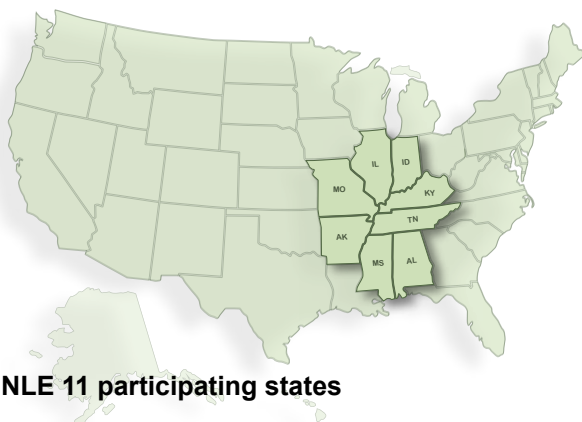


1.0 Introduction and Background

In May 2011, more than 10,000 Federal, state, regional, local, international, nongovernmental, and private sector partners participated in the U.S. Department of Homeland Security (DHS)-led National Level Exercise 2011 (NLE 11). The NLE 11 simulated a catastrophic earthquake in the New Madrid Seismic Zone (NMSZ) to evaluate the Nation's ability to respond to a devastating incident and to help to strengthen the Nation's preparedness through combined emergency response efforts. Eight states (Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee) participated in the NLE 11 with varying participation levels due to real-world incidents occurring in Federal Emergency Management Agency (FEMA) Region IV at the time. The specific objective of the NLE 11 was to assess the ability of the Nation's incident management systems to:

- Respond to and stabilize areas impacted by a catastrophic earthquake within the initial 72 hours;
- Implement critical decisions to ensure effective conduct of lifesaving and life-sustaining mission essential functions;
- Engage the NMSZ Whole Community response methodology—including citizen volunteers from the impacted communities—in immediate catastrophic earthquake response;
- Identify mission-critical capability, resource gaps, and alternative resource solutions; and
- Conduct NMSZ recovery planning activities and tabletop exercises after completion.

At the request of FEMA, the Rural Domestic Preparedness Consortium (RDPC) conducted an examination of the NLE 11 to determine training needs/gaps at the state level as well as to learn to what extent Federal funding has



NLE 11 participating states

been used to fulfill identified needs/gaps with regard to a national catastrophic incident. Further, existing FEMA-sponsored training courses were analyzed to find possible comparisons between existing training needs and relevant course material. The following research brief is a summary of the RDPC's findings.

2.0 Methodology

This study was conducted through research that involved reviews of Federal and state after action reports (AARs), other exercise documents, and interviews with representatives from State Administrative Agencies (SAAs) from participating states. Initial research began in 2012 with general open source Internet research and the utilization of online databases (e.g., Lessons Learned Information Sharing [LLIS]). Following this initial content analysis, the RDPC was granted interviews by four states—Alabama, Arkansas, Indiana and Kentucky—to obtain state-specific information. The interviews addressed the following topics:

- Preparation and exercises completed prior to the start of the NLE 11;
- Information obtained, lessons learned, and training needs observed from NLE 11 participation;
- Specific outcomes from the NLE 11; and
- Specific areas for improvement identified within the national objectives of the exercise.

Data from all sources was tabulated and analyzed in order to identify notable results. FEMA-sponsored training courses were also reviewed to identify relevant courses, where possible, with the associated training needs.

It must be noted, however, that the results presented in this report may need to be validated at the national level as the methods used for this research were based on the following limitations of the exercise:

- Only eight states participated in the exercise;
- Five of the eight states dealt with real-world incidents during the exercise limiting their participation; and
- Many aspects of the exercise required simulated environments.

From the viewpoint of data collection, the RDPC was limited to the data provided in the Federal AAR and two state AARs that focused on national- and state-level outcomes as opposed to local-level outcomes. In addition, only four states elected to participate in the interviews. This study, however, provides strong evidence of gaps that exist among select states that might warrant validation at broader scales.

3.0 Results

3.1 Training Needs Identification

Overall, the RDPC identified 31 specific training needs, nine of which may be considered significant. The nine significant gaps in training are presented in Table 3-1 along with their associated Core Capabilities as defined in the *National Preparedness Goal*. Overall, the majority of training needs identified during the NLE 11 focus on issues surrounding operational coordination, operational communications, and mass care services, all of which are consistent with responding to a catastrophic incident. The most commonly identified training gap/need, however, was effectively utilizing social media to manage, track, and share information during a disaster or other major incident. All SAAs interviewed and Federal documents reviewed expressed a need for this type of training. Further, the use of social media among authorities to manage public information is becoming increasingly important given the widespread use of the technology among citizens. Other common training gaps focused on topics related to sheltering, private and volunteer asset resource management, and emergency operations centers (EOCs).

3.2 Utilization of Federal Funding

Information from the SAA interviews provides evidence supporting the use of Federal funding to fulfill training needs/gaps as well as to address other issues, both before and after the NLE 11. Prior to the NLE 11, SAAs indicated that the following types of activities were funded via Federal funding (e.g., Federal Homeland Security Grant Program, FEMA National Earthquake Hazards Reduction Program [NEHRP] Earthquake State Assistance Program):

- Conducted ICS training, including position-specific training, and earthquake-related training (e.g., *FEMA 154 Rapid Visual Screening of Buildings for Potential Seismic Hazards and ATC 20 Post-Earthquake Safety Evaluation of Buildings*);
- Facilitated multiple state-level exercises in regards to earthquake response; and
- Developed state and local earthquake response plans and templates.

Post-NLE 11, states have continued to utilize Federal funding, including the Federal Emergency Management Performance Grant, to address training and other needs. Examples of these activities include:

- Provided preparedness training to the private sector to support the Whole Community concept;
- Completed necessary upgrades to communications infrastructure and WebEOC services; and

- Trained response personnel, building inspectors/engineers, and emergency managers as well as promoted citizen awareness in order to support the state's earthquake preparedness program.

3.3 Utilization of NLE 11 Outcomes

According to SAAs, several devastating weather-related incidents occurred both pre- and post-NLE 11 in the central United States thereby providing a unique opportunity for emergency responders to apply knowledge, skills, and abilities (KSAs) and lessons learned from the exercise to update emergency operations plans and to conduct additional preparedness activities. Specially, there were three tornado-related incidents that impacted the following NLE 11 participating states:

1. April 27, 2011 – Alabama
2. May 22, 2011 – Missouri
3. March 2-3, 2012 – Indiana

The Alabama SAA indicated that the state benefited from preparation for the NLE 11 (e.g., Resource Allocation Workshop [RAW] and National Tabletop Exercise [NTTX]) during the April 27, 2011 tornado outbreak in the estate. Further, the relationships that were established and training completed during the NLE 11 preparation enabled Alabama to effectively respond during the tornado outbreak.

Less than a month later, the community of Joplin, Missouri was devastated by an Enhanced Fujita scale 5 (EF5) tornado on May 22, 2011. Fortunately, the state officials were able to utilize its preparations and training from the NLE 11 to help coordinate and assist in immediate response efforts after the tornado. Joplin embraced the Whole Community, as the private sector and religious organizations played a large role in the response and recovery efforts. A FEMA External Affairs Specialist in FEMA Region VII stated that Joplin is a great example of the Whole Community approach, saying "it's the best I've seen in a long time."

Similar to Missouri, the Indiana SAA indicated that the state directly applied lessons learned through the NLE 11 during the deadly tornado outbreak in March 2012, which also helped to validate the emergency response plans that were put into place after the NLE 11. Lastly, Kentucky has also utilized lessons learned from the NLE 11 to refine and validate the state's earthquake preparedness plan as well as to refine the state's ice storm preparedness plan.

Table 3-1: NLE 11 Training Needs

Training Needs	Core Capabilities
Effectively utilize social media to manage, track, and share information during a disaster.	Public Information and Warning
Training and planning to achieve communications after a catastrophic incident to ensure that state and local governments can communicate with populations without power.	Operational Communications
Personnel training to staff mass care services (e.g., shelters) for the general, functional needs, medical needs, and pet populations.	Mass Care Services, Housing
Properly identify, and when to relocate to, alternate operational facilities related to mass care services when primary locations are damaged and/or destroyed (e.g., hospitals, shelters).	Mass Care Services, Housing
Distribution of resources obtained from private sector and volunteer organizations.	Operational Coordination, Public and Private Services and Resources
Effectively inventory, deploy, and/or track registered nongovernmental organizations (NGOs) and private search, rescue, recovery, and disaster medical assets.	Operational Coordination, Public and Private Services and Resources
Incident decision support software (e.g., WebEOC) training in state and local emergency operations centers (EOCs) for staff, emergency support function (ESF) partners, and volunteers.	Operational Coordination
Personnel training on how to make more efficient use of local and state EOC space and staffing during catastrophic incidents.	Operational Coordination
Training for amateur (HAM) radio operators, to include National Incident Management System (NIMS) and Incident Command System (ICS), to be an alternate communications channel in the event that primary communications infrastructure is damaged.	Operational Communications

4.0 FEMA-Sponsored Training

FEMA serves the emergency response community by providing various avenues for responders to obtain needed training through the National Training and Education Division (NTED) as well as the Center for Domestic Preparedness (CDP), Emergency Management Institute (EMI), and the National Fire Academy (NFA). The RDPC conducted a comparison of NLE 11 training needs/ gaps to current FEMA training curricula to identify needs/

gaps that may require additional coursework. The results of this comparison are presented in Table 4-1. Please note that the course matching is based on information provided in Federal training catalogs (e.g., course title and description) and no additional verification has been performed by the RDPC. Lastly, the scope of this analysis is limited to FEMA-sponsored training courses.

Table 4-1: Courses Relating to Identified Training Needs

Training Needs	Core Capabilities	Related Courses
Effectively utilize social media to manage, track, and share information during a disaster.	Public Information and Warning	<p>AWR 209 <i>Dealing with the Media: A Short Course for Rural First Responders</i></p> <p>E/L 105 <i>Public Information and Warning</i></p> <p>IS-29 <i>Public Information Officer Awareness</i></p> <p>IS-42 <i>Social Media in Emergency Management</i></p> <p>PER 300 <i>Social Media for Natural Disaster Response and Recovery</i></p>
Training and planning to achieve communications after a catastrophic incident to ensure that state and local governments can communicate with populations without power.	Operational Communications	<p>AWR 301-W <i>Basics of Continuity Planning</i></p> <p>E 969 <i>NIMS ICS All-Hazards Position Specific: Communications Unit Leader (COML) Course</i></p> <p>IS-242 <i>Effective Communication</i></p> <p>IS-247 <i>Integrated Public Alert and Warning System (IPAWS)</i></p> <p>IS-702 <i>NIMS Public Information Systems</i></p> <p>IS-704 <i>NIMS Communications and Information Management</i></p> <p>IS-802 <i>Emergency Support Function #2 – Communications</i></p> <p>MGT 416 <i>Continuity of Government Operations for Rural Communities</i></p>
Personnel training to staff mass care services (e.g., shelters) for the general, functional needs, medical needs, and pet populations.	Mass Care Services, Housing	<p>AWR 192-W <i>Effects of Weapons of Mass Destruction Incidents on Mass Sheltering</i></p> <p>AWR 193-W <i>Effects of Weapons of Mass Destruction on Mass Feeding</i></p> <p>AWR 194-W <i>Effects of Weapons of Mass Destruction on Bulk Distribution</i></p> <p>DHS 094 <i>Community Mass Care Management</i></p> <p>G 108 <i>Community Mass Care Management</i></p> <p>IS-10 <i>Animals in Disasters: Awareness and Preparedness</i></p> <p>IS-11 <i>Animals in Disasters: Community Planning</i></p> <p>IS-806 <i>Emergency Support Function #6 – Mass Care, Emergency Assistance, Housing, and Human Services</i></p> <p>MGT 403 <i>Response Planning for Functional Needs Populations in Rural Communities</i></p>

Table 4-1: Courses Relating to Identified Training Needs (cont.)

Training Needs	Core Capabilities	Related Courses
<p>Properly identify, and when to relocate to, alternate operational facilities related to mass care services when primary locations are damaged and/or destroyed (e.g., hospitals, shelters).</p>	<p>Mass Care Services, Housing</p>	<p><i>AWR 301-W Basics of Continuity Planning</i> <i>IS-546 Continuity of Operations Awareness Course</i> <i>IS-547 Introduction to Continuity of Operations</i> <i>IS-806 Emergency Support Function #6 – Mass Care, Emergency Assistance, Housing, and Human Services</i> <i>MGT 381 Business Continuity and Emergency Management</i> <i>MGT 416 Continuity of Government Operations for Rural Communities</i></p>
<p>Distribution of resources obtained from private sector and volunteer organizations.</p>	<p>Operational Coordination, Public and Private Services and Resources</p>	<p><i>E/L 289 State Volunteer Donations Management</i> <i>IS-244 Developing and Managing Volunteers</i> <i>IS-26 Guide to Points of Distribution</i> <i>IS-702 NIMS Resource Management</i> <i>MGT 339 Resource Inventory Management for Rural Communities</i></p>
<p>Effectively inventory, deploy, and/or track registered nongovernmental organizations (NGOs) and private search, rescue, recovery, and disaster medical assets.</p>	<p>Operational Coordination, Public and Private Services and Resources</p>	<p><i>E/L 289 State Volunteer Donations Management</i> <i>IS-244 Developing and Managing Volunteers</i> <i>IS-288 The Role of Voluntary Agencies in Emergency Management</i> <i>IS-660 Introduction to Public-Private Partnerships</i> <i>IS-662 Improving Preparedness and Resilience Through Public-Private Partnerships</i> <i>IS-702 NIMS Resource Management</i> <i>MGT 339 Resource Inventory Management for Rural Communities</i> <i>MGT 381 Business Continuity and Emergency Management</i> <i>MGT 405 Mobilizing Faith-Based Community Organizations in Preparing for Disaster</i> <i>PER 280 Strengthening Cooperative Efforts Among Public Safety and Private Sector Entities</i></p>
<p>Incident decision support software (e.g., WebEOC) training in state and local EOCs for staff, ESF partners, and volunteers.</p>	<p>Operational Coordination</p>	<p><i>No courses identified; possibly vendor specific and/or dependent</i></p>

Table 4-1: Courses Relating to Identified Training Needs (cont.)

Training Needs	Core Capabilities	Related Courses
<p>Personnel training on how to make more efficient use of local and state EOC space and staffing during catastrophic incidents.</p>	<p>Operational Coordination</p>	<p><i>Integrated Emergency Management Course (IEMC)</i></p> <p><i>IS-775 EOC Management and Operations</i></p> <p><i>MGT 346 EOC Emergency Operations for All-Hazards Events</i></p> <p><i>PER 294 Testing an Emergency Operations Plan in a Rural EOC</i></p>
<p>Training for amateur (HAM) radio operators, to include NIMS and ICS, to be an alternate communications channel in the event that primary communications infrastructure is damaged.</p>	<p>Operational Communications</p>	<p><i>G 251 Amateur Radio Resources</i></p> <p><i>IS 100 Introduction to the Incident Command System</i></p> <p><i>IS 700 National Incident Management System, An Introduction</i></p>

5.0 Conclusion and Recommendations

Upon completion of the NLE 11, the RDPC was tasked with conducting an examination to identify state and local training gaps as well as to determine the extent to which Federal funding has been used to fulfill identified needs/gaps in regards to a national catastrophic incident. The research results identified nine areas that may be considered significant gaps in training. These nine areas focus on issues surrounding operational coordination, operational communications, and mass care services, all of which are consistent with responding to a catastrophic incident. Additionally, the research revealed that Federal funding has been utilized by states pre- and post-NLE 11 to address training needs. Further, states have indicated that they have applied their NLE 11 participatory experiences in responding to actual incidents. Lastly, a review of the existing FEMA-sponsored training courses was conducted, providing evidence that the current Federal courseware may be utilized to fulfill training gaps.

While the results from this research may be used by FEMA and SAAs to structure future training, the findings may also be utilized in broader-scale validation and needs assessment studies. By building upon previous RDPC national training needs studies (see RDPC 2006 and 2009), additional information may be valuable if research was framed around training needs/gaps in relation to a catastrophic incident as presented in the NLE 11 to obtain a more in-depth understanding of the training needs/gaps, especially in small, rural, and remote areas.

Overall, NLE 11 provided participants with a unique opportunity to understand the aftermath of a catastrophic incident without the ramifications of responding to a real-world emergency. The NLE 11 catastrophic earthquake scenario was intended to highlight areas for improvement and the RDPC’s research and SAA interviews provided even more depth into the existing training needs and future training and research needed for responding to a catastrophic incident.

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