Presidents Message

By Craig Wilkinson
EERI Utah Chapter President

I trust that 2019 has been a great year for our members. Personally, I know that 2019 has been a year of learning for me, and I look forward to starting next year a little smarter than last. One memorable learning experience was June’s Unreinforced Masonry Buildings Summit organized by FEMA, the State of Utah, and the Applied Technology Council. This summit was a tremendous opportunity to learn not only how vulnerable many buildings are, but that there are many professionals in the community working to remedy the problems with unreinforced masonry. I met city officials and engineers that were making a difference—one building at a time. Additionally, in July, EERI co-sponsored a workshop highlighting the changes to the ground motion provisions in IBC 2018 and ASCE 7-16, where I learned that we’ll need to change our approach to site-specific seismic studies. This year I am especially thankful for EERI’s efforts to advance the practice of earthquake engineering, improve understanding of the impact of earthquakes, and advocate measures to reducing the harmful effects of earthquakes on our communities.

The educational value of EERI isn’t exclusive to this past year. In fact, the Utah Chapter of EERI has hosted important many important events and workshops in recent years. In 2015, we issued the report titled, “Scenario for a Magnitude 7.0 Earthquake on the Wasatch Fault – Salt Lake City Segment: Hazards and Loss Estimates.” This report was a groundbreaking first here in Utah—presenting a scenario showing how long Utah would take to fully recover from a significant seismic event and possible long-term impacts on our local economy. As a first step for a more resilient community, the scenario is a valuable tool to educate and motivate Utahns to prepare for a major seismic event along the Wasatch Front.

This theoretical scenario was followed by 2016’s Utah Earthquake Resiliency Workshop, a symposium featuring nationally known experts on the creation and implementation of resiliency plans from San Francisco, Oregon, and elsewhere. Recognizing that we could do more here in Utah, the workshop saw our local engineers, architects, planners, geologists, government officials, community leaders, business owners, utility companies, and key stakeholders resolve to start that ball rolling on local resiliency planning. Early 2018 included the workshop Building Resilient Communities: Plan to Survive and Thrive, where we learned more about our community’s vulnerabilities to natural disasters and how to implement strategies now to improve disaster recovery later.

Each of these events built on one another as we increased awareness and motivated our communities towards resiliency. We will continue the Utah chapter’s efforts to make our communities more resilient throughout 2020. Although at times our progress seems slow, take heart that it has been moving forward. I have personally seen community leaders, planners, engineers, and other professionals engage with one another and with the public to discuss where Utah stands with respect to earthquake preparation, recovery, and resilience.

We are fortunate that earthquakes occur in geologic time, and while the “big one” may occur tomorrow, next week, or next month, it could also strike in the next decade or century. There is always more time to be a little better. We can and will make a difference if we keep improving. The positive changes we make
today will always make us better tomorrow. I look forward to continuing these efforts with each of you as I serve as the chapter’s President this next year.

Lastly, I feel like I should mention that in 2022 the 12th U.S. National Conference on Earthquake Engineering will be held right here in Salt Lake City (see page 3). What an exciting opportunity for us to host earthquake professionals from around the world! We hope to harness the excitement for this future conference to sustain our current momentum in engaging our local communities in resiliency discussions. This is a big conference and will require most, if not all, of us to pitch in and help EERI make the conference a huge success.

I invite all of you to come and help EERI in our efforts. If you aren’t already a member, please join. We are doing great things that make a difference, and we need your help to do more. We look forward to seeing you here!

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**URM Summit Held at State Capitol**

By Bob Carey
EERI Board Member

On June 25-26, 2019, FEMA, the Utah Division of Emergency Management, and the Applied Technology Council conducted a day and a half Unreinforced Masonry (URM) Summit in the Utah State Senate Building on the campus of the State Capitol. The Summit brought together a diverse group of stakeholders including government officials, emergency managers, civic organizations, and building official Some of the objectives of the Summit included:

- Raising awareness among the participates of the threat that URMs pose to Utah communities from a large Wasatch earthquake.
- Promoting mitigation best practices.
- Identifying actions and solutions that should be prioritized by the various stakeholder groups to increase Utah’s resilience against large earthquakes.
- Improve the understanding of mitigation funding opportunities.
- Use recent earthquakes outside of Utah to demonstrate the realities of the recovery. timeline and societal impacts following large earthquakes.

The first day of the Summit had presentations characterizing the seismic hazards in Utah, the risk that URMs pose to Utah communities, Utah retrofit solutions and programs, and policy successes in Utah and the other states. Closing out the first day was a panel discussion on financing opportunities.

The second day of the Summit had the participants divided into three breakout groups that would rotate through the breakout topics below:

- Financing challenges, opportunities and solutions.
- Barriers other than cost and potential solutions.
- Gaining buy-in.

The breakout sessions were organized to prompt idea sharing across diverse stakeholder groups and identify actions and solutions that should be pursued at the organizational, local and state levels.
FEMA recently released their National Mitigation Investment Strategy (NMIS). NMIS is a significant jump forward in building a culture of preparedness. Based on the efforts made by the Utah Division of Emergency Management with the URM Summit and the Division’s ongoing mitigation activities, FEMA Region VIII nominated the State of Utah to participate in a pilot FEMA mitigation priority, Resilient Wasatch Front 2023. With over 147,000 URMs along the greater Wasatch Front, the risk to the population is high. Tapping funding and incentives for mitigation investments is a key objective to addressing the Utah’s URM inventory and other similar building type challenges. The “A Resilient Wasatch From 2023” committee will be formed in the upcoming year to begin the work on building a more resilient community.

**EERI Utah Chapter to Host the 12th U.S. National Conference on Earthquake Engineering in 2022**

By Brent Maxfield
EERI Utah Board Member

This is a BIG deal! In 2022, the 12th U.S. National Conference on Earthquake Engineering (12NCEE) and the EERI Annual Meeting will be held in Salt Lake City at the Salt Palace Convention Center. The NCEE is held once every four years and draws participants from all over the globe. It is always held in conjunction with the EERI Annual Meeting. Salt Lake City has hosted the EERI Annual Meetings 1991 and 2009, but this conference will be much larger and more prestigious.

The 11NCEE was held in Los Angeles in June of 2018. More than 1,250 earthquake professionals representing 26 disciplines, 37 countries around the world, and 47 states attended the conference. In addition, 350 undergraduate students competed on 40 teams for the Annual Seismic Design Competition. The conference had 135 technical sessions and 815 papers presented. It required more than 125 volunteers to pull it off.

The 10NCEE was held in Anchorage Alaska in July 2014. This conference had more than 1,100 attendees from nearly 50 countries. This conference remembered the 50th anniversary of the 1964 Great Alaska Earthquake.

I attend both the 10NCEE and 11NCEE and found them to be very exciting and worthwhile meetings. It is an incredible experience to be able to rub shoulders with many of the leading experts in earthquake engineering, earthquake science, earthquake mitigation, and earthquake recovery. The plenary and technical sessions provided me much needed technical knowledge and gave me insights that I had.
not known before. I came away enriched, learning information to help make me a better engineer.

Having the 12NCEE in Salt Lake City will provide a wonderful opportunity to engage the public, communities along the Wasatch Front, many professional and community associations, the State, and the legislature. The EERI Utah Chapter Board is seeking your ideas to include in the conference. Please send an email with your ideas or suggestions to Utah@eeri.org. Please plan to provide your assistance to make this the best NCEE ever. Look forward to more information in the coming months.

The Utah Chapter looks forward to working with the EERI National committee to ensure the success of this conference.

2019 Nevada – Utah Seismic Safety Meeting

By John Crofts
Utah Department of Emergency Management

Nevada and Utah held a joint seismic safety meeting on October 16, 2019, in Reno, Nevada to discuss important earthquake challenges shared both states. Both states have been meeting bi-annually for over 10 years. The close relationship between the states began on February 21, 2008, after Wells, Nevada experienced a magnitude 6 earthquake with 20 to 40 seconds of strong shaking. This earthquake caused significant damage to Wells, and because of Utah’s proximity, Utah representatives quickly assisted Wells and the State of Nevada. This event created a cooperative relationship between the two states.

Since the 2008 Wells earthquake, both states have cooperated on a number of earthquake issues and have met biannually. As a result of the lessons learned from Wells, the Western States Seismic Policy Council took a cooperative effort in developing, producing and printing the Earthquake Emergency Handbook for First Responders and Incident Commanders, which is specifically designed as a guide for small, rural communities following an earthquake. The Wells earthquake was the impetus for creating this handbook. Please visit the Utah Seismic Safety Commission’s website to download a copy.

In 2008 Wells Earthquake struck Wells hard, but that community and their surrounding neighbors have a pioneering spirit and wherewithal that can be credited with effectively responding to the emergency and recovering quickly to keep Wells going strong. Wells residents have been gracious in allowing the earthquake effects to be scrutinized so lessons can be learned.
The 2019 joint meeting had over 60 participants from Nevada and Utah. Nevada media covered the event and highlighted meeting topics. Both States discussed their continued challenges of Unreinforced Masonry Buildings (URMs) that perform badly in earthquakes and discussed possible solutions to address these risks. The meeting covered challenges in funding, regulations, and reviewed a list of possible action items to mitigate earthquake risks.

Should either state suffers an earthquake, both states are equally committed to assisting each other. FEMA supports and encourages strong partnerships between states. Nevada and Utah are both committed to this strong partnership and plan to expand on this partnership and biannual meetings.

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**EERI Utah 2020 Board**

The EERI Utah chapter has had three nominations for three positions open for the 2020 board. The positions are President Elect and two Director positions. Please reference the [Utah Chapter Bylaws](#) for more information about elections and the board.

**2020 President Elect – 3 year term**
The President-elect shall serve a 3-year-term: one year at President-elect, one year as President, and one year as Past-President.

Jordan Terry, KPFF Consulting Engineers

**2020 Directors – 2 year term**
The Director-at-large, shortened to “Director,” shall serve a term of two years. Directors at-large are eligible to serve one additional two-year term. They will be replacing Bob Carey and Dallin Pederson who have served their term.

Emily Kleber, Utah Geological Survey
Travis Gerber, Gerhart Cole Geotechnical Engineers

Thank you to our past, current, and incoming board members! Look for more information about the board activities in the next 2020 newsletter.

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Announcement: ATC-20 Certification Training and Renewal

The Utah Safety Assessment Program (SAP) provides experienced professionals who can quickly evaluate damaged structures, identifying those that are safe for occupancy to which people can return, while marking those that are unsafe or have restricted use. It accepts civil, structural, geotechnical, and architect licenses from any state, along with ICC building inspector certifications.

The ATC-20 course covers rapid assessment of damaged buildings, which covers the requirements for placarding and instruction on identifying potential failures of structures after events from seismic, flooding and wind. This course also includes a field portion that examines buildings.

The ATC-20 course is offered several times a year and you may contact John Crofts for upcoming course offerings or request Crofts to help you to sponsor a training at your location. Once students have completed the FEMA ICS-100 course and completed the ATC-20 course, they are provided a certificate and photo credential as a Utah SAP representative.

The credential is required to be renewed every three years, and you may now renew your credential by passing an online exam with a score of 70% or higher. Exam questions are taken from materials provided at the ATC-20 course.

To renew your credential please contact the SAP Administrator, John Crofts, at jcrofts@utah.gov. Crofts will then email you a link with your online renewal exam. You may also contact Crofts for questions regarding hosting an ATC-20 class, updating contact information or any other general questions.

Upcoming Events:

February 4-5, 2020 8a – 5p: 2020 Utah Earthquake Working Group Meetings

Location: Utah Department of Natural Resources Building, Salt Lake City, Utah
Helpful Earthquake Engineering Links:

Earthquake Engineering Research Institute (EERI) - Utah
National EERI
http://utah.eeri.org

Structural Engineering Association of Utah (SEAU)
http://www.seau.org

American Society of Civil Engineers (ASCE) – Utah
http://www.sections.asce.org/utah/

ASCE GEO-Institute
http://www.asce.org/geo/

American Council of Engineering Companies (ACEC) - Utah
http://www.acecutah.org

Seismological Society of America (SSA)
http://www.seismosoc.org

Southern California Earthquake Center (SCEC)
http://www.scec.org

Utah Seismic Safety Commission (USSC)
http://ussc.utah.gov

Utah Geological Survey (UGS)
www.geology.utah.gov/utahgeo/hazards/index.htm

University of Utah Seismology and Active Tectonics Research Group
http://www.uusatrg.utah.edu

Utah Division of Occupational and Professional Licensure (DOPL)
http://www.dopl.utah.gov

United States Geological Society (USGS)
http://earthquake.usgs.gov/

Be Ready Utah
http://www.utah.gov/beready/

Utah ShakeOut Website:
http://www.shakeout.org/utah/

Homebuyer’s Guide to Earthquake Hazards in Utah

EERI Utah Chapter is seeking articles and announcements for upcoming newsletter editions. Please forward submissions to be considered by the Utah Chapter leadership to Emily Kleber at ekleber@utah.gov