

Missouri quake shakes fears of New Madrid's future

by Cory Davenport, Contributing Writer
June 8 2017 1:15 PM



ALTON - A 2.6 magnitude earthquake Tuesday near Bonne Terre, Missouri, did very little of anything, however, it does act as a reminder of the danger lurking a couple hundred miles to the south - the dreaded New Madrid Fault.

In the winter of 1811-1812, a series of earthquakes approaching 8.0 on the Richter Scale jarred the sparsely inhabited area surrounding New Madrid, Missouri. Reports of that time said the river ran backwards and several areas, which were at one point land, were

swallowed by the deluge caused by the Mississippi River changing its course. The shaking even rang church bells as far away as Boston, Massachusetts, according to witness accounts.

"Because of our geological makeup, and the composition of our soil and bedrock, the waves or shaking are felt for a much larger area than you see on the West Coast," Illinois Emergency Management Agency (IEMA) Public Relations Director Patti Thompson said. "They have a lot more rock underneath them out there, so the quakes are very violent, but much more contained."

An example of Illinois's subterranean makeup causing a large area of shaking occurred in 2008 when a second fault threatening the state, the Wabash Valley Fault Line in Eastern Illinois, released a tremor measuring 5.4 on the Richter Scale. Thompson said she was able to feel the quake in Springfield, Illinois, which is more than 100 miles away from the epicenter.

Although the 2008 quake was relatively small, it was still able to collapse a few brick chimneys and damage a couple brick facades near its epicenter. More importantly, however, Thompson said IEMA received calls from hundreds of miles from the quake - even as far away as Chicago - following the event.

Given that information, Thompson said any major event near the New Madrid Fault Line would likely be felt in a big way throughout the entire state and possibly region. In fact, the agency has been preparing to deal with an earthquake originating from that fault rated at a 7.7 on the Richter Scale, which is exceedingly possible in the future, given past information.

"People from a long-reaching area would feel it," Thompson said. "The earth, when it moves like that, brings a lot of things up and down. What we can do is prepare for the worst case scenarios. While we hope things aren't as catastrophic as our plans, we try to be prepared for the worst."

Thompson said IEMA would deal with geological shifts from a possible quake as they presented themselves. She added the Department of Transportation has protocol dictating they inspect several roads, bridges and other important infrastructure immediately following a quake measuring above 5.0. She said those protocols were done following the 2008 quake.

"They have a plan set in motion," she said. "People run through all the highways and make sure no major portions have cracks or have sunk into the ground. They also check bridges and overpasses. A lot of things affected by transportation are addressed through a plan like that."

While IEMA has worked with local, county, regional and federal agencies to cope with the possible aftermath of such a catastrophic quake, Thompson said each individual person living within the quake zone is invited to take responsibility for their own safety as well.

"We tell people to drop, cover and hold on," Thompson said.

This may sound like an antiquated Cold War drill involving nuclear weapons, but the premise is actually pretty solid in the event of an earthquake. Thompson said, when people feel the shaking, they should immediately drop to the ground to ensure the shaking does not take them to the ground, which could potentially cause even worse injuries.

Once a person has dropped to the ground, they should take cover. That cover should be under a heavy piece of furniture, such as a table or desk. Thompson said people should duck beneath something sturdy enough to maintain its integrity if things from the ceiling start dropping onto it.

The third step, hold on, may not make sense immediately, but a shaking floor will move things with it. Thompson said people taking cover under a table or desk while experiencing an earthquake should hold onto whatever they have chosen for cover, because it may move with the shaking floor, and may even move over an individual not holding tight to it.

Once the shaking has finally stopped, Thompson said people may want to get outdoors. If someone is outdoors when the quake strikes, she said to stay away from large buildings, signage and other objects likely to fall atop people.

She advised to stay outdoors after the shaking, because aftershocks are very likely following major quakes. In fact, the original New Madrid quakes of the early 19th Century came in a swarm of three major ones with countless aftershocks. Given that geological history, such swarms and aftershocks would be incredibly likely following a major quake along the New Madrid Fault Line.

Those tips, among others, can be found at an earthquake safety kiosk currently in Carbondale, Illinois, Thompson said. The kiosk was funded by a grant from the Central United States Earthquake Consortium, which is a regional organization dedicated to earthquake safety. Carbondale and Marion are the two largest Illinois cities, which could be affected by a major New Madrid earthquake in a severe fashion.

Other safety ideas for earthquake-prone areas include: strapping bookcases to a stud in the wall, and securing ceiling fans. Thompson said fastening hot water heaters securely

would also prove extremely beneficial in the wake of an earthquake, especially considering how many of those are connected to natural gas, which could be an explosive situation if left unchecked following a major disaster.

Those tips are some of many, which can be found at www.Ready.Illinois.gov.

Thompson said people need to prepare for a world without telecommunications, texting, electricity, supermarkets and ready access to hospitals following a major quake. She said IEMA has been working on a plan including all of these variables for more than a decade, and is continuously updating it and improving it.

"There has been a lot of integration on the regional and federal level," she said. "We are figuring out what resources can be brought to the table. So much of what we rely on: phones, texting, driving, going to the store - it will all possibly be gone. What if the store is damaged? What if it doesn't have electricity? What about hospitals? There is a whole host of issues, and we have to think of how they will affect people."

As it stands now, earthquakes are not able to be predicted by scientists. Because of this, the threat is one of which people should be perpetually cognizant. Thompson said earthquakes cannot be prevented, either. Because of this, she invites people to be informed about precautions, which may be taken to lessen the danger.

"People say 'there hasn't been a big earthquake in over 100 years, why should we worry about it?'," Thompson said. "There may not be another one. Scientists are pretty sure a big one is likely to happen again in the future, but even if it doesn't, people travel all over the country and the world, and major earthquakes happen all the time. It doesn't cost you anything to learn how to drop, cover and hold on."

Alton, Thompson said, may not be as violently shaken by a possible large New Madrid earthquake as many people fear, however, the damage caused to infrastructure, such as roads, bridges, levees, tunnels and oil pipelines would cause issues for people across the state, region and country for an indeterminable amount of time. Also, if the quake was large enough, the composition of the land could still cause significant damage to the St. Louis Metro Area.