

Utah Seismic Safety Commission

Quarterly Meeting Minutes

On January 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 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
Evan Curtis	Governor's Office of Budget and Planning
M. Leon Berrett	American Public Works Association
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
Katie LeLaCheur	Staff Recorder

Guests Present:

Glen Palmer	Palmer Engineering
Gilbert Gonzales	Murray City
Grant Willis	Utah Geological Association
April Abate	Utah Geological Association
Gerald McKenzie	BHB Consulting Engineers
Cory Lyman	Salt Lake City Emergency Management
Bruce Spiegelz	State Risk Management
Paul Thorley	Structural Engineers Association
Barry Welliver	Structural Engineer
Jonathan Major	Snow College
Mike Barrett	Salt Lake County Emergency Services
Aaron Nelson	Salt Lake County Emergency Management

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
Peter McDonough	American Society of Civil Engineers

Welcome and Introduction

Introductions were made of members and guests present. Roger explained that along with the July 18, 2013 Meeting Minutes was a copy of the November 13, 2013 Nevada Earthquake Safety Council Joint Meeting Minutes. A motion was made for the approval of the July 18, 2013 Meeting Minutes. The motion to approve the minutes was made by Rick Allis, second by Keith Koper. The minutes were approved.

Update on 2014 Legislature

Roger Evans provided an update of the 2014 Legislature. He explained that he put Representative Froerer and Senator Stevenson on the agenda with the hope that they would attend the meeting. Roger took a moment to recognize the Commission's appreciation of the work Representative Froerer did to get HB 278 passed. He then encouraged the Commission to regularly check the Legislative web site to see what bills are out there. Roger mentioned that without further changes the Parapet Ordinance will sunset as of July 1, 2014.

Keith Koper commented that the sunseting of this Bill is what the Commission has been hoping for. There was a brief discussion about the Parapet Ordinance.

Leon Berrett commented that if the Parapet Ordinance does sunset that it would provide a good opportunity for the Commission to increase awareness on the Ordinance. He expressed his concern that when the law was in place before there were very few municipalities that enforced it. Leon suggested that if the ordinance does sunset, they take the chance to increase awareness on the law.

Roger agreed that it is important to address these issues.

Discussion

2013 HB 278 - Public School Seismic Studies

Barry Welliver updated the Commission on Public School Seismic Studies. He began by reviewing the purpose of HB 278. It is a provision that requires School Districts, which are doing bonding for new construction, to survey their schools that were built prior to 1975 and present that report to the Utah Seismic Safety Commission. Barry continued that there was also a \$150,000 appropriation in the Governor's budget to

assemble a group, the RVS Authority, to help survey schools. The members of this group include Evan Curtis, three School Districts, Bruce Williams from the State Office of Education, Bob Carey, Roger Evans and himself. The RVS Authority has met a couple of times and has come to a consensus in regards to establishing a statewide database for collecting the RVS of schools. They have asked the State Office of Education to impress upon the school districts the need to submit the information that they may already have to the RVS Authority. Bob Carey has agreed to provide the space on a computer, housed in the Emergency Operations Center (EOC), for the storage of this data. During their last meeting the School Districts committed to acquiring and submitting the RVS reports that they already have to the RVS Authority. The committee will then determine the quality of the data and upload it to the ROVER database before the legislative session begins.

Keith Koper asked if it was a precondition that the data be stored in EOC. Barry explained that the School Districts were concerned about how and why the information should be stored in one central place. After exploring several options it was decided that the information should be stored on State servers as opposed to the USOE. Keith then asked if the School Districts are opposed to having public access to the data. Barry responded that he isn't sure what that sentiment is. He continued that are beginning to feel that the information will be used effectively. Early on the School Districts felt that they were on opposite sides of the fence in the legislature. Barry expressed his belief that Larry Willey's attendance at one of the meetings has helped to calm those feelings. They now have more of a comradery between the two entities and more support for a joint legislative effort. A brief discussion followed about funding and the ability to complete the project with the current funding.

Rick Allis asked if the passing of HB 278 has triggered any School Districts to begin new reports. He also asked about the development of a process and enforcement for gathering this information from the Districts.

Barry responded that these are questions for the Utah Seismic Safety Commission because they will be the recipients of this data. He continued that he is aware of some School Districts that had created school bonding and that there is not a clear process for collecting the data yet. Barry expressed his hope that Rep. Froerer will have some means for providing leverage on the School Districts that are doing this. He explained that this does not preclude the Commission from reaching out to the School Districts.

Rick responded that they may need to make the School Districts aware that this is a legal requirement.

Barry agreed and a discussion on the topic followed.

Utah Schools Seismic Hazard Inventory

Bob Carey gave his perspective of the process. The School Districts were concerned, primarily with funding, during the meetings with the RVS Authority. The State Office of Education has been pushing to get the RVS Studies from the Districts. The timeline the State Office gave the Districts was through the end of the month. So at the beginning of next month it will be clear how cooperative the Districts will be. Bob also explained storage and security of the RVS data was one of the main stumbling blocks they have faced so far. When he offered to provide a secure computer to store the data, the Districts accepted this solution, and were on board with continuing the process. Another stumbling block has been trying to educate the Districts on what ROVER is and the way it will be used. Bob emphasized that at the beginning of next month they should have a much clearer picture of the kind of delivery they will get from the School Districts.

Rick asked if there is a backup policy for the computer.

Bob replied that it will be a single entity for the initial input. Before he can back the computer up he will have to come up with another dark hole in basement to store a second computer for the backup. They will find an appropriate way to back up the data after they have it.

Roger commented that there are some people who will never give up on this. This has been going for seven years and they will continue to bring it up and push the cause forward.

Earthquake Engineering Research Institute (EERI) School Seismic Safety Initiative

Barry discussed the EERI School Seismic Safety Initiative. EERI is a worldwide collection of individuals who collectively work on earthquake related projects. There are fairly steep dues involved and they do have funds available for special projects. About five years ago EERI established a subcommittee on schools. This subcommittee has been very active at all of the annual meetings in getting together proponents for school seismic safety. EERI decided to provide a \$30,000 grant to this action oriented initiative. The initiative is intended to make actionable items on a local, regional, state, and national level. The thought was to have a workshop of 20 or so individuals. The intent was to coordinate the workshop with the Tenth National Engineering Conference in Alaska in July. Prior to the workshop people will be pre-selected to attend. The group will be established with preformatted thinking and be responsible for carrying the initiatives out. One of the meaningful parts of this proposal is to engage the EERI community where everyone has a part to play. Barry stated his hope that this will take place during the Conference in Alaska. EERI has committed to continue to provide funding for as long as this project needs.

Roger thanked Barry for his report on this Initiative. He also expressed his appreciation

for the individuals in Utah for work that they do on seismic safety.

Assessing the Seismic Stability and Safety of Pipelines along the Wasatch Front

Roger introduced the next agenda item. April Abate from the Utah Division of Oil, Gas, and Mining attended the meeting to discuss the issue of assessing the seismic stability of pipelines along the Wasatch Front. Roger also mentioned that Peter McDonough, who was unable to attend the meeting, has written an article on the subject. He then turned the time to April.

April Abate thanked the USSC for inviting her to attend their meeting. She introduced John Major, a student at Snow College. April explained that her interest in pipeline safety began after a conversation with a neighbor who works at the Tesoro Refinery. He told her about a Hydrofluoric Acid (HF) pipeline that runs through the North Salt Lake area. April continued that she has not been able to confirm the existence of this pipeline. She asked if the Commission has any knowledge of HF pipelines in the Salt Lake Valley or if this is a myth. April mentioned that she and John are interested in the possibility of a mapping initiative to get maps made or accessed and made publicly available. She asked for feedback from the Commission about what initiatives are needed in the area.

Rick responded with a UGS perspective because they compile maps of resources. They tried an initiative about five to ten years ago, looking at coal plants, oil and gas, transmission lines, and pipelines. Rick continued that he found that there is a big sensitivity about the exact locations because of safety terrorist reasons. To resolve this safety issue they ended up with general lines at a scale that didn't show the exact locations.

Bob explained that there is an element within his agency that has done a lot of work with pipeline companies and the refineries. Between that element, their GIS person, and AGRC they do have a database with this information. He agreed with Rick about the pipeline companies and refineries reluctance to provide this information. Bob stated that you can get this information on the federal side through a request which they have done. He continued that he and April should talk so she can see the level and scale of mapping that is already out there.

April replied that they have looked at the Division of Transportation web site. It allows you to zoom into the Salt Lake Valley and shows pipelines. It contained the lines from the refineries, carrying oil and Questar lines but had nothing about dangerous chemicals. April expressed her concerns that the public deserves disclosure on something that is dangerous like pipelines carrying dangerous chemicals.

Bob agreed that in terms of emergency response it would be useful to have some level of awareness of this.

Cory Lyman explained that the Utah Pipeline Safety through the Department of Public Utilities from the State monitors all of this. They train routinely with ongoing first

responder training. He offered to talk to April during the break to give her more information. He expressed his reluctance to believe that a pipeline would be an efficient way to transport Hydrofluoric Acid. Cory also acknowledged that there are some dangerous chemicals that are transported that way and reminded everyone that those things are regulated at a federal level. April asked if the regulations are strict enough. Cory offered to give her contact information for individuals who make be able to provide more information.

Roger mentioned that it is interesting that April brought this up. He discussed when he was a building official for Salt Lake City and how this was when he first started thinking about these issues. He stated that they needed to spend more effort on this. It may be helpful to let the Commission know all of the rules and regulations out there that govern this issue. Roger thanked April for attending the meeting and bringing up these concerns.

Utah Earthquake Program Annual Report for the Western States Seismic Policy Council (WSSPC)

Chris DuRoss began by introducing the WSSPC Annual Report that he had passed out during the break. The report discusses the Paleoseismic Investigations on the Washington Fault Zone and the Wasatch Fault Zone. The report mentions some work done on the Nephi segment of the fault. The UGS is in the final stages of preparing a publication, a UGS Special Study, on a recent investigation done on the Salt Lake segment in the West Valley Fault Zone. This will be published later this year. The UGS is planning another Paleoseismic Investigation of the Salt Lake segment that they will begin in June of this year. A publication on the work done on the St George segment is in the final stages and will also be published later this year.

Steve Bowman discussed the Earthquake Working Group meetings that the UGS sponsors. They meet every February. The Quaternary Fault Parameters Working Group reviews paleoseismic research and comes to a consensus about paleoseismic values to use for building design. The Liquefaction Advisory Group is working toward developing probabilistic liquefaction hazard maps. The Utah Earthquake Probabilities Working Group develops probabilities in 5, 10, 20, 30, and 50 year time intervals. This information will come out in early 2015. The UGS publishes summaries of these working groups and this information is available on their website. Due to a lack of National Earthquake Hazard Reduction Program (NEHRP) funding the Liquefaction and Ground Shaking Groups will not be meeting this year. Steve discussed a project that he worked on with Bill Lund. They compiled all, except one, of the legacy Paleoseismic Reports into one publication. Another big project that they are still working on is acquiring high resolution LiDAR at a half meter interval. They have half of the data acquired already and hope to have the rest of the data by April. The data will be available to the public for download by early this summer.

Keith asked how they were funding the project. Steve responded that it was a coordinated effort from DEM, FEMA, USGS, UGS, AGRC, and Salt Lake County to fund the project.

Steve continued that after they acquire all of the data on the Wasatch Fault they are going to go back and remap the traces of the Wasatch Fault at a scale of 1/10,000. UGS is planning to create new Surface Fault Rupture Hazard Maps. This will be a multiyear effort for as long as they can keep the funding going. They will release each map as they go and make it available for download on their website.

Keith asked how they will handle all of the LiDAR data.

Steve responded that the data they are collecting will take between 3 and 4 terabytes of space. AGRC will only be releasing reduced data sets. The raw data will be available at <http://www.opentopography.org/>. They are a National Science Foundation sponsored portal that aggregates high resolution LiDAR data.

Bob commented that earlier Keith had asked about funding for this project. He clarified that the funding which, came from DEM, did not come from his program but from the National Flood Insurance Program (NFIP). He explained that they combined a flood study with a geologic study and created a unique partnership that came together to make this project possible.

Rick commented on how valuable this LiDAR data will be. He suggested that someday they would love to see more of the State mapped with LiDAR.

Bob mentioned the work being done on the Unreinforced Masonry Buildings (URM) Homeowners Guide. They should be ready to publish this in the very near future.

Glen was asked to comment on this. He explained that they have meeting scheduled for the 12th of February where they plan to review the final details and finish preparing it for publishing.

Roger commented that he has read the entire document and he believes it will be very beneficial to the Fix the Bricks Program.

Keith discussed the Seismograph Stations accomplishments. He stated that it had been a quiet year in seismographic terms. The more newsworthy project they have been working on is the Kennecott Landslide. They had geotechnical surveillance so the landslide was predicted. No one was hurt because they knew it was coming and had already evacuated. The landslide triggered sixteen minor earthquakes that they were able to pick up on the seismic network. This is the first time this has been documented. Kris Pankow is the lead on this project. They have done a very good job of promoting this in the media. There was a rockslide near Zion National Park. A boulder fell off a cliff and ran into a house, killing two people inside. They were able to record the seismic data and have been studying the energy release that came from that rockslide. Keith mentioned the SSA meeting that was held in April. He also briefly discussed Walter Arabasz's work on putting together a catalogue of earthquake magnitudes. This is important because it goes into the hazard calculations and hazard maps. Keith stated

that they put out quarterly reports on their seismicity and are in the process of updating their website so it will be more user friendly. A brief discussion followed about how the Kennecott Landslide could have triggered earthquakes. They are not exactly sure why this has happened.

Roger thanked Keith for his information and commented that it would be nice if they had a handout of all of these key websites that they could pass out at the PTA Annual Meeting.

Update on Utah Structural Appraisal Program (SAP)/ATC-20 (Rapid Evaluation Safety Assessment) Certification

Roger introduced Gilbert Gonzales. He is the Building Official for Murray City and was recently elected to the International Code Council Board of Directors. Gilbert is heading the committee for the Utah Structural Appraisal Program (SAP)/ATC-20 Rapid Evaluation Safety Assessment.

Gilbert Gonzales thanked the Commission for providing him time during their meeting to give an update on the Utah SAP/ACT-20 Certification. He reminded the Commission that the Utah SAP/ATC-20 Certification Program is modeled after the California Emergency Management program. There are other states with similar programs that do not issue a Disaster Response Card. One thing that they want to see come from the Utah program is a Utah Disaster Response Card. Gilbert explained that the committee is composed of members including architects, engineers, building officials, plans examiners, and other members who are present in the meeting. The objective of the Safety Assessment Program is to provide trained and credentialed Utah disaster response volunteers. During a disaster these individuals will be able to go out and do rapid visual assessments of buildings and placard them. There are minimum requirements to obtain the Utah Disaster Response Card include attending ACT-20 training, field training, and Incident Command Training. In addition to these criteria an individual must also be one of the following: a Certified International Code Council (ICC) Member, a Licensed Professional Engineer (PE), or a Licensed Architect to receive a Utah Disaster Response Card. This will ensure that the volunteers who respond to a disaster, that are conducting rapid visual screening, will be credentialed and qualified. Gilbert asked for any questions about the program. A discussion about the process for credentialing followed.

Bob commented that just because not everyone will qualify for the Disaster Response Card does not mean that they can't attend the training. They will train anyone who asks to be trained. The Disaster Response Card will only be issued to those who qualify. In the event of a disaster, coordination of the resources will be coordinated with the State EOC.

Roger asked Cory to discuss the BORP Program in Salt Lake City.

Cory explained that the credit for the Building Occupancy Resumption Program (BORP)

goes to the Structural Engineers Association of Utah (SEAU). After the ShakeOut, a few years ago, the SEAU approached Salt Lake City and presented a model ordinance that was modeled after San Francisco. Salt Lake City agreed that this would be a good ordinance and began the process of developing a similar ordinance. The Ordinance passed last fall. They are in the process of finalizing the rules and will publish them in a few weeks. They have been working to ensure that the program will look very similar from jurisdiction to jurisdiction.

Gilbert commented that he feels this is a great program. He is waiting for Salt Lake to finalize it so that he can implement it in Murray as well. Gilbert expressed his interest in using this program with new buildings as well.

Cory continued to explain the components of the program. A building owner can hire a qualified structural engineer to do an evaluation of their building and create a pre-done packet with the buildings strengths and weaknesses. They can then mitigate those weaknesses before the event. Gilbert commented that the BORP plans will be reviewed by the jurisdictions as well. A question was asked about the procedures of recertification after an individual has received the Utah Disaster Response Card.

Gilbert answered that they have discussed this procedure and are looking at requiring recertification every three years to maintain the Utah Disaster Response Card. The committee is intending to produce a procedural manual that will cover things such as recertification.

Bob responded to a question about how to schedule ATC-20 Training. They used to offer the training once or twice a year. Due to the increase in requests they are now making the training available whenever a group requests it.

Roger asked for any remaining questions and introduced the next topic.

Division of Emergency Management Earthquake Exercise and HAZUS Modeling

Bob discussed this agenda item. The ShakeOut drill will be April 17, 2014. There will be a 4 hour tabletop exercise in conjunction with the drill. DEM will be participating in the Vigilant Guard Exercise that will occur in the end of October. This is also an earthquake exercise. They will be using a cold start instead of a hot start. This means that they will begin with a smaller earthquake that will be followed by a larger main event. The State EOC will be functioning through the entire exercise. Bob explained that the HAZUS model that they will be using this year is the one that was used for the ShakeOut last year. The initial earthquake will be modeled after the 2008 Wells Earthquake in Nevada and will be centered in Taylorsville.

USSC Joint Meeting with Nevada Earthquake Safety Council

Roger asked if the Commission has any comments on the joint meeting with the Nevada Earthquake Safety Council. The next meeting will be held in Utah.

Keith commented that Leon had mentioned that one of the big values of this kind of meeting is to be able to meet with people.

Roger agreed and expressed his belief that it is also valuable to be able to share information.

Rick asked about the next meeting. The meetings are held every other year and the next meeting will be in Salt Lake City. A short discussion followed about the meeting.

News Items

Reports from Recent Professional Meetings

- Grant presented on the project that the Utah Geological Association is working on, in conjunction with the SEAU, AAC, and ASCE. The project is on raising awareness for private Unreinforced Masonry Buildings (URM). They are moving forward fairly rapidly. They have a website under construction and will probably open it up for comment as some time. They are working on a plan for public advertising as well.
- Leon mentioned that the American Public Works Association (APWA) is actively pursuing the adoption of a Mutual Aid Agreement between all public works related agencies. This will include companies such as Rocky Mountain Power, Questar, and other similar companies. The draft of the agreement is being reviewed from a legal standpoint and will be sent out as soon as it is complete. Leon asked that if anyone would like a copy of the agreement to contact him.

Budget

Bob reminded the Commission that in the last meeting they passed a motion to request a line item in the Governor's budget for the USSC. He explained that they did not put in place a mechanism for how they would accomplish this. Bob expressed his belief that the Commission is not likely to lose funding from DEM in the future. A discussion followed about where funding has come from in the past how they could move forward.

Rick asked Bob if he felt that requesting separate funding is necessary. He continued that in his experience they have to be careful what they ask for. Requesting a line item in the budget may put in Commission under scrutiny.

Bob replied that Kris Hamlet would be able to provide a better perspective. Kris responded that if the amount of money isn't huge it is probably not worth creating an issue. He continued that so far DEM has not had any problem with funding the Commission.

Bob addressed the concerns that have been voiced that when he is gone they may lose funding from the Division. He expressed his belief that the relationship would continue, as it is, even when he is gone. Bob suggested that the Commission may want to come

into an MOU or MOA so that the relationship is a little more formalized in case of any changes in the future. He continued that this is probably the safest way to ensure future funding.

Other

The next quarterly meeting will be held on April 24, 2014.

Enzo asked about discussing the seismic design and nonstructural components of new buildings. He asked if anyone had any new information about it. There was no new information to discuss.

Sheila reminded the Commission that 2014 is their anniversary year. She asked if they wanted to have a party or open house. The Commission will discuss this at the next quarterly meeting.

Roger commented that in July he is planning to step down as the Chairman of the Commission. He promised not to stop attending the meetings. Roger asked that the Commission start considering others who could take the Chairman position. He mentioned that he has a few individuals in mind that would be a good representative for the Utah League of Cities and Towns.

Rick asked if Roger is planning to retire.

Roger responded that he is not retiring just stepping down. He intends to stay involved.

Roger Evan adjourned the meeting at 11:15 AM.