



Ball attendees check out the dinner.

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## Emery Co. coal country at earthquake risk

*General*  
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*Emery Co.*  
*Progress*

The Bulletin of Seismological Society of America, the premier scientific journal dedicated to earthquake research, has just published a trio of articles about earthquakes caused by underground coal mining in east-central Utah.

"We've studied how fairly shallow underground coal mining caused earthquakes that, depending on their size, might pose a ground-shaking hazard to nearby surface structures," said Dr. Walter Arabasz, director of the University of Utah Seismograph Stations and one of the principal researchers for the papers.

Dr. Art McGarr, a geophysicist with the US Geological Survey and another of the researchers, added, "Anybody could take our results and apply them to a comparable situation anywhere in the world."

Arabasz, McGarr and others performed their studies in Emery County, near the Cottonwood coal tract, where underground coal mining is proposed. As planned, mining within the Cottonwood tract could extend to within about one kilometer of the 58 meter high earthfill dam at Joe's Valley Reservoir. The key question: How close to the dam should future underground mining be allowed?

To help decision-makers answer the question, the scientists monitored earthquakes induced in the neighboring Trail Mountain Mine, a longwall

mining operation about one-half kilometer underground and 3-7 kilometers from the dam. They recorded 1,913 earthquakes and developed ground-motion prediction relations based on distance and earthquake size.

One of the researchers' conclusions is that mining within the Cottonwood tract might cause a maximum earthquake of magnitude 3.9. In 2000, a magnitude 4.2 mining-induced earthquake at Willow Creek mine about 50 kilometers to the north caused rock falls that temporarily disrupted a highway and a rail line.

The research is the first attempt at ground-motion prediction for low-magnitude, short-distance events related to coal mining McGarr said.

The three recently published papers are: "Coal Mining Seismicity and Ground-Shaking Hazard: A Case Study in the Trail Mountain Area, Emery County, Utah," by W.J. Arabasz, S.J. Nava, M.K. McCarter, K.L. Pankow, J.C. Pechmann, J. Ake, and A. McGarr; "Development of Ground-Motion Prediction Equations Relevant to Shallow Mining-Induced Seismicity in the Trail Mountain Area, Emery County, Utah," by A. McGarr, and J.B. Fletcher; and "Moment Tensor Inversion of Ground Motion from Mining-Induced Earthquakes, Trail Mountain, Utah," by J.B. Fletcher and A. McGarr.

development in the area. Ideas on workshops and issues local business owners would like to see addressed can be brought before Sen. Bennett's representatives at this luncheon.

## A search for Seniors

The Emery County Recreation District is on the search for county senior citizens past the age of 90 to be recognized at this year's county fair to be held Aug. 3-6. Seniors will have a small biography, with a picture, about them printed in the annual fair guide and a float will be prepared so they can ride in the parade. Contact the recreation department at 381-2108 or photos and bios can be dropped off at the Emery County Progress at 410 East Main or emailed to editor@ecprogress.com. Please help us recognize the senior citizens who have done so much for our communities.

## MEETINGS

### County Commission

The commissioners will meet in their regularly scheduled meeting on April 5 at 4 p.m. at the county building.

### ATV Hearing

A public hearing will be held at 5:30 p.m. on April 5 to discuss the draft ordinance for ATVs on county roads. Public input encouraged.

### County Fire Plan Meeting

A planning meeting will be held to develop a countywide fire plan on March 30 at 9 a.m. at the county building.

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