

Utah Seismic Safety Commission Quarterly Meeting Minutes

On October 16, 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 Leon Berrett** called the meeting to order at 9:00 AM.

Members Present:

M. Leon Berrett, Chair	American Public Works Association
Keith Koper	University of Utah Seismograph Stations
Rick Allis	Utah Geological Survey
Roger Evans	Utah League of Cities and Towns
Peter McDonough	American Society of Civil Engineers
Enzo Calfa	Division of Facilities, Construction and Management
Evan Curtis	Governor's Office of Budget and Planning
Judy Watanabe	Utah Division of Emergency Management representing Kris Hamlet

USSC Staff Present:

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:

Walter Arabasz	University of Utah Seismograph Stations
Gilbert Gonzales	Murray City
Grant Willis	Utah Geological Association
Rachel Dunn	In Harms Way/ Red Cross
Emily Esplin	In Harms Way/UVU
Daniel Horns	In Harms Way/UVU

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. **Rick Allis** made a motion for the approval of the July 17, 2014 Meeting Minutes. The motion was second by **Evan Curtis**. The minutes were approved.

Vision, Direction and Goals of the USSC

Leon introduced the first agenda item. He explained that he and Roger had put together a presentation of a summary of what the Utah Seismic Safety Commission is. He stated that he would like to go through the presentation and use it as a catalyst for reviewing where the Commission is, what they do, and what their goals are for the future of the Utah Seismic Safety Commission. Leon began the presentation by providing some history. The Utah Seismic Safety Commission was established by House Bill 358 in 1994. The first Commission meeting was in July of 1994.

Bob Carey commented that they used to have the Utah Earthquake Advisory Board. After HB 358 they changed their name and began meeting as the Utah Seismic Safety Commission.

Leon asked how long the Utah Earthquake Advisory Board had been established before the USSC was created.

Bob responded that it had been established for about two years. They had formed the group to address the issues that the USSC now addresses. The Earthquake Advisory Board served as a template for what the USSC is now. In 2000, HB 200 was passed. This legislation put the USSC into the Utah Code under Title 63C Chapter 6. The code states that the Commission consists of fifteen members from various associations and partnerships. Bob continued that the other major change that came to the Commission was when it was placed under Public Safety. Most advisory boards are created with a sunset date of 10 years. Public Safety has no sunset date, so the USSC no longer has a sunset date. A brief discussion of the original budget of the Commission followed. The Commission had a budget when it was created. The original budget line item no longer exists and the Commission is now funded under the Utah Division of Emergency Management budget. Bob reminded the Commission that they continue to fund projects in the Commission's name. One of the projects that they continue to fund under the Commission's Student Research Grant is the annual field trip to Yellowstone by the middle schools in Summit County.

Leon continued the presentation by reviewing what organizations and associations are represented on the Commission. These include the following:

- Division of Emergency Management
- Utah Geological Survey

- University of Utah Seismograph Station
- Utah League of Cities and Towns
- Structural Engineers Association of Utah
- Division of Facilities Construction and Management
- Department of Transportation
- State Planning Coordinator
- American Institute of Architects
- American Society of Civil Engineers
- Utah House of Representatives
- Utah Senate
- Department of Insurance
- Association of Contingency Planners
- American Public Works Association

Bob commented that there are also two Ex-Officio, non-voting members, from the USGS and FEMA.

Leon continued that the USSC is simply advisory with no regulatory or statutory authority.

Rick responded that the code is 25 years out of date. He recommended that the Commission address this.

Leon continued by reviewing the Commission's mission: Review earthquake related hazards in Utah, Prepare recommendations to identify and mitigate their hazards and risks, Prioritize recommendations for adopting policy or loss reduction strategies, Act as a source of information for earthquake safety and promote earthquake loss reduction measures and Update the strategic planning document and other supporting studies or reports. He then reviewed what the Commission has been working on including:

- Advocating legislation for schools
- Advocating the BORP program
- Advocating for city councils to work on their codes and ordinances
- Providing rapid visual screenings according to FEMA guidelines
- Training emergency inspectors

The USSC has partnered with other agencies and organizations to create some good publications including:

- Earthquakes and Roofing
- Utah Students at Risk
- Putting Down Roots in Earthquake Country
- Utah Earthquake Ground Shaking Maps
- Utah Guide for the Seismic Improvement of Unreinforced Masonry Dwellings

The Utah Guide for the Seismic Improvement of Unreinforced Masonry Dwellings is being updated. Leon asked about if this document would come to the USSC for review prior to being published.

Bob responded that it would not.

Leon asked if they should make a motion to endorse it when it is complete.

Bob expressed his belief that that would be helpful.

Rick asked if they intend to have a press release when it is published.

Bob commented that there is work being done on unreinforced masonry dwellings, so it wouldn't hurt to do a press release. He stated that a press release would generate more people who want copies of the publication. Rather than giving out paper, copies the Commission needs have a list of websites that they can direct people for the document.

Leon asked if there are links to all of the associations on the website. He also stated that the earthquake video that was made for the 2012 ShakeOut should be put onto the website. Leon asked that all the Commissioners review the website for needed updates.

Steve Bowman replied that the website is out of date and needs work. They have presented some possibilities in past meetings. A brief discussion about the website followed.

Leon asked Steve to put together a proposal for updates and costs of the website.

He stated that the Commission gets good updates from the UGS and the Seismograph Stations on what they are doing. The USSC also does regional coordination. They have met with Nevada several times and last year they included Idaho and Colorado. The next joint meeting is next fall and may be held in Utah.

Bob explained that the Council in Nevada does things quite differently than the USSC.

Leon suggested that they try to talk to Idaho, Colorado, and possibly Wyoming about attending the next joint meeting.

Bob replied that the Hazard Mitigation Council would probably be the best place to go with that request. The Commission discussed the possibility of including more people in the joint meeting. Bob suggested that if the USSC wants to have a meeting that involved those types of groups that they may want to coordinate that with WSSPC.

Leon continued to the vision and goals of the USSC. The goals for the future are to continue with the successes, be active and creative and never be complacent. He commented on the passion that Roger brought to the USSC while he was the Chair. He expressed his desire to keep continue with that same passion. He asked for suggestions and ideas for public awareness.

Pete McDonough commented that the Commission needs to consider changing their logo. The Commission discussed this possibility.

Bob offered to find the list of logos that they had looked at in the past.

Evan spoke briefly about Envision Utah. He suggested that this is a great opportunity for the USSC to play an active role in their efforts.

Leon asked how they could be more involved.

Evan responded that they could send Envision Utah a letter, as a Commission, telling them that the USSC would like to be involved in their efforts. He stated that Envision Utah is always looking for comments and feedback and he believes that they would

appreciate having the Commission's support.

Rick reminded the Commission of the reports that the Utah Seismic Safety Commission has had in the past. He explained that there is a lot of valuable information in these reports that Walter used to coordinate. Rick suggested that the Commission pick at most three things that they can realistically accomplish. He then explained that he liked the idea of some sort of publication focused on the latest HAZUS run that will cause a stir as well as be something that they can build on.

Bob responded that a committee has a project being coordinated through the Utah EERI Chapter that will be a publication of the earthquake scenario on Salt Lake County segment of the Wasatch fault. A press release of the publication, in preparation for the 2015 Great Utah ShakeOut, would be perfect timing. This project is set to be finished by the end of February.

Rick asked if they could at least endorse this project.

Bob replied that they put the Commission's name on all kinds of things.

Leon stated that he feels it is the Commission's role to facilitate, advocate, and endorse these kinds of projects. Whoever prepares a publication like this should be the ones who talk to the press while the USSC will fully endorse and support it.

Bob commented that the USSC could take this document and push it to the organizations that they represent. Leon agreed that this is a good point.

Rick asked if the document could be ready by early February. It would be a useful document to have should they decide they have the courage to go to the legislature.

Walter Arabasz respectfully disagreed with Rick. He explained that he would not go to the legislature unless they were speaking from a position of strength. Walter expressed his concern that if they open a can of worms the legislature may start asking what the USSC has been doing lately. He advised that the Commission take Evan's approach. Seismic safety advocacy in Utah is inherently long term. To focus on what is happening with the state now through the coming decades is important in the planning implementation. The Commission has the opportunity to ride on Bob Grow's coat tails. If the USSC became involved in Envision Utah, in a supportive way, and could focus its attention on specific initiatives that would go much further than going to the legislature.

Steve commented that because they are all very busy that makes the web presence even more valuable because it is available 24/7.

Leon appreciated the discussion and agreed that the Commission needs to pick a few initiatives and do them well than to take on too many and do them poorly.

Keith Koper commented that there is a possibility of an earthquake early warning system. There are prototype systems up in California, Oregon, and Washington. It turns out that Utah is right next in line for the Earthquake risk after California, Oregon, and Washington. So if it works in the West Coast the USGS has mentioned that they may look into doing it in Utah as well. It would be a very difficult and expensive project to complete in Utah. Keith continued that he is still learning about it but it could be a big

deal in the next 3 to 5 years.

Leon responded that it is important to be aware of the latest innovations and to be able to at least stand behind and support these innovations by trying to increase awareness.

Bob stated that Twitter is a system that is already in place that works similar to an early warning system.

Leon commented on the way that advancements in technology can so dramatically change things in a relatively short time. Those are the kinds of things that are exciting and will catch the public's attention.

Bob took a moment to remind the Commission that they are obligated to periodically generate a report that they can take to the legislature. The last report the USSC generated was in 2007. A smaller committee needs to be put together and come up with an idea of what this report needs to look like and get it done. Bob explained that they can either put together a report showing what they are doing or they can revise a strategic plan. He suggested doing a short term one that deals with accomplishments. Bob told the Commission about a similar report they did while Walter was the Chair.

Rick discussed the old plan and stated that they don't need to reinvent the wheel.

Leon asked Rick to take the lead on developing the strategy and organization for the report.

Bob offered to take the lead on this project because he already meets with the supporting agencies monthly. In their next meeting they will develop a strategy, timeline, and make assignments for all of the Commissioners. Leon reviewed the action items.

RVS of School Buildings Update

Bob gave the USSC an update on the RVS of schools. The State Office of Education has submitted the RVS studies from 5 school districts last Thursday. There are still 6 school districts that have not submitted their RVS studies. Bob explained that they will start to populate the database with the information from the studies that have already been turned in. This project is progressing. The next step is to figure out which districts have already had studies done so they are not duplicated. Bob believes that a lot of the bigger districts have had RVS studies done. Knowing this will help minimize the workload. He also commented that the studies they have done may not only be on the older buildings. If they work the numbers right they may be able to look at some of the newer buildings as well.

Roger Evans asked about if they have received the RVS data from the district that the new superintendent came from.

Bob responded that Weber District had completed part of the building evaluation and he and Barry would be helping to finish that study.

Rick asked about the funding for this project.

Bob explained that they are not sure what the RFP money will cover yet and briefly discussed the funding.

Roger asked if the Charter Schools would be included in the studies.

Bob replied that the Charter Schools are still under the purview of the State Office of Education so they will be looked at just like the public schools. There will be more progress to report in the next meeting.

BORP

Gilbert Gonzales began by showing the Commission his SAP card. He thanked Bob Carey, Sheila Curtis, Judy Watanabe, and the Utah Seismic Safety Commission for their support of the SAP Program. He also thanked all of the individuals involved in organizing the Building Occupancy Resumption Program (BORP) Program. Gilbert explained that the BORP Program is a strictly voluntary program. If businesses would like to participate they can go out and complete a plan. Salt Lake City and Murray are the only cities that have already adopted this ordinance. There are several other cities that are interested in participating in this program. It is an easy sell because it is voluntary and simple to implement. Several big businesses are interested in being a part of this because they will be able to have their buildings assessed prior to an event. Then in a disaster, they will be able to placard their own buildings based on the design plan that has already been performed. Gilbert expressed that this is a win win for everyone involved.

Roger commented that information about the BORP Program is available at www.slcgov.com.

Leon commented that he would like to throw that out to public works because they are involved in so many aspects. He believes APWA would be a good avenue for getting the word out about this program.

Gilbert agreed and stated that the word is getting out and there is a lot of interest in this program.

Keith asked if there would be conflicts of interest in letting businesses placard their own buildings. A discussion about the process and everyone's interests in this program followed. It was mentioned that there are organizations that can assist businesses in developing business resumption plans like the Utah Chapter of the Association of Contingency Planners website <http://utah.acp-international.com/>

Napa Valley Earthquake

Keith spoke to the Commission about the Napa Valley earthquake. This was a 6.0 magnitude earthquake near the San Francisco Bay area on Sunday August 24, 2014 at 6:00AM. Three-quarters of a million people felt significant shaking from this earthquake. The Napa Valley earthquake occurred on part of the San Andreas fault system. It was a strike slip fault with a shearing motion similar to what we could get in southern Utah. Northern and central Utah are more likely to get the normal, pull apart, faulting

earthquakes. This was the biggest shaking in northern California since 1989. Keith commented that if you talk to seismologists in California they all feel that they are overdue for a bigger earthquake. The USGS agrees. This was a relatively moderate size of earthquake. Keith also told the Commission about ShakeMaps and Prompt Assessment of Global of Earthquakes for Response (PAGER) which the USGS would produce in the event of an earthquake in Utah. These would provide emergency responders with valuable information about the event and damages. Keith discussed the California Earthquake Clearinghouse. The clearinghouse is a central location that pictures and information can be shared between responding agencies. If Utah could develop a similar system it would be critical for responders in a disaster. The earthquake early warning system was said to have activated successfully for this earthquake. There was five seconds of warning ahead of the shaking. The Bay Area Rapid Transit, BART, train system subscribes to this early warning system. The trains stop when they receive an earthquake warning. Keith was not sure that, in this case, lives or damages were saved. Even so, they run three separate algorithms. Two of the three failed, but they were able to get the warnings out. Eventually people will be able to get applications on their phones that will provide the warnings that could be up to a minute or minute and a half early warning. The last topic Keith commented on was a brewery that had been retrofitted in the Napa Valley area. There was a NetQuakes instrument in the brewery that recorded almost nine-tenths of gravity. The retrofit basically worked. The building did not collapse and there weren't any deaths or injuries. The brewery will be looked at a success. There is an enormous amount of data about this earthquake. All of the seismologists have upcoming meetings set to discuss this earthquake in December. Keith offered to keep everyone aware of the updates on this topic. A discussion followed about the use of drones for gathering video footage after an earthquake. The problem with this is that rotary wing aircraft occupy the same space as the drones do. In the future there will need to be a lot of public awareness to make sure only authorized drones occupy the airspace.

Basin Range Summit/Utah Quaternary Fault Database

Steve spoke to the USSC about the Basin Range Summit. UGS, the Seismograph Stations, DEM and many others are sponsoring the Basin Range Seismic Hazards Summit. It will be held in January with a short course, four-day meeting and field trip. Steve asked if the Commission would like to sponsor this and have their logo added as well. He explained that DEM has donated funds, mainly to support out-of-state speakers. The Commission discussed becoming a sponsor for the Summit.

Pete McDonough made a motion that the Utah Seismic Safety Commission make a contribution and become a sponsor for the Basin and Range Province Seismic Hazards Summit. **Keith Koper** seconded the motion.

Rick commented that the Commission doesn't have a budget.

Steve responded that Bob has contributed a significant amount of funds so the financial obligation has already been covered.

Leon clarified the motion to be that the Commission asks that their logo be added in recognition of the funds that Bob has donated, partly under the Commission's name. The motion passed.

Steve then showed the LiDAR data maps of the Wasatch fault. He provided copies of the map that shows the boundaries of the data that was mapped. The map is a draft map that shows what the finished product looks like. Fault traces that have been remapped using the high-resolution LiDAR, aerial photography and field work are shown on the maps. The red areas on the maps are the special study zones. UGS defines where these zones are located and if cities and counties adopt an ordinance based on these zones, a special geotechnical studies by developers would be required before building in these zones. This would keep buildings from being built on active faults. This is one of a series of maps that will be coming out in December.

Keith asked if they are finding any surprises.

Steve responded that in the southern most segments of the Wasatch fault they are finding a lot of traces there were not known before. LiDAR is able to pick up very subtle topographic changes, particularly in the vegetative areas that are very hard to map. The Levan and Fayette segment maps should come out around the first of the year. The Collinston segment, up toward the northern end of the fault, is completed. The mapping continues in the Clarkston Mountain and Malad City segments. The Salt Lake City and Provo segments are still being worked on as well. The other issue that is being worked on is on the map of the Warm Springs fault. This map should be released early next year as an open file report pending more data that keeps coming in. This is the first series of detailed maps that cover Salt Lake City itself. The next mapped area will be Draper and the year after that will be the south part of Salt Lake City. Another topic Steve discussed was on the Utah Quaternary fault database. They have gone through and completely revised the existing fault trench data behind the database. A significant amount of data goes to the USGS as part of their national database. They do not have the funds to regularly update that database. They are many years behind on updating that database, so the UGS is going to release a Utah specific database near the end of the year. This is the database being used over at AGRC in their GIS data set. There are six different fault layers over there and it is very confusing. All of the data are going to be replaced by one single data set. It will be less confusing and the latest data available. UGS will update this database several times a year as data becomes available. Steve was asked if the new LiDAR data covers Utah Lake and if they are looking for evidence of the Utah Lake fault. Steve responded that they have not been successful in tracing Dave Dinter's map faults in Utah Lake. The area has had significant ground disturbance and it appears that any scarps that may have been there

in the past have likely been obliterated. The other problem is that all of that development predates aerial photography, so they cannot look back at historic photography to map them either. Leon thanked Steve and continued to the news items.

Reports from Recent Professional Meetings

- EERI/SEAU Fall Seminar on Structural and Geotechnical Lessons Learned from the Christchurch Earthquake will be held on October 16, 2014 at the University of Utah.

News Items

Leon asked for an update on the ATC-20 training.

Bob responded that they will have two classes next week. The first will be in Sandy and the second will be in Ogden. If anyone is interested in attending either of those classes can contact Bob.

Enzo asked about his employees receiving a card after attending the ATC-20 training. He believes they should be able to qualify for placarding buildings.

Gilbert explained that under the current criteria they would not be able to receive a card.

Bob commented that just because they don't qualify for a card does not necessarily preclude them from attending the training, applying for the card or even from placarding buildings. He also stated that he and Gilbert would be meeting with the committee again next week and would raise the questions at that meeting.

Roger mentioned that he asked Sheila Curtis to provide copies of the revised Parapet Ordinance. This revised ordinance took effect in July of this year. He explained that he is trying to spread the word and make sure that people review this ordinance.

Gilbert asked if Roger had sent a copy of this to the roofing contractors. He replied that this would be his next step.

2015 ShakeOut Drill will be April 16, 2015. There will be a tabletop exercise the next day as well. They are trying to get one million people to participate. There is a website that people can sign up to participate and follow the latest news. Leon encouraged everyone to participate

Vigilant Guard will be October 30 - November 7, 2014. It is the National Guard's exercise. DEM will have a group from UGS do reconnaissance of the fault trace. They will also have people from drinking water agencies and some of the local water treatment plants looking at the water facilities. The Guard keeps track of the missions and maps the routes they fly. It's a nice thing to have that as a backup. The exercise will be initiated by a 6.0 magnitude earthquake in Taylorsville followed by a 7.0 magnitude earthquake that will activate the EOC for a full-scale/functional exercise for two days. An Air Operations tabletop exercise will follow the Vigilant Guard exercise. Bob gave a

standing invitation for anyone who would like to come check it out to contact him.

The next meeting will be on January 29, 2015 at the Salt Lake County Public Works Offices in Midvale.

Evan Curtis made a motion to adjourn the meeting. **Rick Allis** second the motion.

Leon Berrett adjourned the meeting at 12:00 PM.