Feature Story | BY GARY BROWN

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Earthquakes And Aftershocks

With Increased Hurricane Activity, Have They Become the Forgotten Catastrophes?

Charley, Frances, Ivan, Jeanne, Katrina, Rita, and Wilma. Society at large might wonder if these are the latest *American Idol* contestants, or perhaps the newest, most popular names for babies. However, insurance claim professionals correlate these now infamous names with a group of devastating disasters that occurred over two consecutive hurricane seasons. These events justifiably focused the insurance industry on the issues generated by major hurricanes and the utter devastation they can cause. While insurance companies, insureds, and claim professionals are now better prepared than ever for hurricane-related catastrophes, it may be that our industry has turned a blind eye to earthquakes, their effects, and the unique challenges generated by this different but perhaps more devastating catastrophe risk. The question is, have we become captives of our most recent conversation?

Just the Facts

How could earthquakes rival the damages from this latest and apparently unending series of storms? Earthquakes have the potential to cause at least as much — if not greater — distress to commerce than hurricanes, both in terms of building structure and business operations, particularly if an earthquake event of significant magnitude strikes a Pacific Rim metropolis. Of the major recent temblors, the 6.7 magnitude Northridge, Calif., earthquake was responsible for 60 deaths, 9,000 injuries, and more than $40 billion in damages. The Kobe, Japan earthquake had a magnitude of 6.8, caused 5,530 deaths, 37,000 injuries, and more than $100 billion in economic losses. Estimates for the still-pending Katrina, the deadliest U.S. disaster ever, include approximately 800 deaths and more than $80 billion in damage.

The tsunami that struck the Indian Ocean islands with an epicenter off Sumatra, Indonesia was caused by an undersea earthquake. Over 186,000 people died and the economic damage is still being calculated. Thus, the risk and devastation caused by an earthquake can be every bit as significant as even the most severe hurricane, especially given the suddenness with which a temblor occurs.

The perils and dangers created by earthquakes are generally well known both to the general public and to claim professionals, but the actual frequency and potential severity are not. The U.S. Geological Survey estimates there are 500,000 detectable earthquakes across the world each year; 100,000 of those can be felt, and about 100 cause measurable damage.

Alaska is the most earthquake-prone state; it experiences a 7.0 magnitude earthquake almost every year, and an 8.0 magnitude or greater on average every 14 years. However, because of its sparse population, few are usually affected. In populous Southern California, it is estimated some 10,000 earthquakes occur annually. Western Washington State, sitting just east of the massive Juan de Fuca undersea fault, has been considered long overdue for a major event.

However, earthquakes are not solely a West Coast phenomenon, contrary to popular belief. In fact, from 1975 to 1995 there were only four states that did not suffer any earthquakes at all: Florida, Iowa, North Dakota, and Wisconsin. And for you historians, the New Madrid, Mo., earthquake of December 1811 is considered to be the most powerful to have ever occurred in the U.S., with an estimated severity of 8.0 on the Richter scale.

Kinds of Damage

Hurricanes usually provide quick and measurable physical damage indicators. Most hurricane-generated conditions are visible and allow for prompt and straightforward estimate preparation and damage quantification. Earthquake damages, though, typically are the opposite. A building often can appear undamaged on the surface, only to have significant damage behind walls, internal finishes, and roof coverings.

Here's an example. A multi-story wood frame office building, originally constructed in the 1950s, was initially thought to have escaped any damage during the 1994 Northridge earthquake in Los Angeles. Several weeks after the earthquake, and with the building in full operation, an elevator became wedged in its shaft. Engineers conducted a detailed destructive investigation, only to discover the entire wood frame had cracked and that the building was in process of collapsing. This otherwise non-claim eventually was adjusted as a total loss of several million dollars. This example, while somewhat unusual, underlines the need for a thorough and creative approach when addressing a potential earthquake claim.

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Earthquake incidents, particularly those of a severe nature, often trigger code changes. These code changes frequently impact future construction activities of all types, including repairs to those buildings damaged by earthquakes irrespective of what coverage may be available. Depending on this policy wording and the extent of ordinance of law coverage available, the cost of repairs may significantly exceed the stated value of the building and/or its equipment. For insured risks with business-interruption coverage, along with all the usual factors that serve to extend the loss, the period of resto-

ration may be further delayed as a result of permit issues due to local building officials being overwhelmed and/or stalled as a local jurisdiction evaluates its overall plan check criteria.

Finally, a significant earthquake often has a negative impact on a local area economy, particularly in the realm of tourism, which generally serves to increase business-interruption claims and develop interesting and challenging coverage arguments relative to the frequent "loss of market" scenario.

Putting a Plan in Place

The most vexing problem claim professionals deal with is to decide how much preparation (read: money) our industry and individual organizations should allocate in anticipation of earthquake catastrophe. Let's take look at three options: none, some, and a lot.

Organizations and claim professionals serving rural, inland, non-Pacific Rim geography may with some comfort choose the "none" option, but with the realization that they limit their effectiveness in responding to any out-of-area earthquake events.

For the "some" option, organizations and professionals with risks in areas with earthquake history, or identified potential, need to have a written and understood plan at a minimum, and would be better served by a plan with at least some training built in. Organizations with global risk and responsibility must choose the "a lot" option, which entails both earthquake planning and recurrent training. Because there are regular and recurring earthquake events internationally, global risk and global claim service providers usually have already seen and dealt with the aftermath of earthquakes. Through necessity, they have developed plans and have staff claim professionals with earthquake experience in the geographic locals within which they are based.

Our obligation as claim professionals is to anticipate, rather than to react, to both ordinary and catastrophe events and losses. We need to view catastrophe events in the long-term historical perspective, remembering that over the years earthquakes have been equally if not more devastating than hurricanes. A strong earthquake occurring in a major Pacific Rim city such as Seattle, Los Angeles, or Tokyo could cause economic loss and damage equal to or greater than that caused by Hurricane Katrina. Even St. Louis is not totally immune.

Earthquake losses are different than hurricane losses because they are often less visible and more difficult to adjust to the satisfaction of all parties to the claim. Organization, pre-event planning, identification of skilled outside resources, and training are essential to effectively manage earthquake losses.

There is every possibility of one or more major earthquake losses in the not-too-distant future. The issue for claim professionals today is whether or not they are prepared to function effectively when the inevitable loss, or a series of losses, occurs. ■

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Earthquake Certified

So you've decided to check your earthquake preparedness inventory. Here are some small and large tips gathered from Gary Brown's past industry experience to help you out.

1. It is essential to have written procedures and training for in-house and field staff that are regularly updated to comply with existing law.
2. Build a panel of qualified adjusting, engineering, accounting, and legal experts.
3. In some states, earthquake certification may be required for all individuals involved in the claim response, including in-house examiners. Be sure your staff meets this certification.
4. Be aware of code interpretation issues and the large potential for exacerbated repair costs. Don't rely solely on policy valuation clauses restricting liability to codes in force at the time of loss. A smart plaintiff may be able to get this wording defeated.
5. Expect significant business-interruption losses, loss of market, and permit-delay induced claims.
6. Develop a basic understanding of when a crack is earthquake damage or not. Familiarize yourself with the concept that horizontal and vertical cracks often are not earthquake induced, and that diagonally oriented cracks often (but not always) are. Be sure to check for pre-existing conditions, particularly in concrete. Dirt or paint inside a crack is often indication that it is old, particularly if the paint in the crack is a different color than that on the rest of the wall.
7. Learn the benefits and limitations of epoxy, which is a perfectly viable repair method in certain cases.
8. Plan for the possibility of hazardous material treatment and/or encapsulation to complete even the most basic repair.
9. Be proactive and research atypical sources for data on a structure's pre-loss condition. That includes condition surveys completed as part of a title change, historical print media coverage on specific local landmarks, and previous claim files (earthquake or not) that may provide additional insight into the type and scope of damage being compiled.
10. Use all public records available. Most professionals are unaware there are now more than 8,000 seismology stations attached to buildings, with more constantly being added. These machines provide localized ground-movement data, which can be critical information for a claim professional to obtain when analyzing an earthquake claim.

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