

Researchers now say San Andreas could see 8.1 quake

Keith Matheny, Palm Springs Desert Sun, 10-21-10

“The Big One,” a potential major earthquake on the San Andreas fault that runs through the Coachella Valley, could be stronger and rupture a much longer section of the fault than previously thought possible, a new study has found.

The study by UC Irvine and Arizona State University researchers found an increased likelihood of what was once dismissed as nearly unthinkable — a whopping 8.1-magnitude mega-quake rupturing a 340-mile section from the Salton Sea all the way up to Monterey County.

“This data has just made the bigger one a bit more likely,” U.S. Geological Survey seismologist Lucy Jones said.

The possibility of an even larger “Big One” underscores the importance of Coachella Valley residents and other Southern Californians participating in the Great California ShakeOut today — an annual earthquake preparedness exercise.

Scientists and other experts in 2008 released a scenario projecting the damage from a magnitude 7.8-earthquake on the southern section of the San Andreas fault, starting near the Salton Sea.

The 2008 study projected a quake that would devastate a wide swath of Southern California, including the Coachella Valley. Such a quake would likely kill more than 1,800 people, injure more than 50,000 and cause more than \$200 billion in damage, the study found.

Historic evidence indicates a major earthquake occurs roughly every 150 years in that area, but it's been more than 300 years since the region's last major quake.

The new study “is something we should consider as a possibility, rather than dismiss it as impossible,” said Lisa Grant Ludwig, a seismologist at UC Irvine and co-author of the study that was published in the Sept. 1 issue of *Geology*.

“That's not the same thing as saying it's the most likely scenario or that's what's going to happen.” The new study also doesn't necessarily mean more significant damage across Southern California than the 2008 scenario, Jones said.

“The shaking coming into L.A. is probably about the same,” she said. “We add more territory to the hard shaking category, but the area we add doesn't have many people.”

A major quake rupturing on the entirety of the San Andreas fault remains “extremely unlikely,” said Chesley Williams, senior project manager for Risk Management Solutions Inc., which analyzes potential losses from earthquakes for the worldwide insurance industry.

“It's much more likely that individual pieces, or combinations of pieces, would go, rather than the entire fault at once.”

The last major earthquake on the southern San Andreas fault was the 1857 Fort Tejon quake, a magnitude-7.9

temblor with an epicenter about 75 miles northwest of Bakersfield.

The quake caused a more than 217-mile rupture scar along the San Andreas fault. But historic evidence shows the quake stopped near the Cajon Pass, where Interstate 15 now enters the high desert from San Bernardino.

Many scientists now believe another big quake near Wrightwood close to the Cajon Pass in 1812 may have relieved pressure on that section of the fault, perhaps contributing to the 1857 quake's endpoint, Ludwig said. But now all sections of the San Andreas are beyond their average rupture intervals, she said.

“There's a lot of energy built up there that will be released,” Ludwig said.