

## **Utah Seismic Safety Commission Quarterly Meeting Minutes**

On July 14, 2016, 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 a.m.

### **Members Present:**

M. Leon Berrett, Chair	American Public Works Association
Keith Koper	University of Utah Seismograph Stations
Roger Evans	Utah League of Cities and Towns
Peter McDonough	American Society of Civil Engineers
Patrick Tomassino	Utah Division of Facilities Construction and Management
Evan Curtis	Governor's Office of Management and Budget
Steven Bruemmer	American Institute of Architects, Utah Disaster Assistance
Senator Jerry Stevenson	Utah State Senate
Craig Kerkman	Workers Compensation Fund

### **USSC Staff Present:**

Steve Bowman	Utah Geological Survey
Adam Hiscock	Utah Geological Survey
Bob Carey	Utah Division of Emergency Management
John Crofts	Utah Division of Emergency Management

### **Guests Present:**

Walter Arabasz	University of Utah Seismograph Stations
Glen Palmer	Palmer Engineering
Jennifer Youngfield	Utah State Office of Education
Mike Barrett	Salt Lake City
Janna Wilkinson	Utah Division of Emergency Management
Judy Watanabe	Utah Division of Emergency Management
Brad Bartholomew	Utah Division of Emergency Management
Emily Kleber	Utah Geological Survey
Bruce Spiegel	Utah Division of Administrative Services
Leslie Randle	Citizen
Brent Maxfield	Earthquake Engineering Research Institute, Utah Chapter
Kim Robinson	Structural Engineers Association of Utah
Jessica Chappell	Structural Engineers Association of Utah/Earthquake Engineering Research Institute

### **Members Not Present:**

Rep. Gage Froerer	Utah House of Representatives
Sean McGowan	Federal Emergency Management Agency, Region VIII (Ex-Officio)
Meldee Love	Utah Insurance Department
Gerald McKenzie	Structural Engineers Association of Utah

Carmen Swanwick  
Rick Allis  
Kris Hamlet  
Rick Allis  
Gage Froerer  
Meldee Love  
Gerald McKenzie

Utah Department of Transportation  
Utah Geological Survey  
Utah Division of Emergency Management  
Utah Geological Survey  
Utah House of Representatives  
Utah Insurance Department  
BHB Engineers

### Welcome

Introductions were made of members and guests present. **Pete McDonough** made a motion for the approval of the April 18, 2016 Meeting Minutes, and **Keith Koper** seconded the motion with stated corrections, and the minutes were approved.

### Election of Commission Chair and Vice Chair

By invitation of the USSC, **Walter Arabasz** discussed the election process and asked for nominations. **Pete** nominated **Leon** for Chair and **Keith** seconded the nomination. Nominations were then closed by acclamation. The USSC members voted unanimously to appoint **Leon** as Chair. **Walter** opened nominations for Vice Chair. **Pete** nominated **Keith** and **Rick Allis** for Vice Chairs. The nominations were then closed by acclamation, and the USSC members voted unanimously for the Vice Chairs.

### USSC Progress Report/Draft Report Review

**John Crofts** discussed the USSC Progress Report and thanked those who had already submitted their report sections. John stated that the report should be completed by December. The Progress Report is extremely important to provide a narrative and record contributions from all involved in the USSC. **John** invited USSC members to contact him if they have questions or needed additional help. **Leon** discussed organizing the drafts and working together on the Committee. **Leon** invited anyone interested in participating on the USSC Progress Report Committee to let him know. The committee will compile the narratives, create a draft report, and plans to have it completed this year.

### USSC Goals, Directions, and Recommendations

**Leon** discussed the need to review USSC goals, directions, and explore recommendations. Discussion included: marketing and creating greater USSC awareness to a broader groups. **Leon** expressed concern that many in the public works sector and other groups are not familiar with the USSC. **Leon** suggested creating a pass-along card describing what the USSC contributes. **Leon** recommended the card include: 1) Name of the Commission, 2) the USSC's purpose, and 3) a summary of USSC resources. Development of this card would be discussed later. **Roger Evans** recommended that we add this card to the USSC website, advertise the card with a press release, and include the *Utah Guide for the Seismic Improvement of Unreinforced Masonry Dwellings* document and other USSC resources into the press release. **Keith** added that the USSC could further utilize a variety of social media such as Facebook, Twitter, Instagram, and

other platforms to further the USSC's outreach. **Jessica Chappell** recommended also providing an updated email list that the USSC could use to regularly communicate to participants. Added discussion recommended utilizing interns to manage USSC social media outreach efforts.

**Walter** urged the USSC members to further examine the commission's mission and mandate. **Walter** reminded the group that the USSC is the larger face of an on-going partnership between the University of Utah Seismograph Stations, Utah Division of Emergency Management (UDEM), and the Utah Geological Survey (UGS) as the Utah Earthquake Program: <https://ussc.utah.gov/pages/help.php?section=Utah+Earthquake+Program>. **Walter** urged the members to review the USSC statute (<http://le.utah.gov/xcode/Title63C/Chapter6/63C-6.html>) and mandate. **Walter** stated that the statute and mandate are a collective grounding of why the USSC exists and what are the strategic goals.

**Steve Bowman** recommended we create a presentation about the USSC that members and others can then share with their own agencies and others. **Pete** suggested creating a script for a basic presentation outline. **Leon** recommended putting the presentation on the next planning agenda and answering key questions: *What is the USSC?, What are the USSC goals?, and Why does the USSC exist?* **Leon, Pete, Steve, and Patrick Tomassino** will be on a workgroup to develop this presentation.

### Utah Resiliency Plan Discussion

Before the Utah Resiliency Plan discussion, **Bob Carey** announced **Senator Jerry Stevenson** would be joining the meeting, and **Leon** officially welcomed **Senator Stevenson**.

**Leon** recognized **Mike Barrett** from Salt Lake City and **Brad Bartholomew** from UDEM. **Leon** discussed the Resiliency Plan, cooperative group participation, the plan integration into the State Resiliency Plan, and that resiliency is a cooperative effort. **Mike** described this plan as a cooperative effort and mentioned that Salt Lake City's resiliency plan is open for review and if anyone would like to view the plan to contact him.

**Leon** asked **Mike** to discuss how Salt Lake City views resiliency. **Mike** discussed how Salt Lake City approached developing their resiliency plan by breaking the plan into various standing committees, including the State of Utah. In **Mike's** opinion there would be statewide application for resiliency plans and earthquake challenges. **Mike** recommended that other communities could create resiliency plans by creating different workgroups that deal with various hazards, similar to Salt Lake City's approach. **Mike** discussed Seaside, Oregon and their resiliency plan. Seaside also took an all-hazards approach to their resiliency plan. **Mike** said the resiliency plan included all pillars of resiliency, which included mitigation and guidance from the National Institute of Standards (NIST). **Steve** added the NIST guidance documents to the USSC website (<https://ussc.utah.gov/pages/search.php?search=!collection200480>) after the meeting.

**Janna Wilkinson** mentioned she had returned from a mitigation research conference. At the conference, they discussed, examined, and presented new methods for measuring resilience. **Janna** invited everyone to approach her after the meeting to share what she had learned. **Mike** added that Salt Lake County utilized some of these resiliency measurement methods.

**Leon** said he is looking at it as a general framework (general resiliency plan for the State of Utah). **Leon** suggested that a statewide recovery framework would help avoid duplication of efforts and a statewide resiliency plan would be a comprehensive look at how recovery occurs following a large earthquake event.

**Kim Robinson** stated it has been five years since the Christchurch, New Zealand earthquake, and even now their recovery is incomplete. From a structural standpoint, Christchurch is examining existing minimum code design requirements as inadequate. Lessons from Christchurch indicate that our codes are not stringent enough in Utah. The USSC discussed about resiliency and shorting the window of recovery. **Jessica Chappell** discussed increasing resiliency efforts in order to avoid similar problems Christchurch is experiencing even after five years. The USSC members agreed that recovery exceeding five years is too long and would be too costly to Utah.

**Janna** said that Utah is currently working to develop a statewide recovery plan. Discussion followed that an earthquake of significant magnitude could be very costly to Utah. **Jennifer Youngfield** discussed the importance of understanding the risks and knowing what is going to happen if we do have an earthquake, and recommended going into more resiliency detail and thorough review. Discussion followed with members discussing visiting with both **Mike** and **Jenna** to review resiliency estimation methods.

**Pete** added that the Lifeline Infrastructures Resilience Council (LIRC) is quite active, and includes utilities throughout the county that is currently addressing the interdependencies between risks. LIRC meets quarterly, discusses lifeline emergencies, and is examining resiliency.

**Bob** said all the discussion still comes back to resiliency issues discussed in our last meeting, including how to harness these different groups that are addressing earthquakes and resiliency. The bigger question is how does the state bring everyone's efforts together in a unified resiliency effort by integrating all the pieces that each group can contribute to the overall resiliency plan. **Bob** mentioned the first thing out of the recent Earthquake Engineering Research Institute (EERI) Utah Earthquake Resiliency Workshop was that elements of resiliency are being developed and that we need to get everyone in one room for half a day. **Bob** stressed that we need to talk to each other and sit down together to coordinate our efforts.

**Brent Maxfield** summarized the recent EERI workshop, and how attendees discussed economic, social involvement, planning, and collaboration issues. **Brent** complimented those working towards resiliency and asked about an umbrella organization that would coordinate and integrate current resiliency efforts towards a unified resiliency goal without duplicating efforts. **Brent** asked if the USSC could be the overall group that oversees the integration of resiliency efforts.

**Bob** said the Federal Emergency Management Agency (FEMA) is pushing resiliency and that the USSC can be used to be supportive of resiliency and help bring everyone together. **Bob** suggested sponsoring a half-day workshop to get everyone together, discuss existing resiliency efforts, and examine any duplication of efforts from various groups. **Walter** expressed concerns about the discussion and stated that UDEM has the responsibility of overseeing the state overall

resiliency efforts. **Walter** stated the Commission lends support to UDEM for being the overall coordinating agency responsible for coordinating resiliency efforts.

**Bob** agreed with Walter and recommended that UDEM be the “bigger umbrella” to coordinate resiliency efforts. Further discussion and agreement resulted in the Commission agreeing to recognize UDEM as the agency responsible for overseeing and coordinate resiliency efforts. **Leon** made a motion for the USSC to prepare a letter supporting UDEM as the statewide resiliency plan lead. **Keith** seconded the motion, and by acclamation, the USSC members agreed to send a letter to UDEM indicating the USSC’s support to UDEM as the agency responsible for overseeing overall resiliency efforts in the State of Utah.

### **State of Utah and Salt Lake County Recovery Plans Update**

**Leon** invited **Brad Bartholomew** and **Mike Barrett** to provide updates on the Salt Lake City and State of Utah recovery plans. **Brad** discussed progress of the State Disaster Recovery Framework (UDRF). **Brad** said that they are reaching out to other state agencies and are providing a structure to UDRF. The goal of UDRF is to understand what the disaster looks like and how to recover. The UDRF is broad and open so that it can be a flexible recovery plan that describes who will be included in the recovery framework. Utah has based our recovery plan after the National Disaster Recovery Framework (NDRF, <https://www.fema.gov/national-disaster-recovery-framework>) that has six recovery teams and describes how they will work together.

**Mike** said the Salt Lake County resiliency plan has taken three years to complete and has now gone out for public comment. Salt Lake County’s recovery framework is 38 pages long, and includes the NDRF. **Mike** stated that he expects the Salt Lake County Council to approve the resiliency plan at their next meeting. The authors intentionally kept the plan short so they could integrate the annexes to the plan and that separate County Council approvals would not be required. Currently, there are eight annexes to the plan. The plan involved a large amount of work, and **Mike** invited others to draw from their plan. He will share the plan after the County Council approves the plan at their next meeting.

**Leon** further emphasized the importance of recovery plans, given the recent publication of the *EERI Scenario for a Magnitude 7.0 Earthquake on the Wasatch Fault-Salt Lake City Segment* (<https://ussc.utah.gov/pages/help.php?section=EERI+Salt+Lake+City+M7+Earthquake+Scenario>) document. The document describes an increased risk to schools, parapets, and an increased need for further legislation, due to higher than anticipated earthquake hazard. **Leon** said he personally believes we need to do everything we can to encourage a successful statewide recovery plan program. **Leon** suggested providing a workshop to bring everyone together. Discussion included involving the Utah Legislature and perhaps requesting funds to provide additional funding to address recovery.

**Brent** expressed concerns that resiliency be given adequate attention. **Bob** said he has several roles as an emergency management professional, and with these multiple roles, he has a broader view of UDEM and FEMA and how we should implement resiliency. The overall goal is to reach out to a broad audience and get them involved in community resilience. **Bob** stated that

UDEM is the most capable agency to reach out to communities. **Bob** suggested the USSC encourage UDEM's pursuit of resiliency in being the overall umbrella organization that brings everyone together. **Leon** said they have plenty of justification to have UDEM oversee resiliency and recommends the USSC be a motivator in supporting UDEM with recovery planning efforts.

**Keith** recommended the USSC write a letter of support to UDEM supporting resiliency, planning, and include support of the Utah Earthquake Program. **Glen** said that the USSC could ask, but not task UDEM with the goals of completing a statewide resiliency program. Discussion then continued that we could bring participants together in a half day workshop to discuss resiliency efforts, and that UDEM should take the lead. **Bob** said he likes the letter of support to UDEM Director **Kris Hamlet** and that it would be helpful.

**Kim Robinson** said the Structural Engineers Association of Utah (SEAU) is an important organization to include in resiliency planning, assignments, and coordination. SEAU has a list of everything listed in resiliency and SEAU can help with tasking. **Bob** added that the State Resiliency Plan should be written in a way that supports the counties and demonstrates participants' expectations. Further discussion included concerns of duplication of efforts by various participants. The discussion included future resiliency meetings and perhaps putting together another half day workshop to include all participants in order to avoid duplicating efforts.

### **ATC-20 and Direction of the Federal Program**

**Bob** talked about ATC-20 (<https://www.atcouncil.org/products/downloadable-products/briefing-papers/45-downloadable/downloads/107-atc-20-download>) and the process the Central United States Earthquake Consortium is using to develop mission ready packages. **Bob** discussed the Emergency Management Association Compact (EMAC) request, and how it could play out with ATC-20 training. **Bob** followed with the EMAC discussion and stated that Utah is currently providing 27 Utah Highway patrolmen on an EMAC request from Cleveland, Ohio for the Republican National Convention. **Bob** is pushing for an ATC presentation so that states can see how they are organizing their teams. **Bob** said California relies on licensing as shield to liability. Our committee allows anyone to be Tier 1 responder; nonetheless, they have a level of credentialing. **Bob** is encouraging the ATC committee to hold a series of meetings in the Fall for establishing criteria for an EMAC request of ATC trained staff. ATC is trying to standardize what credentials (type I or II) will be. ATC is currently addressing credentialing and hopes to answer some of the issues that could be standardized between states.

As about 92% of our buildings are residential, the committee is going to have pushback because all do not agree on the credentialing issue and are worried about potential legal liability. **Bob** said there are just not enough licensed professionals to sufficiently deal with a large earthquake event.

### **Cascadia Rising Exercise Update**

**Pete** discussed the Cascadia Rising exercise that was recently held in Washington, Oregon, and Idaho. **Pete** referenced a Cascadia earthquake event in the 1800s, and discussed the purpose of



the exercise was to address how the region would handle a similar earthquake if it were to happen today through training and test entire emergency management community in these areas. Over 50 counties participated along with the states of Washington, Oregon, Idaho; various native tribal governments; and the province of British Columbia, Canada.

Simulated field operations and all major military commands were identified on June 7 and June 10. They tested six capabilities: operations and communications, public health and medical, mass care services, situational assessments, operational coordination, and critical transportation.

**Bob** added that four UDEM employees participated in the exercise: Matt Beaudry was in Washington, **Sheila Curtis** went to Idaho as an evaluator, and Kris Repp and **Bob** were observers in the exercise. **Bob** discussed the Idaho scenario was to deal with an influx of 140,000 people entering from outside the state. **Bob** said there was a lot of debate on how the exercise would work and the objectives. **Bob** discussed the value of the exercise, the need to review difficult questions, the need to improve, and the opportunity to improve emergency management. He stated the exercise was very educational. **Sheila** shared her experiences in the exercise and discussed her participation. **Sheila** described the exercise as valuable, educational, and an excellent opportunity to explore an earthquake scenario.

### General Updates

**Glen Palmer** stated the *Utah Guide for the Seismic Improvement of Unreinforced Masonry Dwellings* document (<https://ussc.utah.gov/pages/help.php?section=Utah+Guide+for+URM+Dwellings>) is excellent, now available online, and discussed the benefits of reviewing the document and sharing it with others.

**Brad** discussed Salt Lake City's Fix the Bricks program (<http://www.bereadyslc.com/go/doc/6354/2122438/Fix-the-Bricks>), and that the city submitted a \$500,000 grant request in June to FEMA to retrofit homes. Fix the Bricks will allow individual, single-family homeowners to apply for \$5,000 to complete earthquake retrofits. Salt Lake City is waiting for FEMA to announce if the grant will be awarded.

**Glen** mentioned the Fix the Bricks program is hoping to include continuous load path requirements. All of the details of Fix the Bricks have not yet been resolved, and the city will discuss some of the details after a successful grant award.

**John** said the earthquake booklet draft is being reviewed and revised and will be printed before the year ends.

**Bob** said the Utah state earthquake program funding may be restored soon and is hoping to know this Fall. **Bob** mentioned another rapid visual screening class will be held on August 2<sup>nd</sup>, and an ATC-20 course on September 15<sup>th</sup> in Midvale. **Bob** discussed a module for basic construction that would assist those who do not typically deal with construction for single family structures.

**Evan Curtis** discussed HB 316 (<http://le.utah.gov/~2016/bills/static/HB0316.html>) that went into effect July. State amendments to the bill include a six-year cycle.

**Steve** announced the UGS *Earthquake Probabilities for the Wasatch Front Region in Utah, Idaho, and Wyoming* report has now been published and is available on the USSC website (<https://ussc.utah.gov/pages/help.php?section=Utah+Earthquake+Probabilities>). Kennecott Utah Copper/Rio Tinto is making additional mitigation efforts because of this report that addresses regional earthquake hazard.

**Bob** stated the Cascadia Rising Exercise with Idaho highlighted some bigger concerns and that Idaho expressed further interest to conduct more exercises.

**Steve** discussed several new paleoseismology investigations and submitted funding proposals to support additional lidar data acquisition and detailed mapping of the East and West Cache and Wasatch fault zones to produce surface-fault-rupture hazard maps. **Adam Hiscock** mentioned that several Utah Valley University professors are performing paleoseismic trench investigations near Corner Canyon.

**Keith** discussed the relatively low seismic activity in Utah and mining activities as a contributor to earthquake activity. He mentioned a magnitude 4 earthquake in the Uinta Mountains, but no other seismic activity of note.

**Steve** updated the commission of new guidelines for earthquakes, useful for developers, cities and other so we can mitigate. These guidelines have been published by the UGS and are available at <http://ugspub.nr.utah.gov/publications/circular/c-122.pdf>.

**Bob** said FEMA is currently in Utah conducting congressional visits, and we are giving Congressional staff copies of the EERI *Scenario for a Magnitude 7.0 Earthquake on the Wasatch Fault-Salt Lake City Segment* and the USSC *Utah Guide for the Seismic Improvement of Unreinforced Masonry Dwellings* and *Putting Down Roots in Earthquake Country* documents.

The USSC public outreach discussion will continue to the next meeting

The USSC scheduled the next meeting for October 27, 2016, in the Kletting Room at the Utah Senate Building.