

Utah Seismic Safety Commission

Quarterly Meeting Minutes

On April 24, 2014, a regularly scheduled quarterly meeting of the Utah Seismic Safety Commission (USSC) was held in the Kletting Room of the Utah State Senate Building. Chair Roger Evans called the meeting to order at 9:00 AM.

Members Present:

Roger Evans, Chair	Utah League of Cities and Towns
Keith Koper	University of Utah Seismograph Stations
Rick Allis	Utah Geological Survey
Meldee Love	Utah Department of Insurance
Enzo Calfa	Division of Facilities, Construction and Management
M. Leon Berrett	American Public Works Association
Peter McDonough	American Society of Civil Engineers
Kris Hamlet	Utah Division of Emergency Management

USSC Staff Present:

Chris DuRoss	Utah Geological Survey
Steve Bowman	Utah Geological Survey
Bob Carey	Utah Division of Emergency Management
Sheila Curtis	Utah Division of Emergency Management
Judy Watanabe	Utah Division of Emergency Management
Katie LeLaCheur	Staff Recorder

Guests Present:

Glen Palmer	Palmer Engineering
Gerald McKenzie	BHB Consulting Engineers
Walter Arabasz	University of Utah Seismograph Stations
Orion Goff	Salt Lake City
Les Youd	Brigham Young University

Members Not Present:

Michelle Jones	Association of Contingency Planners
Senator Jerry Stevenson	Utah State Senate
Mark Peterson	U.S. Geological Survey (Ex-Officio)
Doug Bausch	Federal Emergency Management Agency
Josh Sletten	Utah Department of Transportation
Jeremy Achter	Structural Engineers Association of Utah
Rep. Gage Froerer	Utah House of Representatives

Welcome and Introduction

Introductions were made of members and guests present. Enzo Calfa made a motion for the approval of the January 16, 2014 Meeting Minutes, Keith Koper seconded the motion. The minutes were approved.

Discussion: Utah Safety Appraisal Program (SAP)

Roger Evans, referring to the agenda, explained that Gilbert Gonzales from Murray City was unable to attend the meeting. Bob Carey would update the Commission on the Utah Safety Appraisal Program.

Bob Carey began by informing the Commission that the Utah SAP Committee meets monthly. During their last meeting they discussed the deployment of volunteer inspectors and how that would actually take place. They considered what deployment would mean to the organizing entities such as the SEAU, AIA, and ICC on the building officials side. It became obvious that they are not organized well enough to deploy these groups into the field. Bob suggested that the committee do a tabletop to explore how they would deploy the groups at the lowest levels. One of the issues that came from the last committee meeting was a need to meet with DFCM to discuss their part in deploying these volunteers. The SAP Committee has organizational work that needs to be done so that things will run smoother when this group is activated.

Bob continued with a report on the trainings that have been held to date. They have held 2 trainings, one was held in St. George at a Building Officials Conference with 35 attendees and the second training was organized by Roger in Park City with 90 attendees. Park City was a nice location to hold the fieldwork portion of the training because of the unique nature of Park City. Bob discussed the future scheduled trainings to include Salt Lake County, Southern Utah University and Weber County. He mentioned that a concern that is already becoming an issue is the question of issuing a card to a non-licensed individual. He stated that this is an issue that will need to be addressed by the SAP Committee as well as by the USSC.

Roger commented on the SAP training he held in Park City. It was interesting that Park City had sent 4 people to attend the training in St. George and so Roger had decided to hold the training in Park City because it would be a convenient location. He hadn't planned to have a facility big enough to accommodate such a large group. He stated that they had over ninety people show up and he had turned probably twenty people away. Roger commented that the word is getting out about this training and it has gotten off to a great start.

Keith Koper asked about the backgrounds the participants in the Park City training.

Roger responded that they were architects, engineers, and building inspectors. He

explained that he only charged ten dollars for the training and still made money. Roger also commented that Salt Lake City had sent sixteen individuals to the training.

Bob responded that Salt Lake City Building Department has expressed an interest in holding another training for their employees who were unable to attend the last one.

Keith asked if this training would be something they would be able to add to their resume or what would be the motivation to attend.

Bob responded these groups need to organize themselves so they will be able to respond to an emergency. Having requirements tied to the program and a renewal process gives people more confidence in program. Attending the training also provides continuing education credits. They are working on developing a manual for the program that will include information on renewal, licensing, and how individuals will be activated and deployed. A brief discussion followed about Safety Appraisal Program. Suggestions were made that renewal courses be made available online in the future to simplify the process. Another suggestion made was to team up licensed and non-licensed individuals in a tiered manor. This is a possibility for addressing the concerns of issuing a card to a non-licensed individual. Bob commented on this suggestion and explained that the committee's main concern is to get enough people to be able to respond to a magnitude 7 earthquake. In a major disaster, local government will need as many inspectors as they can to assess building damage.

Roger expressed his belief that the program is off to a strong start and commented that they will keep the Commission informed on all updates with the Safety Appraisal Program. He then introduced Orion Goff and the next agenda item.

Building Occupancy Resumption Program (BORP)

Orion Goff thanked Roger for introducing him. He commented that he had attended the SAP training in St. George and that they try not to hire any inspectors that don't have construction experience. Following these comments, Orion asked if the Commission is familiar with the acronym BORP. BORP stands for Building Occupancy Resumption Program. Brent Maxfield came to Orion a few years ago and suggested that they use the BORP program from San Francisco in Utah. They began working on it and it took a few years to get it done. Salt Lake City Council didn't adopt the program. What they did was give them the authority to develop a policy that would then become the program. Orion expressed his belief that this program will better prepare Salt Lake City for a post disaster situation. Building owners are going to make judgment calls after a disaster and this program will put the participating businesses in a better position post disaster. They have not signed anyone up for the program yet. Orion stated that some of the businesses that have shown interest in the program so far include the LDS Church, Zion's Bank and some larger hotel chains.

Keith asked if Orion had heard anything from Goldman Sachs. They have a large workforce and were concerned about post disaster scenarios.

Orion replied that he hasn't heard from them but looks forward to working with them.

Bob clarified that on the BORP program building owners will hire a structural engineer to do a pre-disaster assessment of their building. Then in the post-disaster, that structural engineer will evaluate and placard the building within the amount of time they agreed upon.

Orion agreed and explained that the buildings that are part of the BORP program will have their own placard and the City will not go out to evaluate those buildings after a disaster. They will leave it to the engineers that the building owners have hired to evaluate those buildings.

Roger stated that if anyone wants to read the program policy document it is available at www.slcgov.com or <http://goo.gl/a3ZxcU> to download the complete document as a pdf. A brief discussion followed about the benefits and details of the program.

Enzo Calfa commented that this is going to be expensive for building owners who choose to participate.

Orion responded that they have no way to know who will be interested in participating and they are going to let the market control who will be able to participate.

Walter Arabasz commented on the need for public education, possibly in conjunction with the ShakeOut, about the need for and process of placarding buildings following an earthquake.

Glen Palmer asked about ways of enforcing orders if a building is assessed as being unsafe. What are the City's and County's rights under the circumstances? The Buildings Standards Act gives cities and counties the right to adopt uniform code for the abatement of dangerous buildings.

Roger commented that many cities have not adopted this document and he has encouraged them to adopt this document to give them a legal way to enforce this. Roger asked Peter to introduce the next speaker.

Earthquake Engineering Research Institute (EERI)

Les Youd began by briefly discussing the Utah EERI Chapter. This chapter was organized 3 years ago. In looking at things that they could do to improve engineering practice, they decided to hold a 1 day course on liquefaction. The course was titled Evaluation and Mitigation of Liquefaction for Engineering Practice. The goal was to discuss the mitigation of liquefaction effects in engineering practices. This can be accomplished by either compacting the ground to prevent liquefaction from occurring or strengthening the structure so it can resist whatever happens in the ground.

Update from the Structural Engineering Association of Utah (SEAU) Existing Building Committee

Glen Palmer provided an update on the recent activities of the SEAU Existing Building Committee. He reminded the USSC that they typically meet monthly. They are scheduled to have a booth at the PTA Leadership Convention in Provo. Glen stated that the PTA has been a major supporter in moving forward the seismic safety of schools. Another project that the Existing Building Committee has been working on is revising and reorganizing the Utah Guide for Seismic Improvement of Unreinforced Masonry Dwellings. The last version published was in 1996. The Existing Building Committee is working on a final review and hope to submit the guide for professional editing after their next meeting.

Roger commented that there is a lot of awareness of the seismic safety in schools in the PTA. He expressed that the greatest thing he can imagine is the work Glen is doing with the Existing Building Committee in updating the homeowners guide and making this information more accessible. Roger encouraged anyone who is interested to volunteer to attend the PTA Conference.

Glen commented that they would pass around the schedule so people who would like to attend could sign up for a time. The PTA Conference is scheduled for May 14-15.

Roger mentioned that he has made a habit of keeping pages with significant websites and helpful information with him at all times. He encouraged Commission members to do the same. Bob introduced his supervisor Judy Watanabe to discuss the 2014 Great Utah ShakeOut.

Division of Emergency Management Earthquake Exercises (2014 Utah ShakeOut)

Judy Watanabe began by informing the Commission that Utah had 840,000 participants registered online for the Great Utah ShakeOut. Utah had the largest participation per capita on this type of drill. They had good participation from schools. They also had very good media coverage on the drill. The University of Utah campus evacuated their buildings. The State Capitol complex participated in a drop, cover, and hold drill followed by an evacuation. Once DFCM has completed a post-disaster building safety inspection, the Division of Emergency Management returned and participated in a tabletop exercise. This exercise included all of the State Emergency Response Team members. They met, reviewed policies and identified areas that need future training. Judy expressed her feelings that this was a successful drill. She then commented on the Tooele Earthquake that occurred shortly after the ShakeOut Drill.

Bob commented that the Chilean Earthquake spurred some media attention from KSL radio. An article in the newspaper mentioned there was not less damage due to building codes and preparedness. Bob did an interview with Doug Wright who expanded it into an hour long town hall program. It was held at the University of Utah Seismograph

Stations. A State Historical Society representative, a Seismograph Stations representative and Bob all participated in the program.

Keith commented that he also did an hour long interview with NPR as well. A discussion about the ShakeOut drill followed.

Leon Berrett commented on the ShakeOut Drill they held at an old gravel pit. It was a training exercise for everyone including training on debris removal, fire suppression and triage. It worked out very well and they are already planning to expand the exercise next year.

Bob responded that this is similar to the CERT Program Training.

Keith asked Bob where the funding for the ShakeOut comes from.

Bob responded that it is funded by DEM and is built into the budget as a recurring project every year.

Walter commented that it would be interesting to collect real world examples on why safety drills make a difference.

Meldee Love stated that in her department they did the Great ShakeOut Games. They started off with a piece in the monthly newsletter. They then began sending out pieces of information and followed up with a quiz. It was a fun competition that created a lot of participation and interest in the drill.

Update on Utah Schools Seismic Hazard Inventory

Bob provided the update on the Utah Schools Seismic Hazard Inventory. The RVS Authority met last Tuesday with Evan Curtis, a State Office of Education representative, and the school districts representatives. This was supposed to be the meeting where the school districts would provide their RVS Studies that have already been completed. Unfortunately they came with nothing in hand. There is still some reluctance with the districts in releasing this information. The State Office of Education representative reassured Bob that he would be able to gather this information. They discussed sending a letter either to the State Office of Education or the Governor's Office to acquire the information. They did provide a spreadsheet with some information about buildings that have had seismic upgrade projects done. This information is incomplete and will need to be updated and verified. They will give them a couple more months to provide the information. Bob expressed that they will not stop trying to obtain this information.

Roger agreed that they will never give up until they have a complete study.

Glen commented that this is part of why they will have a booth at the PTA Leadership Conference. People will come and ask them about the status of their school buildings. They can then direct these individuals to go to their school districts and ask if the studies have been done.

Rick mentioned that the UGS has 45 minutes scheduled with the Governor in 3 weeks. They will use the time to discuss geologic hazards in Utah. They have been trying to determine what message they could send, in regards to schools seismic safety, that the

Governor will embrace. It was suggested that they give the Governor a copy of the Utah Students at Risk document.

Bob commented that it is clear that the biggest issues are in elementary schools.

Rick asked if this document would give a rough number on what would be required to fix the issues. He expressed his belief that if they could present an estimate of the magnitude of the issue that they may have more success with gaining the Governors support.

Roger commented that the Utah Students as Risk document was very valuable when lobbying with the legislature.

Instrumentation in the Capitol Building

Bob presented on the Instrumentation in the Capitol Building. He began by stating that this has been a long and extensive process. The original contract to maintain the instrumentation was void because the funding was diverted to something else. Over the last few years, they have been working with the USGS on how to manage the seismic instruments that were installed in the Capitol. The USGS has been given internet access to the instrumentation so they can do some maintenance. The contract that is being proposed is between the Preservation Board and the USGS. In the last meeting, they discussed the data that comes from the instruments and maintenance of the instruments. The question is if a piece of that equipment were to break or fail, then who would be responsible for paying for the repair or replacement? Bob recommended to the Preservation Board that the Utah Seismic Safety Commission be responsible for maintenance. He explained that this would work well because the Commission is an entity that will last and they could set up an MOU with DEM to cover the funding for the maintenance of the instrumentation in the Capitol. Bob continued that the data that goes to the USGS will be made available to researchers from that point. It was requested that the data also be sent to the University of Utah Seismograph Stations. Bob does not believe that this will be an issue and will bring it up with the USGS.

Walter stated that it was a \$200,000 investment to put the instrumentation in.

Roger asked if it would be possible to use this data to create an early warning system.

Keith responded that early warning system is a big future issue that the Commission should carefully consider. He expressed his concern that an early warning system may not be as effective in Utah. This would be a very expensive investment that may not be worth it if it is not as effective.

Bob stated that if the Commission is willing to be responsible for the maintenance, then they need to pass a motion stating that. He can then take it to the Preservation Board and move forward from there. A discussion about repairs to the instrumentation followed. Most of the equipment that is involved in the instrumentation will not be very expensive. In case of a major system failure, it would be up to the Preservation Board to repair or replace the equipment. The concern is that the USGS needs to have someone

to go to for regular maintenance.

Rick asked if they could have something in writing that they could make a motion on in the next meeting.

Bob responded that he needs a motion of intent to move forward after they see an agreement in writing. With this they can put together a specific document, in writing, to discuss in the future.

Keith Koper made the following motion.

Motion: The Commission supports the efforts of Bob Carey to sustain the operations and maintenance of the seismic instrumentation in the capital.

Rick Allis seconded the motion. The motion was passed.

News Items

Basin and Range Province Seismic Hazards Summit III

Steve Bowman gave a brief overview of the Basin and Range Province Seismic Hazards Summit III. The Utah Geological Survey, Division of Emergency Management, and Professional Engineers and Land Surveyors Licensing Boards will support a Basin and Range Province Seismic Hazards Summit III on January 12-17, 2015. They will discuss a variety of seismic hazard issues. The Summit will include a short course on paleoseismic investigations, a 4 day summit meeting on a variety of different seismic issues and a field trip that will visit some different earthquake scarps along the Wasatch Fault, the U of U Seismograph Stations and a tour of the Capitol. A final agenda and registration will be available in June.

Reports from Recent Professional Meetings

- Pete McDonough is the Chairman of the Gas and Liquid Fuels Lifelines Committee of the American Society of Civil Engineers Technical Council on Lifeline Earthquake Engineering. One of the primary functions of this group is to put together design guides of relevant technical issues. They have begun working on the new design guides, New Design Guide for Seismic Design of Storage Tanks, Pipeline Bridge Interface, and Resiliency of Lifelines to Various Multi-Hazards. They will also be working on co-location issues.
- WSSPC Annual Meeting will be held in conjunction with EERI in Anchorage Alaska this summer.
- National Earthquake Program Managers Meeting will be held at FEMA Region VIII, in May. Bob Carey and Sheila Curtis will both be attending. Bob mentioned that FEMA has changed how they give out supplemental monies to the states.

This will be a major topic in this meeting between the program managers and FEMA.

- The Mutual Aid Agreement has been finalized between Public Works and Cities, Counties and Agencies.
- Vigilant Guard will be held November 3-5, 2014. It will be a 3 day full scale exercise. It will begin with a magnitude 6.0 earthquake on the Taylorsville fault. A magnitude 7.0 earthquake will follow the 6.0 precursor event.

Other

Keith Koper mentioned several earthquakes that recently happened in Challis, Idaho. The swarm is near the Borah Peak fault zones. In 1983, there was a M7.3 earthquake in this fault zone. The University of Utah Seismograph Stations sent instruments up to the area so they can record the motions. He also mentioned the M3.1 earthquake near Tooele on Saturday. There were no aftershocks and all of the movement was recorded at the University of Utah Seismograph Stations. Their colleagues at the University of Nevada Reno posted a false alarm that made it appear that there had been 2 earthquakes in Utah. They are working to keep this from happening again in the future. The University has hired a new seismologist who is an expert on imaging. He is working on a project with geophones that are recording ambient noise. They will then use that to create a high-resolution geologic model.

Budget

Bob commented that the Commission still has no budget.

The next meeting will be held on July 17, 2014. This will be the 20th Anniversary of the Utah Seismic Safety Commission. More information will follow.

Roger Evan adjourned the meeting at 12:00 PM.