



This graphic illustrates the disparity between the NMSZ at-risk population in the high to very high seismic risk states, and the NMSZ at-risk population in those same states that have adopted building codes with seismic-resistant provisions.

**WHEN:**

May 16-19, 2011

**WHO SHOULD PARTICIPATE:**

Organizations with responsibilities in critical infrastructure protection including Federal, State, tribal and local government agencies; owners/operators; nonprofit agencies; academic institutions; nongovernmental organizations; and other critical infrastructure stakeholders such as trade associations.

**BENEFITS OF PARTICIPATING:**

- Learn how to better prepare for an all-hazards event
- Build and foster relationships at the Federal, regional, State, local, and tribal levels
- Practice your business continuity plan
- Increase awareness of how to respond in an emergency
- Protect your bottom line—being prepared will result in less downtime and fewer lost employee work hours

**UPCOMING MEETINGS:**

The NLE 11 Exercise Calendar is continuously updated based on exercise planning and development outcomes. Currently the NLE 11 key dates are as follows:

Key Event	Date
Functional Exercise TTX	May 16-19, 2011
National Recovery Seminar	June 2011
Recovery Exercise TTX	September 20-22, 2011

**QUESTIONS:**

For more information about NLE 2011, contact: [private.sectorNLE@hq.dhs.gov](mailto:private.sectorNLE@hq.dhs.gov)

## Building Codes Protect Public Health

Despite the risk of an earthquake in the New Madrid Seismic Zone (NMSZ), many communities in this region have not taken sufficient earthquake safety measures, in particular, the adoption and enforcement of building codes that produce earthquake-resistant buildings, according to *Building Codes in the New Madrid Seismic Zone*, a report by the Department of Homeland Security’s Federal Emergency Management Agency (FEMA). NMSZ stretches over 5,000 square miles across eight states—Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee—and more than 9 million residents live in this area.

To help businesses, owners, and operators of critical infrastructure, Federal, State, and local government agencies, and others to prepare for a catastrophic earthquake in this region, the U.S. government will conduct its National Level Exercise 2011 (NLE 11) this month to simulate the disastrous nature of an earthquake in the central U.S. region. According to the U.S. Geological Survey (USGS), there is currently a 25 to 40 percent chance, in a 50-year time span, of a magnitude 6.0 or greater earthquake in the NMSZ. NLE 11 will allow private sector participants to practice their emergency management or continuity of operations plans to protect their businesses and employees.

According to FEMA, building implementation with seismic provisions is an additional preparedness effort that can strengthen our Nation’s resilience to natural disasters by enhancing the quality of construction and the ability for structures to endure natural disasters, such as earthquakes. FEMA encourages safer communities having better building codes as an effective mitigation measure to help withstand future disaster damages.

The National Earthquake Hazard Reduction Program—a coordinated effort involving USGS, the Federal Emergency Management Agency (FEMA), the National Science Foundation (NSF), and the National Institute of Standards & Technology (NIST)—is recommending that states and local communities use national model building codes with seismic provisions within the NMSZ. These codes include consensus-based, minimum design requirements to resist seismic and other natural hazards. While code implementation and enforcement produce earthquake-resistant buildings, they do not produce earthquake-proof buildings. These codes are a means to protect people inside the building by preventing building collapse and enabling safe evacuation.

According to a Multidisciplinary Center for Earthquake Engineering Research publication, *The ABCs of Seismic Building Codes in the United States*, “structures built according to code should resist minor earthquakes undamaged, resist moderate earthquakes without sufficient structural damage, and resist severe earthquakes without collapse.” To date, the reduction of potential loss due to earthquakes continues to be an area that needs improvement. The monetary cost to adhere to seismic codes is relatively inexpensive, according to *The ABCs of Seismic Building Codes*. Studies estimate that incorporating seismic building codes adds less than 1 percent to the purchase price of a new home, and from 1 to 2 percent to the total cost of new commercial and industrial buildings. This is a small price to pay

# Building Codes Protect Public Health and General Welfare

(Cont.)

considering building damage is estimated to be \$11.8 billion if a 7.7 magnitude earthquake were to strike the NMSZ, according to *The Impact of Earthquakes in Central USA*, a two-year study conducted for FEMA.

Building code implementation is conducted at the State and local level, but there appears to be a gap between State and local code adoption. The following list summarizes the current building codes in several states within the NMSZ.

- ♦ **Arkansas** adopted a national model code into its State code. The code is mandatory and applicable to all buildings. Local codes are required to comply with State code, and the State only oversees code enforcement for state capital investments.
- ♦ **Illinois** has no statewide mandatory building code in place. Local authorities have jurisdiction over code adoption and enforcement. The Capital Development Board of the State government oversees design and construction of new buildings for schools, universities, and State-owned facilities.
- ♦ **Indiana** has statewide building and residential codes based on national models. The State requires mandatory enforcement of the codes and allows localities to apply more stringent amendments when necessary. A State agency oversees code enforcement for public, commercial, industrialized buildings, and mobile structures.
- ♦ **Kentucky** has implemented national models with amendments specific to the State. These amendments have weakened national-level codes by downgrading the designated seismic design categories to lower levels. The Kentucky Building Code (KBC) is mandatory statewide, and local jurisdictions may not amend the State code. The KBC is applicable to all buildings except farm dwellings and homes constructed under Federal Housing and Urban Development standards.
- ♦ **Mississippi** does not have statewide building codes. Local jurisdictions assume the primary role for building code adoption and enforcement. Mississippi requires all State buildings to meet requirements developed in the 1997 Standard Building Code.
- ♦ **Missouri** depends on local jurisdictions to adopt and enforce their own building codes. The State requires that projects for State-owned facilities be designed in accordance with a national model code.
- ♦ **Tennessee** utilizes a national model, which recently made it a requirement for all new residential construction or change of use to residential effective after October 1, 2010.

Statistics indicate that the NMSZ is lagging behind the Nation in adoption of building codes. Approximately 60 percent of high or very high seismic risk jurisdictions in the NMSZ have adopted building codes with full seismic provisions for commercial buildings, 11 percent for residential buildings, and 10 percent for both commercial and residential buildings, according to FEMA. In comparison, for the Nation, 83 percent of communities have adopted building codes for commercial buildings, 64 percent for residential buildings, and 43 percent for commercial and residential buildings. ■

## NLE PARTICIPATION ESSENTIALS: HAVE YOU COMPLETED THE FOLLOWING?

✓	<p>Sign up for the Department of Homeland Security, Lessons Learned Web site, which can be found at <a href="https://www.llis.dhs.gov">https://www.llis.dhs.gov</a>. Once registered, please subscribe to the channels listed below by e-mailing <a href="mailto:Channels@llis.dhs.gov">Channels@llis.dhs.gov</a> and provide the name of the channel, the reason you are requesting the channel, and your name. Channels you will need to subscribe to are:</p> <ul style="list-style-type: none"> <li>• "National Level Exercise 2011 Channel"</li> <li>• "National Private Sector Working Group (NPSWG)"</li> </ul>
✓	<p>Identify the most appropriate level of play for your organization by choosing one of the following participation options:</p> <ul style="list-style-type: none"> <li>• Full Engagement – Planner and Player</li> <li>• Full Engagement – Simulation Cell (Simcell)</li> <li>• Leadership Discussion Testbed</li> <li>• Self-Directed-Downloadable Tabletop Exercise (TTX)</li> <li>• Virtual Engagement</li> </ul> <p>For a complete description of each participation option, please refer to the March edition of the "NLE 2011 Preparedness Matters" newsletter found at <a href="http://www.llis.dhs.gov">www.llis.dhs.gov</a> or in the FEMA "Private Sector Participation Guide for the National Level Exercise 2011" document also found on the DHS Lessons Learned Web site.</p>
✓	<p>Download and review the Federal Emergency Management Agency (FEMA) "Private Sector Participation Guide for the National Level Exercise 2011." To access the Private Sector Participation Guide, log onto <a href="https://www.llis.dhs.gov/index.do">https://www.llis.dhs.gov/index.do</a>. You must have access to the National Level Exercise 2011 – National Private Sector Working Group (NPSWG) channel. Click on NPSWG General Membership link and then locate NLE 11 Participation Guide 8 Mar 2011. If you don't have access to LLIS, please contact <a href="mailto:Private.sectorNLE@hq.dhs.gov">Private.sectorNLE@hq.dhs.gov</a> or apply directly to <a href="http://www.llis.dhs.gov">www.llis.dhs.gov</a>.</p>
✓	<p>Send your contact information to <a href="mailto:Private.sectorNLE@hq.dhs.gov">Private.sectorNLE@hq.dhs.gov</a>. Please indicate: the desired level of participation, i.e., national or regional/State level; which states are of interest to you to ensure that you are assigned to the appropriate Exercise Planning Team; which of the 18 sectors you represent or are involved with, and other key information needed to design and coordinate your participation in NLE 2011.</p>
✓	<p>Gain access to the Homeland Security Information Sharing Network (HSIN). HSIN is a national secure and trusted Web-based portal for information sharing and collaboration between Federal, State, local, tribal, territorial, private sector, and international partners engaged in the homeland security mission. Membership in HSIN is Community of Interest (COI)-based. To become a member and gain access to NLE 2011 Exercise information, please request access to the critical infrastructure COI. If you need additional information, please contact the Mission Advocate listed as the POC for a particular COI(s), or e-mail the HSIN program at <a href="mailto:HSIN.Outreach@HQ.DHS.gov">HSIN.Outreach@HQ.DHS.gov</a>.</p>