

How prepared are you for an earthquake?

Government agencies, retailers can reduce damage and loss of life before and after a disaster occurs

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Is your business prepared for an earthquake? There are simple, yet useful hints that your company can follow to better manage this natural disaster. Government agencies and retailers usually brace themselves for situations where there is a major medical accident, an accidental death, loss of inventory, a need for property insurance and safety measures for stored merchandise.

"The last major earthquake in Puerto Rico was in October 1918. At that time, losses amounted to about \$4 million, and 116 people died. Thirty of those people died as a consequence of a tsunami (a tidal wave) near Aguadilla, where waves reached 12 feet high," said Christa von Hillerbrandt, a geologist from the Seismic Network of the University of Puerto Rico's Mayaguez campus.

Dr. Miguel Santiago-Melendez, who has a doctorate in earthquake engineering from the University of California at Berkeley, said: "There are a number of things that are crucial after an earthquake occurs. Puerto Rico must keep an up-to-date inventory of all available nonperishable food and its location. A list of all water and electrical-supply lines should be available. All available private construction-equipment companies that could help reach the areas that are

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severely affected by the disaster should be identified. Traffic routes should be identified beforehand to guarantee that help will get to those areas that really need it."

An accurate inventory helps the government distribute basic supplies. A list of key human resources is also needed, including doctors, nursing staff, emergency crews, fire fighters, police officers and military personnel.

"I don't think Puerto Rico has a survival plan that includes all of those elements. Another concern of mine is that there's no map of the island that identifies the zones susceptible to "soil liquefaction." These are

land areas that could behave as quicksand during an earthquake, risking major infrastructure damage and loss of investment," Santiago said.

Food-service retailers should take preventive measures to secure the shelves on which merchandise is displayed, install lightweight ceilings and store heavier items close to the floor to reduce the likelihood of breakage and major accidents. For cash-and-carry outlets, storage areas should cover stacks of products with a light net to prevent major accidents and excessive loss of merchandise when a major earthquake occurs.

Another word of advice: When buying insurance coverage for earthquakes, make sure the surrounding area and the land underneath the establishment is inspected by a certified engineer.

Puerto Rico is located in an area of seismic activity with five earthquake zones, four of which are susceptible to major earthquakes. There have been about five major earthquakes in Puerto Rico that have caused noticeable damage. The island registers about 350 seismic events every year.

"The most recent significant earthquake was on July 29, 1943, which registered 7.5 on the Richter scale. According to scientific studies, the window for the next major earthquake is between 51 years and 117 years after the last major earthquake in 1918," von Hillerbrandt said.

"Seventy-five years have passed, and we're closer to the upper curve of that window," Miranda said.

"The earth is not like a watch that predicts exactly when an earthquake will take place but, as time goes by, the closer we are to having another major earthquake," von Hillerbrandt said. ■