

Today's Agenda

BREAKS at 10:00 and 2:45

- Review Mission Ready Packages (Types I,II,III)
 - Inspector Certification/Qualifications
 - Inspector Training
- Mutual Aid Support System Demo (MASS)
- I-BEAM Briefing
- CAPSTONE-14 Exercise Planning
- ***12:00 LUNCH on site provided by TEMA***
- State Building Inspector Program (*Discussion*)
- Timeline and Next Actions

CUSEC Post-Disaster Building Safety Evaluation Strike Teams

Mission		
TYPE I	TYPE II	TYPE III
<p>Conduct RAPID AND DETAILED SAFETY EVALUATIONS OF COMPLEX BUILDING STRUCTURES</p> <p>(> Three stories, irregular building design, soft story construction, critical facilities, etc.)</p> <p><i>May also conduct Safety Evaluations normally done by Type II and III Teams</i></p>	<p>Conduct RAPID AND DETAILED SAFETY EVALUATIONS and assist Type I teams</p> <p>(Non-critical low rise structures up to three stories)</p> <p><i>May also conduct Safety Evaluations normally done by Type III Teams</i></p>	<p>Conduct RAPID SAFETY EVALUATIONS and assist Type I and II teams</p> <p>(Residential single-family wood framed structures; single story buildings of less than 10,000 square feet)</p>

CUSEC Post-Disaster Building Safety Evaluation Strike Teams

Personnel		
TYPE I	TYPE II	TYPE III
<p>2 PERSONS</p> <p>1 LICENSED STRUCTURAL ENGINEER with 5 yr. experience in design and/or construction and 1 LICENSED ENGINEER OR ARCHITECT</p>	<p>2 PERSONS</p> <p>1 LICENSED ENGINEER OR ARCHITECT and 1 NON-LICENSED ENGINEER OR ARCHITECT or 1 CERTIFIED BUILDING INSPECTOR OR CODE OFFICIAL</p>	<p>2 PERSONS</p> <p><u>NOTE</u>: AT LEAST ONE <u>LICENSED</u> ENGINEER OR ARCHITECT, INTERNATIONAL CODE COUNCIL (ICC) <u>CERTIFIED</u> BUILDING OFFICIAL/INSPECTOR, OR NON-LICENSED <u>ENGINEER OR ARCHITECT</u> IS PREFERRED FOR THIS TEAM</p>

CUSEC Post-Disaster Building Safety Evaluation Strike Teams

Training		
TYPE I	TYPE II	TYPE III
<p>Required FEMA Emergency Management Institute (EMI) Courses:</p> <ul style="list-style-type: none"> •IS-100 Incident Command System (ICS) •IS-700 National Incident Management System (NIMS) •IS-800 National Response Framework (NRF) <p>Choice of building inspector training:</p> <p>Applied Technology Council ATC-20 Post Earthquake Safety Evaluation of Buildings ATC-45 Safety Evaluation of Buildings After Wind Storms and Floods</p> <p style="text-align: center;">or</p> <p>Missouri SAVE training</p> <p style="text-align: center;">or</p> <p>California EMA Safety Assessment Program (CAL SAP)</p>		

Mutual Aid Support System Demonstration

Jeff Sopel

G&H Services International, Inc.

Indiana I-BEAM Response Team

Jim Hawkins

Assistant Director

**Fire & Building Code Enforcement
Indiana Department of Homeland Security**

CAPSTONE-14

Exercise Planning

- Multi-state catastrophic NMSZ earthquake exercise scheduled for June 2014
- Under the direction of the CUSEC Board
- Key dates
 - Feb. 13, 2013 Concepts and Objectives Meeting
 - June 05, 2013 Initial Planning Conference
 - Dec. 04, 2013 Mid-Planning Conference
 - Dec. 05, 2013 Building Inspection Workshop #3
 - Feb. 12-14, 2014 RAW II/MASS Workshop
 - Mar. 04-05, 2014 Final Planning Conference
 - June 16-20, 2014 CAPSTONE-14 Multi-State Exercise

National Overview Event Summary

- Earthquake occurs at **2:00 AM** on **February 7th**
- Event represents rupture of three New Madrid Fault segments simultaneously with magnitude, **$M_w = 7.7$**
- Modeled as sequential rupture of individual segments similar to 1811-1812 series of events over several months
- Severe shaking occurs throughout **western Kentucky, Tennessee, southeastern Missouri, northeastern Arkansas and southern Illinois** with localized amplification of ground shaking due to variations in soil conditions
- Significant ground deformations **likely** in soft soils, particularly near riverbeds
- **Aftershocks** around magnitude 6, $\sim M_w$ 6, **are likely** in the days and weeks after the main shock

National Assessment Overview

- By Day 3, approximately **2,038,000 people will seek shelter** and **3,500¹ truckloads of commodities** (water, ice, MREs) will be **required** to support the at risk population
- Nearly **1.1 millions households are without potable water service**, and over **2.6 million households are without electric power** (Day 1)
- There are approximately **82,500 injuries** and **3,500 deaths**
- Nearly **715,000 buildings** are damaged
- Approximately **3,600 bridges** are damaged

¹25-ton capacity truckloads

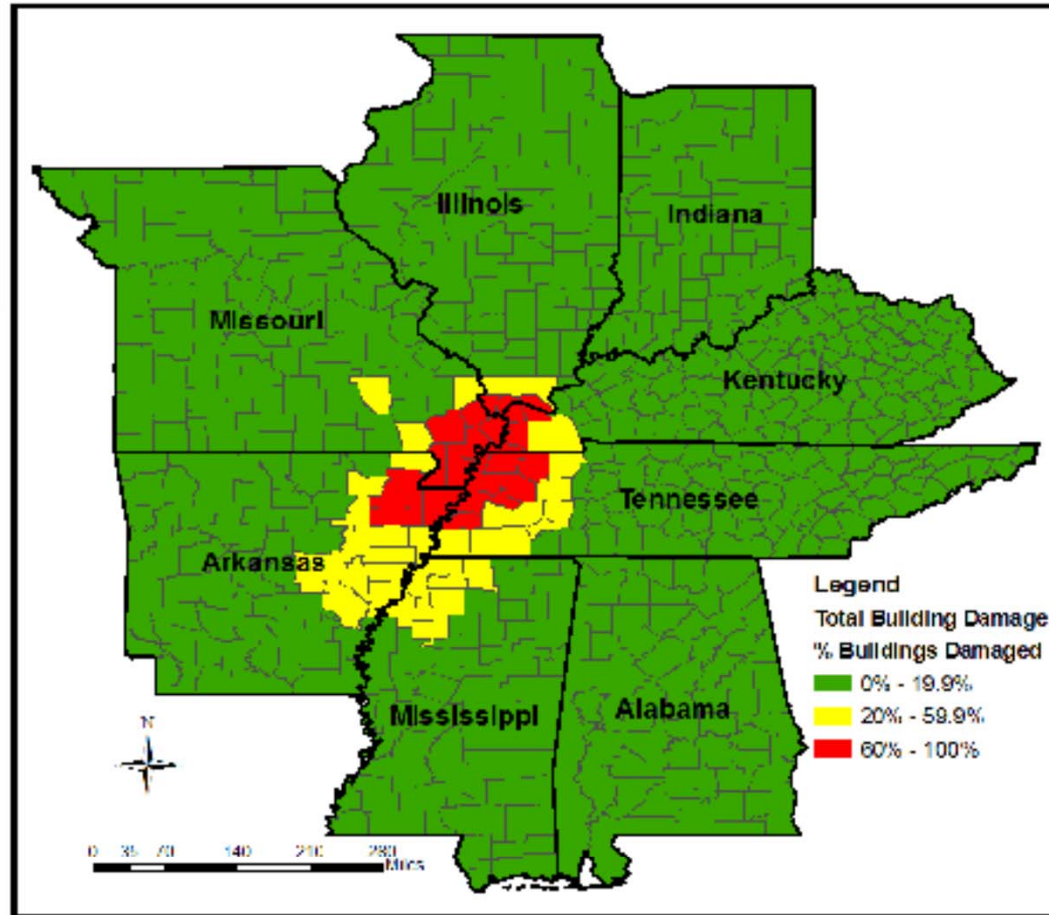
General Buildings

	Total Buildings	Buildings Damaged	URM Damage	Wood Damage
Alabama	1,758,300	15,382	372	3,009
Arkansas	1,325,400	162,235	29,134	68,763
Illinois	3,855,800	44,464	10,120	17,712
Indiana	2,202,000	14,215	2,564	4,796
Kentucky	1,543,900	68,400	9,413	36,116
Mississippi	1,064,000	57,442	4,995	19,856
Missouri	2,101,900	86,838	26,772	40,185
Tennessee	2,126,800	264,198	48,880	163,577
TOTAL	15,777,900	713,174	132,250	354,014

• Though buildings are damaged throughout the entire 8-state region, the most severe damage occurs in western TN, northeastern AR, western KY, the Boot Heel of MO, and southern IL

• Roughly 25 counties are catastrophically damaged, meaning more than 60% of all buildings are damaged (colored red)

• Additionally, almost 40 counties incur substantial damage with 20% to 60% of all buildings damaged (colored yellow)



Building damage is illustrated by the percent of buildings damaged in each county. Counties with more than 60% of buildings damage are critically impacted.

• Footnote what is URM – each state - inspectors

Discussion

CAPSTONE-14 Goals & Expectations

Discussion

MRP / EMAC / MASS Integration

CAPSTONE-14 Exercise Play

- Use exercise injects to manage and consolidate damage reports at the State and Regional levels (COP)
- Determine number of inspectors needed based on exercise damage injects and identify shortfalls***
- Submit EMAC requests to other States (CUSEC or non-CUSEC) based on shortfalls
- Integrate MRPs with EMAC Requests through Mutual Aid Support System
- Conduct one or more State/Regional building inspector deployment exercises

CAPSTONE-14 Exercise Play

- Develop State Inspector Program
- Provide Building Inspector training
- Pre-inspect buildings and identify vulnerabilities and **mitigation** opportunities
- Simulate “Activation” of State Inspector Program
 - Communications w/State EOC
 - Call down procedures
 - Local Deployment
- Conduct one or more local building inspector deployment exercises

Discussion

Other CAPSTONE-14 ideas?

LUNCH

State Building Inspection Program

- Liability Issues and State Legislation
- Recruiting and Retention
- Database Demonstration
- Training/Recertification Recommendations
- Equipment “Go” Kits
- Building a State Program from the Ground Up
- Credentialing / Identification *(Time permitting)*

Liability - EMAC

COVERED if deployed under EMAC to another State

Officers or employees of a party state rendering aid in another state pursuant to this compact shall be considered agents of the Requesting State for tort liability and immunity purposes; and **no party state or its officers or employees rendering aid in another state pursuant to this compact shall be liable** on account of any act or omission in good faith on the part of such forces while so engaged or on account of the maintenance or use of any equipment or supplies in connection therewith. Good faith in this article shall not include willful misconduct, gross negligence, or recklessness.

Source: EMAC Legislation, EMAC Articles of Agreement, ARTICLE VI – LIABILITY. All 50 states and the District of Columbia, Puerto Rico, Guam, and the U.S. Virgin Islands have passed EMAC laws.

Liability – State Law

- **COVERED** if your State has a “Good Samaritan” law or other statutory liability protection for post-disaster volunteers
 - Alabama
 - California
 - Kentucky
 - Missouri <http://www.moga.mo.gov/statutes/C000-099/0440000023.HTM>
 - Tennessee
- **Sample legislation is available**
- **Deputizing as a “Disaster Service Worker” can also offer liability protection**

Recruiting and Retention

- **Professional Organizations**
 - American Institute of Architects (AIA)
 - Structural Engineers Association (SEA)
 - American Society of Civil Engineers (ASCE)
 - American Council of Engineering Companies (ACEC)
 - American Construction Inspectors Association (ACIA)
 - ETC...

- **SAVE and SAP Examples**

Database Demonstration

Training, Recertification and Exercises

- **Recurring Training/Recertification**

- How Often?
- On line? Classroom?
- Testing?
- Who administers, how recorded, should it be noted in MRP?

<http://www.sema.dps.mo.gov/programs/SAVEForm.asp>

- **Exercises**

- Exercise completion is vital part of MRP concept
- Periodic exercise and “activation” review?
- Will disaster response count as exercise completion?

- **Other Training/Exercise Issues?**

Inspector Equipment “Go Kits”

- Needs and Contents
- Who provides Go Kits?
- Does each team keep its own kit?
- Storage, Maintenance, & Accountability?

Costs need to be included in MRP

S.A.V.E. Go Kit Example

1. Strong Plastic Tub with good lid
2. Placards, green, yellow & red.
3. Inspection Forms
4. Sharpies
5. Ink Pens
6. Duct Tape (10 rolls) & Painters' Tape (10 rolls)
7. Staple Guns (5) and staples
8. Clip Boards/Form Holders
9. S.A.V.E. high visibility safety vests
10. Large zip loc bags to hold papers
11. Plastic Sheet Protectors
12. Survey Field Book for deployment log/notes
13. ATC-20 Manual (1)
14. ATC-20 Field Manuals (6)
15. ATC-20 Work Sheets/Forms, blanks for copying and electronic version.
16. Paper and electronic form of the SAVE Assessors' Guide
17. CD or flash drive with various electronic files
18. Incident Command System (ICS) Organization Flow Chart
19. Post-It Notes
20. Sign-In Sheets
21. Memorandum of Understanding (MOU) between S.A.V.E. and the local government
22. Inventory List
23. MoDOT State Highway Map

Building a State Program

- **Adapt Existing Plans**
 - MO SAVE
 - CalSAP
- **Professional Organizations**
 - May take leadership role in State Building Inspector Program
 - Advocate for Legislation
 - Assist with Recruitment and Training

State EMA has Authority over Program


Credentialing / Identification

ID # 40003 Exp: 07/31/14
State of California
**Safety Assessment
Program**




Your Name
Architect - AIA
DSW - Volunteer

ID # 40001 Exp: 07/31/14
State of California
**Safety Assessment
Program**



Your Name
Building Inspector - CALBO
DSW - Local

ID # 40002 Exp: 07/31/14
State of California
**Safety Assessment
Program**



Your Name
Civil Engineer - Caltrans
DSW - State

Timeline

- **June 05, 2013** **CAPSTONE IPC**
- **Oct. 17, 2013** **ShakeOut**
- **Dec. 04, 2013** **CAPSTONE MPC**
- **Dec. 05, 2013** **Workshop # 3**
- **March 04-05, 2014** **CAPSTONE FPC**
- **June 16-20, 2014** **CAPSTONE-14**

Next Actions

- **CUSEC**
 - Compile list of State Inspector Points of Contacts (EMA, SEA, etc.) - March 29, 2013
 - Create Webpage for State/Regional Building Inspector Programs - April 15, 2013

- **States**
 - Submit MRPs to EMAC
(http://www.emacweb.org/index.php?option=com_content&view=article&id=280&Itemid=301) April 30, 2013
 - Work with State Exercise Officer to include Building Inspector Program Activities in CAPSTONE-14 MSEL

Acronyms

- ACEC American Council of Engineering Companies
- ACIA American Construction Inspectors Association
- AIA American Institute of Architects
- ATC-20 Post Earthquake Safety Evaluations of Buildings
- ATC-45 Safety Evaluations of Buildings After Windstorms and Floods
- ASCE American Society of Civil Engineers
- CAL SAP California Emergency Management Agency Safety Assessment Program
- CUSEC Central U.S. Earthquake Consortium
- EMAC Emergency Management Assistance Compact
- FEMA 154 Rapid Visual Screening of Buildings for Potential Seismic Hazards
- I-BEAM Indiana Building Emergency Assessment & Management Team
- ICC International Code Council
- ICS Incident Command System
- MASS Mutual Aid Support System
- NCSEA National Council of Structural Engineers Associations
- NEMA National Emergency Management Association
- NIMS National Incident Management System
- NSPE National Society of Professional Engineers
- RAW II Resource Allocation Workshop II
- SAME Society of American Military Engineers
- SAVE Missouri Structural Assessment and Visual Evaluation Coalition
- SEER Plan Structural Engineer Emergency Response Plan (NCSEA)
- TNSEA Tennessee Structural Engineers Association
- TSPE Tennessee Society of Professional Engineers
- USACE U.S. Army Corps of Engineers