

# Ho-hum, a new warning about earthquakes

**Pete Golis, Santa Rosa Press Democrat, 3-14-15**

It qualifies as the most cataclysmic event in the history of Sonoma County. On the morning of April 18, 1906, the earth moved, and downtown Santa Rosa was reduced to a pile of bricks. In a town of fewer than 7,000 people, more than 100 died. No home or building was left undamaged.

“A DREADFUL CATASTROPHE VISITS SANTA ROSA,” read The Press Democrat headline of the day.

And yet we go about our business. It was a long time ago now, and what’s a person to do anyway?

Another scientific analysis of the risks posed by earthquakes came and went last week, and it barely made a ripple.

In case you missed it, a new forecasting model from the U.S. Geological Survey — the scientists who study earthquakes and their causes — concludes that a major earthquake is more likely than experts previously believed. Within the next 30 years, researchers say, there is a 7 percent chance of an 8.0 or greater magnitude earthquake somewhere in California.

In what will pass for a consolation prize, scientists also say there’s less likelihood of moderate earthquakes of magnitude 6.5 to 7.5.

What’s called the Uniform California Earthquake Rupture Forecast (Version 3) combines advances in computer modeling, new data, lessons gleaned from recent temblors and a better understanding of what researchers are calling “multifault” earthquakes.

The report explains: “It has become increasingly apparent that we are not dealing with a few well-separated faults, but with a vast interconnected fault system. In fact, it has become difficult to identify where some faults end and others begin, implying many more opportunities for multifault ruptures.”

In a press release, lead author Ned Field added, “This is a significant advancement in terms of representing a broader range of earthquakes throughout California’s complex fault system.”

If you live in the Santa Rosa Valley, about now you’re thinking about the Rodgers Creek Fault, which bisects Santa Rosa on a north-south line situated east of Santa Rosa Memorial Hospital.

In analyzing the potential for earthquakes in the Bay Area, the USGS describes the Rodgers Creek, Hayward and Calaveras faults as being “relatively ready.”

Relatively ready? I asked USGS geophysicist Tom Parsons about our chances.

The good news about the Rodgers Creek fault is that the chances of an earthquake of 8.0 or higher are very small, less than 0.01 percent, he said.

The bad news is, scientists didn’t previously believe that an earthquake of 8.0 or greater magnitude was possible on the Rodgers Creek fault.

Parsons also shared the probabilities of smaller earthquakes on the Rodgers Creek fault during the next 30

years: greater than or equal to 6.7 magnitude, 13.7 percent; greater than 7.0, 11 percent; greater than 7.5, 3.4 percent.

For comparison, the August earthquake centered near Napa registered magnitude 6.0. Loma Prieta in 1989 measured 6.9.

I know what you're thinking: Maybe, I should restock that earthquake kit, after all.

Last September, Sonoma County emergency officials estimated that a 6.8-magnitude earthquake would leave more than 50,000 households without a water connection, some for as long as a week.

I asked Parsons what Californians can do to prepare for an earthquake, and he answered by saying he was uncomfortable with trying to tell other people what to do.

But he did volunteer that it would be great if we did what we already know we are supposed to do. He mentioned earthquake kits (including a week's supply of food and water), making sure all houses are bolted to their foundations, making sure that every school meets current building standards.

I admitted that after the Napa earthquake last August, my wife and I finally got around to installing safety glass in the window over our bed. (We've only lived in the house for 33 years.)

Right after earthquakes, Parsons said, people seem more committed to earthquake preparations, but later, their resolve tends to fade away.

In their history of Santa Rosa, authors Gaye LeBaron and Joann Mitchell recall the devastation of the 1906 earthquake: "No city on the North American continent had ever been hit harder by an earthquake than Santa Rosa was on that fateful spring morning."

In the last century, we have come a long way in terms of earthquake preparedness. We have new building codes and emergency plans, and some of us have supplies stored in the garage. Thanks to science, we also know a lot more about the risks and about what we can do reduce the threat to life and property.

Still, we know that when the next one comes along, we will wish we had done more.

You can consider your earthquake preparations the price you pay for not living in the path of hurricanes, typhoons and catastrophic tornadoes.