



ASA HUTCHINSON
GOVERNOR

**STATE OF ARKANSAS
DEPARTMENT OF EMERGENCY MANAGEMENT**



A.J. GARY
DIRECTOR

October 25, 2016

The Honorable Bill Sample, State Senator
The Honorable David Branscum, 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. This report is being provided in an electronic version; a print version may be provided upon request.

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

Sincerely,

A handwritten signature in black ink, appearing to read "A.J. Gary".

A.J. Gary
Director and State Homeland Security Advisor

To the Co-chairs of the Legislative Council:

In accordance with the House Bill 2032 amending Act 711 the Arkansas Department of Emergency Management (ADEM) hereby reports the following activities of the Arkansas Earthquake Program as they relate to specific requirements of the bill:

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

In 2016 ADEM maintained its relationship with the Arkansas Geological Survey (AGS), Arkansas Archeological Survey (AAS), and State Fire Marshall, through meetings, email and phone correspondence.

- State officials from all of the above listed agencies attended the Arkansas Governor's Earthquake Advisory Council (ARGEAC) meetings in February and July 2016.
- The Arkansas Department of Emergency Management and the Arkansas Geological Survey have had multiple joint-meetings, including one in December, two in January, and one in May 2016. Key topics of discussion have included: trigger points, clearing house concepts, the Emergency Management Assistance Compact (EMAC) processes and information sharing. Meetings are scheduled to happen quarterly to continue to discuss current seismic risk and response coordination.

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:

In 2016 ADEM hosted a variety of courses focused on post seismic building assessment. Below is a complete list of classes offered by the state to all citizens, government officials and employees.

- February 11, 2016 – Hosted an ATC 20, Post-Earthquake Building Assessment course in Jonesboro, AR at Arkansas State University.
- March 16, 2016 – Hosted an ATC 20, Post-Earthquake Building Assessment course in Little Rock, AR at Arkansas Electric Cooperatives Corporation.
- April 22, 2016 – Hosted an ATC 20, Post-Earthquake Building Assessment course in Fayetteville, AR at the University of Arkansas.
- September 16, 2016 – Hosted an ATC 20, Post-Earthquake Building Assessment course in Jacksonville, AR at the Police and Fire Training Center.

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

Rehearsal of Concepts (ROC) Drill

The Rehearsal of Concepts Drill is a tabletop exercise that is held on an as needed basis to de-conflict any overlapping response efforts at the state-level for a New Madrid type event. This year, the drill was held at the Post Headquarters on Camp Robinson and had participation from multiple state agencies, FEMA, FEMA Region VI state, voluntary organizations active in disaster, and private sector organizations who will respond to a catastrophic event. The intent of this exercise was to determine the areas in which different agencies/entities will stage their resources and personnel in the event of a catastrophic event. The results of this drill will assist the Arkansas Department of Emergency Management and FEMA Region VI with upcoming planning efforts regarding the New Madrid Seismic Zone.

INSPARK (INSpect ARKansas)

In October of 2014 the earthquake program began working on a program to better utilize building inspectors after a catastrophic earthquake. This included the creation of a new database, the 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. This program successfully tested their call down and notification system as well as personnel accountability standards in March of 2015.

In 2016, the Central United States Earthquake Consortium (CUSEC) adopted a program created by ESRI to collect information that can be conveyed to the State Emergency Operations Center during disaster. The "Collector App" was successfully tested and integrated into INSPARK training in 2016 and is used as the primary means of data collection during trainings and real-life events.

INSPARK is currently serving as a model program for other member states of the Central United State Earthquake Consortium (CUSEC) to develop their programs. The Arkansas Department of Emergency Management participated with the Missouri SAVE Coalition in a collaborative exercise in October 2015 to help promote building inspection programs in the Central United States. Since then, Arkansas has served on planning committees and as an informational point of contact to other states, such as Mississippi and Kentucky, who are working to build their own programs. In May 2016, the Earthquake Program Manager visited Biloxi, Mississippi to provide a presentation to the citizens of Mississippi on how they can become involved in a volunteer building inspection program.

In 2015 a survey was issued by the State of Arkansas to all states with a building inspection program that identified a gap between the number of inspectors available in one state versus the projected number of inspectors needed after a catastrophic incident. To fill this gap, in July 2016, the Central United States Earthquake Consortium has created Mission Ready Packages for large groups of building inspectors to be moved from state-to-state through the Emergency Management Assistance Compact. This capability will be tested in June of 2017.

Arkansas Air Coordination Group

To gain situational awareness following a catastrophic earthquake, the response community will rely heavily on aviation reconnaissance. ADEM's Technical Planner conducted a meeting with the Arkansas Air Coordination Group to de-conflict response operations that may take place after a catastrophic earthquake. This meeting included associated aviation partners throughout the state to ensure a common operating picture and standard operating procedures during emergency air operations are achievable and meet the needs of all parties involved. Memorandums of Understanding (MOU) have been developed with airports around the state to use their facilities in the event of a catastrophic earthquake. Listed below are the airports which have signed MOU's with the Arkansas Department of Emergency Management:

- 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
- Jonesboro Municipal

Arkansas Voluntary Organizations Active in Disaster (VOAD)

The Natural Hazards Planner at ADEM partnered with 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 VOAD community following the most recent multi-state earthquake exercise, Capstone 14. The task forces are still working to create a functional template for the plans. Meetings continue to be held to complete these plans.

In addition to these planning initiatives, the Arkansas Voluntary Organizations Active in Disaster have partnered with the National Center for Missing and Exploited Children to serve as one of three pilot programs in the United States to develop a disaster reunification plan for children who are separated from their parent or caregiver as a result of disaster.

The Arkansas Department of Human Services is the lead agency for this effort in the State of Arkansas with support from the Arkansas Department of Emergency Management and others.

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

Mutual Aid Support System/Mission Ready Packages

ADEM worked with other CUSEC member states on the Mutual Aid Support System (MASS) tracking of Mission Ready Packages (MRP). MASS was originally developed by the state of Kentucky to track MRP's specific to different response and recovery operations and has now been modified and incorporated into the Emergency Management Assistance Compact Operating System (EOS). MRP's 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. MASS will provide emergency management agencies with real-time tracking of resource inventory and allow states to utilize other states' inventory systems. Arkansas is working to identify auto-triggers for the deployment of other FEMA Region VI states' identified packages which will allow resources to be automatically dispatched to ensure timely delivery and adequate resource support at the disaster site.

Arkansas has held multiple workshops to create Mission Ready Packages made of resources available around the state. As these packages are identified, they are being placed into the MASS system for other states to use. In addition to state resources, the Arkansas Geological Survey is working nationally to create Mission Ready Packages for geologists and other seismic related professionals to respond after a catastrophic earthquake.

Essential Elements of Information

In October 2015, several employees from the Arkansas Department of Emergency Management were trained to use the Essential Elements of Information (EEI) Board. The EEI Board is a tool, designed by our partners in Tennessee who are also threatened by catastrophic earthquake, to provide a common operating picture across multiple agencies, jurisdictions, and levels of government. It resides in the Emergency Management software used by Arkansas and neighboring jurisdictions and it was tested in the Capstone 14 exercise. The EEI Board consolidates information about power outages, road closures, human impacts, compromised infrastructure, etc. It also has a Geographic Information System (GIS) capability to map the data it holds. Visibility of all this information in a well organized, user-friendly format will promote effective coordination of an earthquake response that will undoubtedly have thousands of moving parts. The EEI Board is continually being perfected and is slated to be tested in 2018 during a national level exercise.

Private Sector Coordination

Arkansas has worked over the past year to create a relationship with key stakeholders within the private sector. Through this relationship building, the Arkansas Department of Emergency Management has 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); representatives from the private sector community have the opportunity to exercise their capabilities virtually and provide feedback to our emergency operations center.

Arkansas Governors Earthquake Advisory Council

In 2016 the Arkansas Governor's Earthquake Advisory Council (ARGEAC) met for their bi-annual meetings:

- February 12, 2016 in Jonesboro, Arkansas
 - Mr. Brooks Booher from the Arkansas Highway and Transportation Department provided an overview of priority clearance routes that will be addressed by the Arkansas Highway and Transportation Department following a large-scale earthquake.
 - ARGEAC separated into 4 working groups to help address issues within safety, mitigation/engineering, education and response areas of the earthquake hazard.
- July 22, 2016 in Beebe, Arkansas
 - Dr. Clinton Wood and Dr. Gary Prinz from the University of Arkansas provided information on case-studies on response efforts from other catastrophic earthquakes around the world. In addition to this, information was provided on how to create more sustainable structures that will promote life safety and infrastructure integrity during disaster.
 - ARGEAC separated into 4 working groups to help address issues within safety, mitigation/engineering, education and response areas of the earthquake hazard.

National Earthquake Program Manager's Meeting and National Earthquake Conference

The Arkansas Department of Emergency Management participated in the National Earthquake Program Manager's (NEPM) Meeting held May 2-6, 2016 in Long Beach, California. In December 2014, the Arkansas Earthquake Program Manager was named the National Earthquake Program Chairperson. The role of this chairperson position is to plan and coordinate the efforts of this meeting, to serve as the voice of all Earthquake Program Managers across the United States, and promote innovative ideas and practices which can be implemented as national programs. During the May 2016 meeting, the chairperson role was passed to Matthew Wall who is the earthquake program manager for the Commonwealth of Virginia.

In addition to the National Chairperson responsibilities, the Arkansas Earthquake Program Manager (EQPM) was selected to serve on the Executive Planning Board for the National Earthquake Conference. The National Earthquake Conference occurs every four (4) years in conjunction with the Earthquake Program Manager's Meeting and is geared toward providing a whole-community approach to earthquake awareness and resilience.

Emergency Management Assistance Compact

Arkansas Department of Emergency Management participated in utilizing the Emergency Management Assistance Compact (EMAC) during Capstone 14. EMAC is a program that streamlines the process for states to fill the resource requests of their neighboring states quickly. In November 2015 the State of Arkansas had the privilege of sending a public information officer to South Carolina after severe flooding to help coordinate media correspondence in relation to the event.

In 2016, Arkansas participated in multiple EMAC related exercises. The first was held in Sherwood, Arkansas and had participants from around the state. This exercise tested the in-processing function of EMAC personnel. Volunteer personnel were given identification badges, briefed, given specific mission orders, and debriefed by Arkansas personnel. In addition to these exercises, Arkansas also assisted with the National Coordinating State Transition by participating in exercises that gave Louisiana the opportunity to formally respond to EMAC requests.

Other exercises were conducted by Louisiana and Missouri, which tested their capabilities, identifying how each state would obtain resources from the State of Arkansas. Louisiana and Missouri filed paperwork and submitted it to Arkansas requesting resources, at which time, Arkansas processed the paperwork and simulated deployment of the requested resources. Both exercises were highly educational and provided an opportunity for personnel to become familiar with the EMAC software and paperwork format.

Interstate Emergency Response Support Plan

Over the past year Arkansas has worked with Oklahoma to build an Oklahoma capability to support the Arkansas State Emergency Operations Center (SEOC) with personnel. This project began with an exercise in October 2013 which involved bringing staff from Oklahoma's Department of Emergency Management to shadow Arkansas Department of Emergency Management employees. As a result of this exercise, Oklahoma's Department of Emergency Management employees are able to support Arkansas' State Emergency Operations Center in the event of a catastrophic earthquake through mutual aid. There continues to be a working relationship between the Emergency Operations Centers (EOC) to ensure reciprocal support in large scale disasters.

Over the course of the year, Arkansas met with several other states, including New Mexico, Texas, and Louisiana to determine each state's needs within their emergency operations

centers. Visits were done to each emergency operations center and training was done on the standard processes each state uses. There is continued planning to share staff among emergency operations centers and each state is working to hold an exercise to train personnel for this purpose.

Currently, participants from the identified states are working together to identify shortfalls within the states. Once the shortfalls have been identified, other states within the group will have an opportunity to close the gaps. Future plans include developing and training comprehensive teams and resources to fill gaps.

ShakeOut

The Arkansas Earthquake Program participated in the Central United States ShakeOut in 2016. 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 the exercise was held on October 20th at 10:20 am. We had 59,844 participants in the state of Arkansas which fell into the following categories:

- 65 individuals and families
- 1,805 childcare centers and pre-schools
- 51,584 K-12 students
- 1,400 College or University Students
- 148 local government workers
- 2,985 state government workers
- 115 federal government workers, including military
- 727 businesses
- 227 healthcare workers
- 368 non-profit organization workers
- 310 preparedness workers/organizations
- 65 museums, libraries, parks, etc.
- 23 youth organizations
- 7 animal shelters

This year, the Arkansas Department of Emergency Management participated in different preparedness presentations and outreach methods to connect with a wider array of people throughout the state. An increase in participation was seen this year in both childcare facilities and colleges/universities.

Additional Coordination Activities

ADEM participated in several other meetings in regard to interstate coordination. Below is a list of notable conference calls, presentations, and meetings.

- January 19-20 – Participated in the Central United States Earthquake Program Manager’s meeting in Memphis, TN.
- May 2-6, 2016 – Participated in the National Earthquake Program Manager’s Meeting and National Earthquake Conference in Long Beach, CA.
- 2016 – The Earthquake Program Manager participated in quarterly FEMA/State conference calls
- 2016 –Earthquake Program Manager (EQPM) participated in monthly CUSEC conference calls.
- 2016 – EQPM participated on monthly FEMA Region VI conference calls
- 2016 – EQPM worked with CUSEC and Public Information Officers to participate in the Central United States ShakeOut Exercise on October 20, 2016.

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

- October 20, 2015 – Hosted a booth at the University of Central Arkansas Benefits Fair.
- February 19, 2016 – Hosted a booth at Kroger in Little Rock as part of preparedness fair.
- February 23, 2016 – Presented to Valley View Elementary in Jonesboro, AR.
- February 26, 2016 – Presented to Valley View Elementary in Jonesboro, AR.
- March 3, 2016 – Presented at a conference in West Memphis, AR sponsored by the Arkansas Department of Health.
- March 5, 2016 – Hosted a booth at Cabot Home Depot in Cabot, AR as part of preparedness fair.
- April 16, 2016 – Hosted a booth at McCain Mall in North Little Rock for Safety Days.
- June 23, 2016 – Hosted a booth at Lockheed Martin in Camden, AR as part of a preparedness fair for employees.

Recommendation for Improvement

Due in large part to the efforts put forward by the manager of the Arkansas Earthquake Program, in conjunction with the Central United States Earthquake Consortium and the Federal Emergency Management Agency, many Arkansas citizens have become aware of the potential threat posed by the New Madrid Fault System. However, there is still room for improvement. The recommendation of the Arkansas Department of Emergency Management is to continue to provide public outreach to gain citizen involvement and awareness in relation to the New Madrid Fault System. Additional consideration

for improvement would be to identify and obtain additional funding sources to assist with the forward progression of the Arkansas Earthquake Program.