs of the Arkansas Legislative Council:

The Arkansas Department of Emergency Management (ADEM) hereby reports the following activities of the Arkansas Earthquake Program as they relate to specific requirements in accordance with ACA 12-77-107:

**A. Continued assessment from proper scientific authorities of the seismic risk to the state:**

Arkansas Department of Emergency Management (ADEM) maintained its relationship in 2014 with the Arkansas Geological Survey (AGS), Arkansas Archeological Survey (AAS), and State Fire Marshall, through meetings, emails, phone conversations, and correspondence.

- State Fire Marshall attended the summer (July 2014) Arkansas Governor's Earthquake Advisory Council (ARGEAC) meeting and presented updates to the *2012 Arkansas Fire Prevention Code Rules* as found in the *2012 International Fire, Building, and Residential Code*. These updates continue to address seismic provisions.

**B. Training and education of the state and local government officials, employees, and citizens of Arkansas regarding preparation and protective measures that can be taken before, during, and after an earthquake:**

Arkansas Department of Emergency Management (ADEM) hosted a variety of courses in 2014 that focused on pre and post seismic issues. Below is a complete list of classes offered by the state to all citizens, government officials and employees.

- October 25, 2013 – ATC 20 Post Earthquake Safety Evaluations; this course was held in Fayetteville, AR
- November 7, 2014 – ATC20 Post Earthquake Safety Evaluations; this course was held in Baxter County, AR
- July 24, 2014 – Federal Emergency Management Agency (FEMA) E-74 Non- Structural Earthquake Mitigation Course; this course was held in North Little Rock, AR
- July 24, 2014 – Federal Emergency Management Agency (FEMA) – Train the Trainer Earthquake Home and Business Safety; this course was held in North Little Rock, AR

**C. Planning coordination, guidance, and assistance to all state and local government officials in preparation for, response to, and recovery from earthquakes:**

*Joint Information Center Testing*

A plan was written in 2014 for a Joint Information Center (JIC), identifying how the Center would operate during a catastrophic earthquake event. This plan was thoroughly exercised during the Capstone 14 Exercise, a multi-state exercise. This plan was developed to help provide a common message among agencies to disseminate to the public.

*INSPARK (INSPEct ARKansas)*

The earthquake program began work in October 2014 on a program to better utilize building inspectors after a catastrophic earthquake. This included the creation of a new database, execution of multiple classes to help certify building inspectors and creation of concept of operations plans for how to identify and deploy teams of inspectors after an earthquake, and identification of a board of directors for the program. This program is still in the planning phases but is expected to be implemented and functional by October 2015.

#### Arkansas Aviation Operations Plan Revision

Arkansas Department of Emergency Management's Technical Planner conducted a full review and revision of the Arkansas Aviation Operations Plan to gain situational awareness since the response community will rely heavily on aviation reconnaissance following a catastrophic earthquake. This revision includes a series of meetings with associated aviation partners throughout the state to ensure a common operating picture and standard operating procedures during emergency air operations. Memorandums of Understanding (MOU) were developed with airports around the state to use their facilities in the event of a catastrophic earthquake. Listed below are the airports which have current signed MOUs with the Arkansas Department of Emergency Management (ADEM):

- Walnut Ridge
- Baxter County
- Batesville Regional
- Fort Smith Regional
- Little Rock National
- Stuttgart Municipal
- Memorial Field (Hot Springs)
- Northwest Arkansas Regional
- Boone County Regional
- Blytheville International
- Newport Municipal
- Russellville Regional
- Drake Field (Fayetteville)
- Searcy Municipal

#### Arkansas Voluntary Organizations Active in Disaster (VOAD) Mass Feeding and Sheltering Plan Revisions

The Natural Hazards Planner at Arkansas Department of Emergency Management (ADEM) partnered with Voluntary Organizations Active in Disaster (VOAD) to establish two separate task forces regarding mass feeding and sheltering plans after a catastrophic earthquake. These task forces were created based on lessons learned in the Voluntary Organizations Active in Disaster (VOAD) community following the Capstone 14 Exercise. The mass feeding plan was completed and implemented in October 2014 as Arkansas Voluntary Organizations Active in Disaster Standard Operating Procedure. This plan has not yet been tested. The sheltering task force came together for the first time in September 2014 to identify issues within the sheltering plan. This task force plans to meet monthly until the plan is updated and functional.

#### **D. Coordination of earthquake program activities with comparable agencies of the federal government and other states:**

##### Capstone 14 Exercise

Capstone 14 Exercise was conducted June 16-19, 2014, in direct support of Presidential Policy Directive 8 and the National Preparedness Goal. Participants included the Central United States Earthquake Consortium (CUSEC), eight states (including Arkansas), Federal Emergency Management Agency (FEMA), Arkansas Army National Guard, private sector partners,

multiple state agencies and county government officials. This exercise focused on the results documented in the Improvement Plan of National Level Exercise 2011 (NLE11). Capstone 14 Exercise was the first repeat of a multi-state exercise to demonstrate progress of the work completed since a previous exercise. This exercise brought together groups across multiple Federal Emergency Management Agency (FEMA) Regions and proved that individual states can coordinate and execute a multi-state exercise with little or no federal involvement.

There were different objectives being tested at local, state, national, and private sector levels. At the local level, counties tested communications capabilities, sheltering and feeding of disaster survivors, and logistical difficulties of impaired infrastructure. Plans continue to be reviewed and updated based on these focus areas. Difficult discussions remain on how to best support survivors when basic public services (gas, water, electricity) will be severely impacted for significant periods of time.

The four primary focus areas at the state level were communications, operations of the Joint Information Center (JIC), operations of the State Emergency Operations Center (SEOC), and integration of the private/public partnership.

Communications progress has been made by the development of Arkansas National Guard Teams being deployed to the most impacted counties to provide communications capabilities with central Arkansas until normal communications can be reestablished. We also utilized the Radio Amateur Civil Emergency Services (RACES – Ham Radio) to share information from locals to the State. During National Level Exercise 2011 (NLE11), we had an issue with satellite communications “bleeding over” from one channel to another. This was tested and, after initial problems were resolved quickly, the satellite phones worked well.

Joint Information Center (JIC) plans were tested during the Capstone 14 Exercise to identify how well agencies could work together and create a common message to disseminate to the public. During National Level Exercise 2011 (NLE11), the Joint Information Center (JIC) was a theory which did not function properly in reality. In the Capstone 14 Exercise, the Joint Information Center (JIC) was established at Phillips Armory on Camp Robinson. Connectivity was available for phones, satellite television, and information technology equipment. The Joint Information Center (JIC) was staffed by public information officers from Arkansas Department of Environmental Quality, Arkansas Highway and Transportation Department, Arkansas Forestry Commission, Federal Emergency Management Agency (FEMA), Arkansas Department of Emergency Management (ADEM), and Arkansas National Guard. This demonstrated extensive progress in having a fully operational Joint Information Center (JIC). Areas in need of improvement were identified, and better communication links from the State Emergency Operations Center (SEOC) to the Joint Information Center (JIC) are currently high priority. We are also striving to identify ways to contact disaster survivors when traditional means of communication are disrupted.

State Emergency Operations Center (SEOC) policies and procedures were tested during the Capstone 14 Exercise. We conducted two 6-hour shifts to demonstrate twenty-four hour coverage. Although we were successful for the week in providing staffing, we realize that in a real event extended twelve hour shifts will take a toll and additional staffing (outside of the Arkansas Department of Emergency Management) will be necessary. State Emergency Operations Center (SEOC) operations in a real world catastrophic earthquake will require at

least six months continuous staffing in the State Emergency Operations Center (SEOC). The high rate of staff turnover within the Arkansas Department of Emergency Management (ADEM) makes it very difficult to keep a fully trained staff.

The State Emergency Operations Center (SEOC) tested the use of the Emergency Management Assistance Compact (EMAC) and identified how surrounding states could help the citizens of Arkansas in a catastrophic earthquake. Over 200 Mission Ready Packages were created and geo-located around the state. At this time, we are working to identify auto-triggers to dispatch these resources if a real event were to happen. This will ensure resources are where they are needed in a timely fashion. With these auto-triggers, resources will be automatically dispatched and can be stopped if the need for the resources is already met.

On the state level, another key component of Capstone 14 Exercise was the integration of the private/public partnership into the State Emergency Operations Center (SEOC). Since National Level Exercise 2011 (NLE11), a Private Sector Working Group has been established with twenty-four members receiving information at least monthly. A Private Sector Board has been developed and utilized in multiple exercises in WebEOC (incident management software in the State Emergency Operations Center). WebEOC technology gives private sector partners a way to interact and share information, and to receive information regarding the incident. Procedures continue to be refined to make this process mutually beneficial. The “whole community” approach to responding and recovering from disasters involves the private sector, government, and private non-profit organizations working collaboratively to achieve complete recovery. A brochure has been developed to share with other private sector partners in hopes of increasing the number of entities involved. Representatives from Wal-Mart and AAMSCO have been trained to work in the State Emergency Operations Center (SEOC) or remotely from their respective companies to coordinate the information flow from private sector to the State Emergency Operations Center (SEOC).

On the national level, objectives for Capstone 14 Exercise were across the eight-state region that makes up the New Madrid Seismic Zone. Objectives included developing a Common Operating Picture (COP), sharing information via Military Auxiliary Radio Services (MARS) in both voice and data transmission, utilization of Mission Ready Packages (MRP) and the Mutual Aid Support System (MASS) to share resources through the Emergency Management Assistance Compact. The Military Auxiliary Radio Services (MARS) communications piece tested our ability to transfer documents from the state to the Federal Emergency Management Agency (FEMA) Region VI, across all eight states and to Federal Emergency Management Agency (FEMA) Headquarters. This capability will be necessary to process Emergency Management Assistance Compact requests from other states during a time of limited communications.

Arkansas worked with multiple states in developing a Common Operating Picture (COP) to identify an Essential Elements of Information board. This board provided emergency management personnel with a quick way of obtaining information on 18 essential elements of information including: waterway transportation; road transportation; rail transportation; transportation fuel sources; air transportation; staging areas; shelters; points of distribution; Joint Reception, Staging, Onward-movement, and Integration (JRSOI) sites; injuries and fatalities; hospital status; evacuation status; communication status; area command locations;

water grid infrastructure; private sector infrastructure; natural gas infrastructure; and electric grid infrastructure.

The geographic information system utilized in association with the 18 essential elements of information gives a graphical representation of the status of critical infrastructure and resources across the eight-state region. Standards will have to be agreed on for future use among the states, but the geographic information system has great value in a multi-state disaster situation.

Mission Ready Packages (MRP) and the Mutual Aid Support System (MASS) combine to provide a nationwide database of National Incident Management (NIMS) typed resources and the contacts required to request them. The information is available to all impacted states. This is the first time a national system has been developed and utilized. The database continues to grow, even after the exercise.

Arkansas plans to conduct another multi-state exercise in 2017 to build on the valuable lessons learned from this exercise and from National Level Exercise 2011 (NLE11).

#### Mutual Aid Support System/Mission Ready Packages

Arkansas Department of Emergency Management (ADEM) worked with other Central United States Earthquake Consortium (CUSEC) states on the Mutual Aid Support System (MASS) tracking of Mission Ready Packages (MRP). Mutual Aid Support System (MASS) was developed by the state of Kentucky to track Mission Ready Packages (MRP) specific to different response and recovery operations. Mission Ready Packages (MRP) are organized, developed, trained and exercised prior to an emergency or disaster. They are developed by resource owners or providers and coordinated through state emergency management agencies. Mutual Aid Support System (MASS) will provide emergency management agencies with real-time tracking of resource inventory and allow states to utilize other states' inventory systems. This system was utilized during the Capstone 14 Exercise. At this time, it is estimated that over 200 Mission Ready Packages (MRP) are geo-located throughout the state of Arkansas and ready to be utilized in the event of a catastrophic earthquake. Additional Mission Ready Packages (MRPs) are continually being identified, and Arkansas is working to identify auto-triggers for deployment of these packages. Auto-triggers will allow resources to be automatically dispatched to ensure timely delivery and adequate resource support at the disaster site.

#### Essential Elements of Information

Tennessee created an Essential Elements of Information (EEI) board that was utilized in the Capstone 14 Exercise. This board was updated to show power outages, road closures, fatalities, and etcetera. This board identified specific county and state resources that may be compromised due to the impact of a catastrophic earthquake. The Essential Elements of Information (EEI) board's objective was to provide a multi-agency Common Operating Picture between states and other jurisdictions. Continued updates will make this board more user-friendly in the future.

#### Private Sector Coordination

Arkansas has worked diligently over the past year to create a relationship with key stakeholders within the private sector. Through this relationship building, we have partnered with industries (like Wal-Mart) to identify what types of resources could be provided to the

State of Arkansas during a catastrophic earthquake response. Private sector partners have gained visibility in the State Emergency Operations Center (SEOC); now representative from that community have the opportunity to exercise their capabilities virtually and provide feedback to our emergency operations center.

#### Arkansas Governor's Earthquake Advisory Council

In 2014, the Arkansas Governor's Earthquake Advisory Council (ARGEAC) met for their bi-annual meetings:

- January 30, 2014 in Jonesboro, Arkansas
  - Keith Kittinger from CenterPoint Energy provided a presentation on *Expected Impacts, Assessments and Restoration on Natural Gas Systems in the New Madrid Impact Area*
  - R.A. Bauer from the Illinois State Geological Survey provided a presentation on *The Wabash Valley Seismic Zone and the 2008 Mt. Carmel Earthquake*.
  - Arkansas Department of Emergency Management (ADEM) presented the Arkansas State University Science, Technology, Engineering, and Math (STEM) Earthquake Suitcase to be utilized as a teaching aid to students in schools around Northeast Arkansas.
- July 18, 2014 in Jacksonville, Arkansas
  - Chris King from the United States Department of Agriculture (USDA) provided a presentation on the Seismic Risk to Natural Resources Conservation Service (NRCS) Watershed Structures in Northeast Arkansas.
  - Arkansas Governor's Earthquake Advisory Council (ARGEAC) separated into four working groups to help address issues within safety, mitigation/engineering, education and response areas of the earthquake hazard.

#### Emergency Management Assistance Compact

Arkansas Department of Emergency Management (ADEM) participated in utilizing the Emergency Management Assistance Compact (EMAC) during Capstone 14 Exercise. Emergency Management Assistance Compact (EMAC) is a program that allows states to fill the requests of their neighboring states with a cost-share or lower cost benefit than obtaining the resource from the federal government. Several hundred requests for assistance were filled using this process in the Capstone 14 Exercise.

#### Interstate Emergency Response Support Plan

In October of 2013, Arkansas's State Emergency Operations Center (SEOC) Exercise included bringing staff from Oklahoma's Department of Emergency Management to shadow Arkansas Department of Emergency Management (ADEM) employees. As a result, Oklahoma's Department of Emergency Management employees will be able to support Arkansas's State Emergency Operations Center (SEOC) in the event of a catastrophic earthquake through mutual aid. There continues to be a working relationship between the State Emergency Operations Centers (SEOC) to ensure reciprocal support in large scale disasters.

#### ShakeOut

The Arkansas Earthquake Program aligned with the majority of the United States for the ShakeOut Earthquake Exercise in 2014. This drill allows people in homes, schools, businesses, and other organizations to practice what to do during an earthquake and improve

preparedness using the “Drop, Cover and Hold On” methodology. This year’s exercise was held on October 16<sup>th</sup> at 10:16 am. We had 65,216 participants in the state of Arkansas which fell into the following categories:

- 39 individuals and families
- 1,204 childcare centers and pre-schools
- 57,937 K-12 students
- 494 local government workers
- 2,915 state government workers
- 207 federal government workers, including military
- 630 businesses
- 25 hotels or lodging facilities
- 1,001 healthcare workers
- 120 senior facilities
- 268 non-profit organization workers
- 240 preparedness workers/organizations
- 12 youth organizations
- 76 unidentified participants

#### Additional Coordination Activities

Arkansas Department of Emergency Management (ADEM) participated in several other meetings regarding interstate coordination. Below is a list of notable conference calls, presentations, and meetings.

- May 21-22, 2014 – National Earthquake Program Manager’s meeting in Denver, CO
- Capstone 14 Exercise Related Activities
  - October 18, 2013 – Capstone Conference Call
  - October 21-25 2013 – Pre-Capstone Meeting in Nashville, TN
  - October 31, 2014 – Capstone Discussion
  - November 4-5 , 2013 – Resource Allocation Mutual Aid Support System Workshop in Little Rock, AR
  - December 12, 2013 – Capstone Communications call
  - December 16, 2013 – Capstone Conference call
  - January 13, 2014 – Capstone Communications Call
  - January 28, 2014 – Arkansas Mid-Planning Conference
  - February 24, 2014 – Capstone Conference Call
  - February 25, 2014 – Capstone Planning Meeting
  - March 10, 2014 – Capstone Conference Call
  - March 17, 2014 – Capstone Planning Meeting
  - March 24, 2014 – Capstone Conference Call
  - April 7, 2014 – Capstone Planning Meeting
  - April 17, 2014 – Capstone Arkansas Final Planning Conference
  - April 22, 2014 – Central United States Earthquake Consortium (CUSEC) Final Planning Conference
  - May 12, 2014 – Capstone Planning Meeting
  - May 15, 2014 – Capstone Private Sector Call
  - May 20, 2014 – Capstone Conference Call
  - June 2, 2014 – Capstone Conference Call



- June 6, 2014 – Capstone Conference Call
- 2014 –Earthquake Program Manager (EQPM) participated in monthly Central United States Earthquake Consortium (CUSEC) conference calls
- 2014 – Earthquake Program Manager (EQPM) worked with Central United States Earthquake Consortium (CUSEC) and Public Information Officers to participate in the Central United States ShakeOut Exercise on October 16, 2014.

**E. The dissemination of information to the public, especially to Arkansans living near the New Madrid Fault, pertaining to earthquake hazards, protective measures, seismic resistance in building construction, appropriate actions to be taken before, during and after an earthquake, and other matters the Arkansas Department of Emergency Management (ADEM) shall determine to be necessary or appropriate to educate, inform, and equip citizens in this state to deal with any earthquake:**

- March 20, 2014 – Presentation provided to Piggott High School
- August 21, 2014 – Presentation to the Chamber of Commerce in Batesville
- September 5, 2014 – Presentation to the Science, Technology, Engineering & Math (STEM) Directors for the State of Arkansas
- October 11, 2014 – Presentation and demonstration given at the Arkansas State University Science Fair
- October 21, 2014 – Presentation given to approximately 20 ROTC Cadets at Ouachita Baptist University in Arkadelphia
- 2014 – Provided updates and training announcements to the Arkansas Governors Earthquake Advisory Council
- 2014 – Earthquake Program Manager (EQPM) updated the Arkansas Department of Emergency Management (ADEM) Earthquake Webpage to reflect current trainings happening around the state regarding earthquakes.

**Recommendation for Improvement**

Due in large part to the efforts put forward by the administrators of the Arkansas Earthquake Program, in conjunction with the Central United States Earthquake Consortium (CUSEC) and the Federal Emergency Management Agency (FEMA), many Arkansas citizens have become aware of the potential threat posed by the New Madrid Fault System. However, there is still room for improvement in the area of general citizen awareness of the earthquake risk as it pertains to the entire state. It is therefore recommended that a continued emphasis be placed on citizen education through initiatives and programs aimed at primary and secondary schools and to the general public.