

Mapping fault lines in the Reno-Carson urban corridor

The Nevada Seismological Laboratory at the University has finished the first phase of seismic surveying through downtown Reno as part of a \$1 million U.S. Geological Survey study to create an earthquake hazard map in the Reno-Carson City urban corridor.

“There are several suspected faults in the downtown area, and we don’t know much about them,” said John Louie, professor of geophysics in the Seismological Lab and principle investigator of the project.

Researchers conducted full-scale seismic reflection soundings up to a half-mile deep using a “mini-vibe” truck. Louie, co-principal investigators Pat Cashman and Ilenna Tibuleac, and seven graduate students worked with two USGS researchers to make thousands of soundings to complete the high-resolution, noninvasive seismic imaging study using industry techniques for



Photo by Mike Wolterbeek

The shake truck moves alongside the Truckee River in downtown Reno. University students helped with traffic control, community outreach, installation of sensors along the route and data collection.

oil and gas exploration.

The truck, using a relatively light 700-pound reaction weight, stops every 30 feet, sets the shaker on the asphalt and vibrates the ground for a few minutes. Hundreds of monitoring sensors connected by cable transmit the seismic reflection soundings to the recording truck. It is a slow process, with the truck creeping less than one mile a day.

“This is a process of discovery,” Louie said. “We’ve looked for the suspected faults, may possibly find faults we don’t know about, and will be able to identify the most hazardous faults.”

—Mike Wolterbeek '02

New director at helm of Seismological Laboratory



Graham Kent

Graham Kent is well-known to researchers in Nevada. He has been studying the tectonics of Western Nevada for 10 years, including earthquake fault hazards in Lake

Tahoe and Fallen Leaf Lake through sonar profiling. His research interests also include the Walker Lane Belt, a geological region roughly aligned with the border between the states of California and Nevada.

This summer Kent was named director of the Nevada Seismological Laboratory and professor of geophysics. It is a homecoming of sorts, since Kent graduated from South Lake Tahoe High School. He comes to Nevada from UC San Diego’s Scripps Institution of Oceanography, where for the past 13 years he has been a research geophysicist at their Institute of Geophysics and Planetary Physics.

“There’s a lot of opportunity for answering grand science questions in this region, which requires a variety of different seismic techniques,” Kent said. “I’m a hi-tech geek at heart and hope to bring the ability to work on some of the larger National Science Foundation-driven science questions, such as formation of the Sierra Nevada mountain range.”

After 11 years at the helm, former director John Anderson stepped down from the position to focus on teaching and research. “I never meant this to be my last job, to be director for life,” he said. “It’s part of my long-term plan; it’s someone else’s turn now.” He predicts Kent will “be a fantastic director for the lab.”

LOOK ONLINE
View technology profile of Kent at uncr.edu/silverandblue

—Mike Wolterbeek '02

Sports Medicine experience at the Reno Rodeo

Rodeo competitors know it’s not a question of if you’ll get hurt, but when... and how badly. Competitors in the 2009 Reno Rodeo simply accept injuries as part of their sport. Luckily, University of Nevada School of Medicine physicians and students along with medical volunteers from the Reno Rodeo Association provided medical assistance and expertise as needed to both competitors and spectators at the June 18-27 event. The team treated a wide variety of injuries ranging from sprained ankles and broken fingers to broken jaws and torn skin.

“This was an educational opportunity for our students to learn how to interact with emergency medical teams and what is potentially involved with medical help in a large crowd setting,” said Dr. Daniel



Photo by Chandra Hecht

Carol Scott, University director of sports medicine, tapes up the arm of a bareback rider at the Reno Rodeo.

Spogen, chair of the School of Medicine’s Family and Community Medicine Department in Reno.

—Anne McMillin