

“EARTHQUAKES”

Part Three

A rolling terror hides under the earth in the New Madrid Fault Zone area, and sooner or later, it will be unleashed.

The earth will tremble and shake, and all along the Mississippi River, water and sand will shoot out of the ground like geysers. Buildings will topple, river bluffs will collapse and hundreds, perhaps thousands, of homes will become uninhabitable after the event.

Experts say, for people who live along or near the New Madrid Fault Zone, it is only a matter of time before a big earthquake strikes.

Emergency Management Officials are now saying that the aftermath of Hurricane Katrina should be a lesson for all of us. For days following a large earthquake, many people will have to fend for themselves. Evacuation to safe locations isn't an option before earthquakes, because they are unpredictable. And leaving the zone of destruction afterward could be difficult, if not impossible.

Is the average citizen ready for an earthquake of a high intensity, the honest answer to this of course is **NO!** So, everyone who lives in or near the New Madrid Fault Zone needs to be prepared to function without a major government cavalry charge for at least 72 hours and possibly for up to a week or longer. These preparations should include water, food, and plans for shelter if left homeless. Preparations should also include medications, communications, portable AM/FM radios, flashlights, extra batteries and a first aid kit. You always hope you never need them, but the day you don't have them is the day you need them. Hurricane Katrina exposed many **FLAWS** in the NIMS Plans that most emergency Management Managers and their teams had written up, so now these Plans and the NIMS is being rewritten. Will these new plans have flaws, will they work? Well, that remains to be seen, but regardless of that, you all need to be as fully prepared as

possible.

According to the U.S. Geological Survey, an earthquake similar to the 1811-1812 events has a one in 25 chance of occurring within the next 20 years. Those odds may make it seem unlikely but don't be fooled into a false sense of security by those figures. Improbable events occur all the time. Hurricane Katrina was an unlikely storm, but it happened.

Large portions of eastern Arkansas and western Tennessee, including Memphis, will see extensive catastrophic damage. During a major earthquake, cracks in the earth will open up, the ground will roll in visible waves, and large areas will either sink or rise. When exposed to seismic waves, buildings constructed on landfill can collapse or sink into the ground, bridges will collapse, portions of roads will disappear entirely as the soft, sandy soil shakes and the heavy roads sink. This process, known as liquefaction of the soil, causes the soil to lose virtually its entire load bearing strength. The results are a quicksand like effect.

Liquefaction occurs primarily in saturated, loose, and fine to medium grained unconsolidated sediments in areas where the ground water table is 50 feet or less below the ground surface. When these sediments are shaken, such as during earthquake, a sudden increase in pore water pressure causes the soils to lose its strength. Liquefaction related effects can also include ground oscillations, lateral spreading, and flow failures. Ground failure caused by liquefaction is expected to cause the major portion of damage in the Mississippi River Embayment Region during the next big earthquake.

The eastern half of Arkansas is covered with alluvial soil which is sometimes hundreds or eve thousands of feet deep. The topography is nearly flat and stretches from the Mississippi River until it meets the rocky, hilly base of the Ouachita foothills in Little Rock. Going north the delta area stretches into Missouri edging the Ozark Mountains and the White and Black Rivers. To the south the delta follows the Arkansas River bottomlands to Pine Bluff and Bayou Bartholomew along the piney woods east of Monticello to Louisiana.

When or if a big earthquake happens in this area, the economic impact will be staggering and felt world wide. Some of the industries in this area are RICE, COTTON, SOYBEANS, CATFISH, WHEAT, MILO, and CORN.

Some of the problems that we will be facing other than the economics' will be Landslides, Flooding from levee and dam failures, ruptures in gas, water and sewage lines, fires, bridges down and the roads may be impassable which will cause you to be unable to evacuate, debris, electrical power failure, communications by telephone will be out, water systems will be down, hospitals will be overloaded with injured victims if the hospital is even operational, many of the injured will have to care for themselves or their loved ones, shelters will become overloaded, gasoline will be unavailable, there will be a shortage of food and water, police protection will be mostly unavailable to the public, sanitation and waste will be a major concern, hazardous materials spills, train derailments and their tanker cars that rupture, Bio-hazards, crime will be on the increase, and help from the outside world will be slow getting onto the affected areas.

Dale Temple, W5RXU, sent me the following information that he received from a gentleman that has been involved in earthquake rescue since 1985. He has been inside 875 collapsed buildings, in 60 countries, has trained rescue teams in several countries and has worked every major disaster in the world since 1985 except for simultaneous disasters. He offers the following 8 tips for earthquake safety: Remember while I am reading these that the man that wrote these tips has been there and seen what happen:

- (1) Most everyone who simply "ducks and covers" when buildings collapse are crushed to death. People who get under object like desk or cars are crushed.
- (2) Cats, dogs and babies often naturally curl up in the fetal position. You should too in an earthquake. It is a natural safety/survival instinct. You can survive in a smaller void. Get next to an object, next to a sofa, next to a large bulky object that will compress slightly but leave a void next to it.
- (3) Wooden buildings are the safest type of construction to be in during an earthquake. Wood is flexible and moves with the force of the earthquake. If the wooden building does collapse, large survival voids are created. Also the wooden building has less concentrated crushing weight.

- (4) If you are in bed during the night and an earthquake occurs, simply roll off the bed. A safe void will exist around the bed.
- (5) If an earthquake happens and you cannot easily escape by getting out a door or window, then lie down and curl up in the fetal position next to a sofa or large chair.
- (6) Most everyone who gets under a doorway when buildings collapse is killed. You ask how? If you stand in a doorway and the door jam falls forward or backward you are crushed by the ceiling above. If the door jam falls sideways you will be cut in half by the doorway. In either case, you will be killed.
- (7) Never go to the stairs. The stairs have a different "movement frequency", they swing separately from the main part of the building. The stairs and the remainder of the building continuously bump into each other until the structure failure of the stairs takes place. The people who get on stairs before they fail are chopped up by the stair treads horribly mutilated.
- (8) Get near the outer walls of buildings or outside of them if possible. It is much better to be near the outside of the building rather than the interior. The further inside you are from the outside perimeter of the building the greater the probability that your escape route will be blocked.

The following web address is one of the best sites that I have found for safety tips and lots of information about earthquakes, also if you will click on the Arkansas link on that page you will find more information.

<http://www.disastercenter.com/earthqk.htm>

Written by Tom Harris, k5wth
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