Show Me Mass Care
August 22-26, 2016

2016 National Mass Care Exercise
New Madrid Seismic Zone

About 200 earthquakes per year
Danger in the Central U.S.: New Madrid Seismic Zone

Winter of 1811-12

New Madrid area shaken by a series of the strongest earthquakes in U.S. history (estimated to have been magnitude 7 to 8)

- Damage reported as far away as Charleston, South Carolina, and Washington, D.C.
- Shaking was felt over 5,000,000 square kilometers.
What are the odds?

- 25-40% chance of 6M or larger in 50 years

- 7-10% chance of 7M or larger in 50 years
Impacts of Earthquake

- Collapse of structures
- Collapse of infrastructure
- Liquefaction
What is Liquefaction?

https://www.youtube.com/watch?v=tvYKcCS_J7Y
Liquefaction Map

Displaced population may far exceed MAE Center Estimate of 842,000
This map shows the highest projected Modified Mercalli intensities by county from a potential magnitude ~ 7.6 earthquake whose epicenter could be anywhere along the length of the New Madrid seismic zone.
Planning Assumptions:


- Of the 2,288,445 (2000 Census) individuals residing within the impacted area, 842,002 are expected to be “at risk” by day 3 post-impact.
- Significant impacts to power generation, transmission, and distribution are expected
  - Areas are likely to be without power for up to 6 months
- Older structures that house key businesses or government offices in many communities likely are impacted, slowing the recovery process.
Will They Evacuate???

• According to the MAE Center data, it is anticipated that within the first 72 hours nearly 1 million individuals will attempt to evacuate the impacted area.

• Evacuation will be severely restrained due to the collapse of a significant number of bridges and infrastructure.

• Without implementation of contra-flow, it will take approximately 122 hours (5 days) for this population to evacuate the area using ground assets and personal vehicles.

Remember that since earthquakes are no-notice events, there is little history of large evacuations.

SOURCE: “Impact of Earthquakes on the Central USA” Volume II, Mid-America Earthquake Center, 2009
Situation Overview – Missouri only

- 842,002 displaced individuals (assuming an average of 2.7 persons per household)
- Number of people requiring emergency shelter:
  - Day 3: 237,991
  - 129,191 pets (dogs and cats) requiring shelter
- Potable water service needed (liters):
  - 3 Day Total: 2,706,450
- Food service needed (shelf stable meals):
  - 3 Day Total: 1,804,300
- Ice needed (pounds):
  - 3 Day Total: 7,217,200
# MAE Center vs. DHSS Data

<table>
<thead>
<tr>
<th>Element</th>
<th>MAE Center</th>
<th>MDHSS</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counties Impacted</td>
<td>23</td>
<td>23</td>
<td>MAE Center Data</td>
</tr>
<tr>
<td>Impacted Population</td>
<td>2,288,445</td>
<td>2,288,445</td>
<td>MAE Center Data</td>
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<tr>
<td>&quot;At Risk&quot; Population</td>
<td>842,002</td>
<td>842,002</td>
<td>MAE Center Data</td>
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<tr>
<td>Number of Persons Seeking Shelter</td>
<td>237,991</td>
<td>237,991</td>
<td>MAE Center Data</td>
</tr>
<tr>
<td>Percent Vulnerable Age</td>
<td>23</td>
<td>23</td>
<td>Average of All Counties</td>
</tr>
<tr>
<td>Percent Disabled</td>
<td>23</td>
<td>23</td>
<td>Average of All Counties</td>
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<tr>
<td>Injuries</td>
<td>13,434</td>
<td>92,719</td>
<td>Region C and E</td>
</tr>
<tr>
<td>Level 3 Injuries</td>
<td>10,177</td>
<td>70,240</td>
<td>Require Medical Aid</td>
</tr>
<tr>
<td>Level 2 Injuries</td>
<td>2,897</td>
<td>19,995</td>
<td>Require Hospital Care</td>
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<tr>
<td>Level 1 Injuries</td>
<td>360</td>
<td>2,485</td>
<td>Life-Threatening</td>
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<tr>
<td>Fatalities</td>
<td>686</td>
<td>4,735</td>
<td>Region C and E</td>
</tr>
<tr>
<td>Total Hospital Facilities</td>
<td>208</td>
<td>164</td>
<td>Source: MAE Center/MDHSS</td>
</tr>
<tr>
<td>Total Hospital Beds</td>
<td>27,343</td>
<td>22,031</td>
<td>Source: MAE Center/MDHSS</td>
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<tr>
<td>Hospitals Lost in Regions C and E</td>
<td>7</td>
<td>61</td>
<td>Source: MAE Center/MDHSS</td>
</tr>
<tr>
<td>Hospital Beds Lost in Regions C and E</td>
<td>846</td>
<td>10,715</td>
<td>Source: MAE Center/MDHSS</td>
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</tbody>
</table>
Mass Care – Shelter Required Numbers

- 476 500-person shelters
- 237,991 Cots, Blankets
- 4,559 Toilets
- 17,142 General Shelter Staff (10/1)
- 5,471 Supervisor (33/1)
- 3,974 Medical Trained (100/1)
- Daily Baby Food: 1.8 million jars*
- Total # of diapers (Preemie to 5T): 4.2 million*
- Diaper Wipe Boxes: 15,528 (200 count)*
  - Total Pallets: 3,470*
  - Total Daily Truck Loads = 157*

*Source: National Commission on Children in Disasters
General Concepts – Evacuation

- Localized evacuation will be the responsibility of the local jurisdiction
- Large-scale evacuations will be overseen by the Evacuation Management Team (EMT) from the SEOC
- The EMT is a multidisciplinary team which can support the evacuation efforts, make recommendations to the Unified Command (UC), and coordinate with local jurisdictions
## Evacuation Management Team

<table>
<thead>
<tr>
<th>Agency Represented</th>
<th>ESF-#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Public Safety (Lead)</td>
<td>ESF-13 Law Enforcement</td>
</tr>
<tr>
<td>Public Information Officer</td>
<td>ESF-15 Public Information</td>
</tr>
<tr>
<td>State Emergency Management Agency</td>
<td>ESF-5/ ESF-7 EM/Logistics</td>
</tr>
<tr>
<td>Department of Natural Resources</td>
<td>ESF-10 Hazardous Materials</td>
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<tr>
<td>Missouri Department of Transportation</td>
<td>ESF-1 Transportation</td>
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<tr>
<td>Voluntary Organizations Active in Disaster</td>
<td>ESF-6 Mass Care</td>
</tr>
<tr>
<td>Department of Social Services</td>
<td>ESF-6 Mass Care</td>
</tr>
<tr>
<td>Department of Health and Senior Services</td>
<td>ESF-8 Health and Medical</td>
</tr>
<tr>
<td>Missouri State Highway Patrol</td>
<td>ESF-13 Law Enforcement</td>
</tr>
<tr>
<td>Department of Mental Health</td>
<td>ESF-6 Mass Care</td>
</tr>
<tr>
<td>Missouri Information Analysis Center</td>
<td>ESF-13 Law Enforcement</td>
</tr>
</tbody>
</table>
Overview of the NMCE

- Relatively new event
  - 2016 is 5th exercise
    - Missouri is 3rd host state
  - Designed around catastrophic scenarios
    - Plans to overwhelm/break the systems
  - All 4 FEMA Region VII states will play
Missouri’s Exercise Design

- Major event on the NMSZ
- Scenario begins 3 days post-disaster
  - Ensures focus on mass care/evacuation
Missouri’s NMCE Design: Multiple Levels of Play

- Local play in independent exercises
  - “Rolling Play”
    - Day 1 – Regions C & E
    - Day 2 – Regions I, F & G
    - Day 3 – Regions A, D & H
  - Range of play from tabletop to full-scale
  - Testing evacuation concepts
- ESF-6 and SimCell on SEOC floor
- ESF-8 play
- Task Force play
Missouri’s Exercise Goals

- Testing evacuation concepts
  - Evacuation is not a given, but needs practice
  - Concepts are part of the NMSZ plan
    - Plan is being updated
    - Exercise lessons learned will influence the update

- Testing National Mass Care Task Force concepts
  - Akin to EMAC/Mutual Aid
  - Planning forward for overwhelmed resources
Task Forces

- Include Missouri and national mass care SMEs
- Planning forward for future resources
- Can be back-up for Missouri ESF-6
- Task forces are:
  - Feeding
  - Sheltering
  - Distribution
  - Reunification
- Missouri Evacuation Management Team
  - Also likely to be exercised
Task Force Concept

- Provides a flexible, scalable planning and operational structure to mass care/emergency assistance areas of operation
- Task forces provide structure in large events for SMEs to organize and respond from other areas
- Support planning for 48 hours from NOW and beyond
- Once activated, task force operates per the direction of the State Mass Care Coordinator
Whole Community Support

- **NGO Sector:**
  - Voluntary organizations
  - Faith-based organizations
  - Community organizations
  - Charities
  - Foundations
  - Professional associations
  - Academic institutions

- **Private Sector:**
  - Chambers of Commerce
  - Businesses
  - Other for-profit organizations

- **Public Sector:**
  - Community members

- **Government:**
  - Local
  - State
  - Federal
Evacuation Concepts

- Evacuation Assembly Sites
  - Regions C & E
- Consolidated Assistance Sites
  - Regions C & E
- Emergency Respite Sites
  - Regions F, G, & I
- Evacuee Reception Centers
  - Regions A & D
- Complex shelters
  - Regions A & D
Evacuation Assembly Site

- An EAS is a pre-identified assembly site that is locally operated and used during the initial stages of evacuation
  - Provide temporary assistance to meet basic human needs of evacuees
  - Initiate tracking
  - Move evacuees to the next step in the process
  - Move evacuees to alternate care if required
  - May also serve as a Casualty Collection Site (CCS) where survivors are assembled from ESF #9 US&R operations
Evacuation Assembly Site

- Local evacuations are the responsibility of the local jurisdiction
- EAS will be activated upon determination that evacuation is necessary
- Scope and severity determines the level of activation
EAS Services

- Registration of evacuees, service animals and pets
- Evacuee information collection for family/pet reunification
- Management of unaccompanied minors
- Transportation assistance
- Tracking of transportation assisted evacuees
- Basic first aid
- Food and water
- Basic assistance to self-evacuees who do not require transportation assistance
Consolidated Assistance Sites

- Closest location to impact zone where services will be available
  - “Where the stuff meets the people”
- Consolidates evacuees and services along priority routes
- State and federally supported location
- Evacuees directed and assembled prior to significant evacuation and relocation
- Assessment site for needs of evacuees
- Formal evacuation initiated
Evacuee Assistance Center

Respite Station

Medical Operations

Mortuary Operations
Concept of Operations

- Provide the following services:
  - Evacuee processing and family assistance (to include household animals)
  - Respite (food, water, personal hygiene and short-term rest)
  - Medical Operations
  - Mortuary Operations
Evacuee processing and family assistance

- Begin formal tracking
- Create manifest for buses or other transport
- Initiate formal tracking and transportation for household animals
- Begin reunification services
- Assess and refer evacuees for additional needs:
  - Medical treatment
  - Behavioral health/trauma services
  - Items to accommodate access and functional needs
Respite

- Includes:
  - Food
    - Likely snack foods or shelf-stable meals
  - Water
  - Personal hygiene
    - Ensure accessibility of facilities
  - Short-term rest
Mortuary Services

- Morgue will not be located on-site at CAS
  - Will likely be within the same community
- Victim Information Center may be on-site at CAS
- Begins process of reunifying survivors with deceased loved ones
- May require sheltering at VIC
Medical Operations

- Assessment and triaging of medical conditions
- Determination of next phase of evacuation, based on condition
  - Emergency transport to hospital
  - Treatment on-site
    - Medical Reserve Corps
    - Local medical services
Emergency Respite Site

- Located along primary evacuation routes
- Evacuees may arrive by bus, car, on foot, on bikes or any other mode of egress
- Provides comfort items and supplies to continue evacuation
  - Nutrition – Snacks and water
    - May be delivered in a drive-thru configuration
  - Basic medical care
  - Fuel
  - Basic vehicle repair
  - Short-term rest
  - Care for service animals
- Scope determined by number of evacuees
Evacuee Reception Center
Evacuee Reception Center

- Receive evacuees and direct them to locations for short-term shelter
- Two locations:
  - Kansas City Metro
  - Springfield
- Distribute shelter seeking throughout state, out-of-state
Evacuee Reception Center

- Designed to provide quick response mass care and emergency assistance
- Evacuee needs assessed and appropriate shelter locations identified
- Also provides a central location to leverage government, NGO and private sector resources
- More comprehensive support is available:
  - Hot meals, shelter, medical and behavioral care, psychological, pet sheltering, reunification
ERC Services

- Shelter Assignment
- Transportation
- Accommodation of Pets
- Recreation and Dormitory Services
- Registration
- Confidentiality
- Health Services
- Psychological First Aid (PFA)
- Feeding
Hub and Spoke Concept for Evacuee Reception Center and Shelters
Access and Functional Needs

- All sites must comply with ADA standards
- Must prepare to accommodate:
  - Adults and children with disabilities
  - Residents with behavioral health issues
  - Children
  - Elderly
  - Service animals
- FAST resource can be requested
Questions?