



Meeting Minutes Nevada Earthquake Safety Council

Attendance	DATE	Thursday, May 28, 2014	
	TIME	9:00 A.M.	
	LOCATION	Legislative Counsel Bureau 401 S. Carson Street, Room 2134 Carson City, Nevada 89701	
		Grant Sawyer Building 555 E. Washington Ave, Room 4412 Las Vegas, Nevada 89101	
	METHOD	Video-Teleconference	
RECORDER	Janell Woodward		
Council Members	Present	Staff and Others	Present
Alan Bennett	X	Janell Woodward	X
Michael Blakely	X	Rick Martin	X
Ian Buckle	X	Chief Chris Smith	X
Wayne Carlson	X	Henna Rasul	X
Craig dePolo	X		
Joan Jeffers	X	Ken Smith	X
Graham Kent	X	Werner Hellmer	X
Ron Lynn	X	Barbara Luke	X
Connie Morton		Christine Springer	X
Jim O'Donnell	X	Jeff Hahn	X
Vance Payne		Dave Donovan	X
Jim Reagan	X	Patrick Macan	X
Woody Savage	X	Justina Hillman	X
Wanda Taylor	X	Kyle West	X
Jim Walker	X	Bill Elliott	X
Jim Werle	X	Andrea Esp	X
		Diane dePolo	X
		Annie Kell	X

1. CALL TO ORDER AND ROLL CALL

Chair, Ron Lynn called meeting to order. Janell Woodward called roll and a quorum was established for the meeting.

2. PUBLIC COMMENT

Chair, Ron Lynn opened discussion for public commentary in both the northern and southern venues. There were no comments.

3. COMMENTS FROM THE CHAIR

Chair, Ron Lynn, stated that David Donovan was in attendance in the southern venue and has expressed an interest in becoming a member of the Nevada Earthquake Safety Council (NESC). He regularly attends the NESC meetings. Janell Woodward stated that NDEM Chief Smith would speak to open positions at this time. Ron Lynn reminded everyone that all appointments to the NESC come through Chief Smith and NDEM.

4. NDEM CHIEF'S COMMENTS TO THE NEVADA EARTHQUAKE SAFETY COUNCIL (NESC)

Chief Chris Smith, Nevada Division of Emergency Management (NDEM) addressed the NESC. Chief indicated NDEM is working to fill the open positions. Two positions have been appointed including VOAD and COAD representatives. The appointment of the volunteer agencies is important in helping to ensure the public understands the risks of earthquakes and how to best mitigate. Not everyone understands the earthquake risks, preparedness and recovery in Nevada. Chief Smith asked that NESC take a look at what else can be done to get the message out to the public. Earthquakes, Fires and Floods are the top three risks in Nevada. Other positions available include insurance industry, education, and legislative members on the board.

Craig dePolo shared Chief Smith's concern regarding the lack of awareness of earthquakes in Nevada. Craig indicated that part of the issue with lack of awareness is that Nevada has not had a severe damaging earthquake in a long time. California also faces this situation. Earthquakes have the potential of being far worse than a fire or flood. Craig indicated the importance of taking advantage of the timing when earthquakes do happen to use that as a stepping stone to reach the public when they are most aware of the hazard.

Chief Smith discussed the THIRA process that Nevada performs each year indicating that earthquakes are ranked in the top three with this group. With regard to taking advantage of the opportunity to educate when disasters occur, the Living with Fires group does just that with fires and Chief Smith supported the NESC also following this process in order to further promote earthquake awareness, preparedness and recovery.

Chair, Ron Lynn, thanked Chief Smith for his continued support of the NESC. Ron indicated that perhaps in the future the NESC needs to take another look at the bylaws to see if changes may need to be made to accommodate allowing positions on the NESC for some important entities that shoulder perhaps be represented on the NESC to enhance the NESC's effectiveness. Emergency preparedness has similar aspects regardless of the emergency including being prepared, having an emergency kit, and being informed. Ron indicated that the NESC can join with others in supporting an overall preparedness educational outreach.

Jim Reagan brought up the issue of the development of a playbook in the event of an earthquake. This concept was discussed in the past but never actually completed. This playbook would cover who does what during the period following an earthquake event with regard to NESC, as well as directing media to the correct person, coordination with NDEM and local agencies. This playbook needs to be put together ahead of time.

Ron Lynn indicated he would like to pass this to Chief Smith. Chief Smith's desire is for the NESC to work toward having this "playbook" for the future. The NESC includes many

subject matter experts with regard to earthquakes and would like this to occur perhaps in lockstep with the Emergency Management Coordinating Council (EMCC). This would be a playbook for the NESC which would also help to add to NDEM's plan and message to the public. It was suggested that Jim Reagan could lead this committee to accomplish this.

Graham Kent supported the idea of a playbook. Graham indicated that many issues would most likely need to include California as there would be a high probability that an event could happen on the border of Nevada and California.

5. NEVADA DIVISION OF EMERGENCY MANAGEMENT UPDATE

Rick Martin, NDEM, asked Bill Elliott, lead planner at NDEM, to give an update on the Southern Nevada Regional Earthquake Operations Plan. The project is based on developing an operational plan which is a playbook for operations to integrate all the different agencies for the purpose of responding to an earthquake event. The plan will define what organizations are available for immediate response and what gaps are present. The committee working on this plan will work toward determining how these gaps can be filled. The process is to have one plan instead of many different plans.

The question was asked whether there is any private involvement in these committees. Bill indicated that there will be private involvement and there will be some workshops in the Las Vegas area. Another question asked who Bill was in contact with from the resort industry. Bill stated that this plan is in the very early stages and Clark County will determine who should be involved. Bill believes there should be a broad spectrum of players involved in the process.

Chair, Ron Lynn stated that the resort security industry would fill a critical function in the community with a catastrophic event and hoped that they would be included in this planning process and Bill agreed.

Craig dePolo applauded the effort in this plan and supported the idea of basing the plan with the highest possible visitor population as being very important. Craig indicated the importance of showing visitors that even when bad things happen in Nevada, they are in good hands.

Rick Martin highlighted an upcoming cross-border exercise in June for a seismic event with California and Nevada. Also, this year NDEM will ramp-up efforts for Vigilant Guard 17 that will be a statewide exercise.

The Emergency Management Performance Grant was approved for Nevada yesterday and local awards for this will be cut pretty soon. About 54-56% of this grant is awarded to local jurisdictions. Pre-disaster mitigation for 2013 just had a project approved for the Clark County School District for replacing gas shut-off valves. Karen Johnson is working with NDEM on these projects and will be with NDEM through August.

Rick also had the opportunity to attend the Regional Earthquake Program Manager's Conference in Denver, CO. The reduction of funds to each state was discussed at this conference with many states in the same situation. FEMA does not foresee any increase in funding for the near future. Increased communication between FEMA, their third-party consortiums, and the states was also an important subject with suggestions such as quarterly conference calls and email user groups. Discussion also took place regarding how to get national attention for earthquakes and how to get NEMA and NEHRP involved. California gave a presentation at the conference on the Shakeout giving kudos to Nevada

for great involvement. Additionally, some other states have been leveraging packages for grant funding for outreach and videos mainly to schools.

Ron Lynn suggested that perhaps Nevada should consider leveraging some video projects for the Basin range including Nevada, Utah, and Colorado.

6. APPROVAL OF MINUTES

Chair, Ron Lynn called for approval of the meeting minutes from the Nevada Earthquake Safety Council (NESC) meeting held February 12, 2014. A correction was made to the spelling of "Almanor" on number four. With the correction noted, motion presented by Woody Savage with a second provided by Craig dePolo. All were in favor with no opposition. Motion passed unanimously.

7. SYMPOSIUM/TECHNICAL TRAINING WORKSHOP WITH CALIFORNIA AUGUST 13, 2014

Graham Kent testified on May 8 to the California Seismic Safety Commission and highlighted what NESC is and earthquake hazards in Nevada. California is excited to have the workshop with Nevada and would like to look forward to a joint project between California and Nevada with funding coming from California. California will have their normal quarterly meeting on August 12 and then have the symposium/workshop the following day. The agenda will be forthcoming closer to the workshop. Craig dePolo volunteered to give a talk regarding historical earthquakes along the border of California and Nevada. Clarification was given regarding the reasoning for having a symposium/workshop versus a quarterly meeting with that reason being that under the open meeting laws, neither California nor Nevada would be allowed to have their public meetings across their respective state line borders. Having a workshop with no business discussed or considered allows both states to get together for presentations.

8. PRESENTATION – AN ALTERNATIVE ANALYSIS OF THE PROBABILISTIC SEISMICITY HAZARD FOR LAS VEGAS VALLEY, NEVADA

Wanda Taylor and Barbara Luke gave a technical presentation regarding an alternative analysis of the probabilistic seismicity hazard for Las Vegas Valley, Nevada. This project was a result of several experts throughout Nevada including Wanda Taylor, Barbara Luke, Woody Savage, Craig dePolo and Jim Faulds, as well as University of Nevada, Las Vegas (UNLV) student, Suchan Lamichane. This work has been published. An overview was given of the faults in the Las Vegas Valley area. These faults have been shown to be more active than was previously thought. There are additional faults further away that could also potentially affect the Las Vegas Valley.

Of note, there were some technical difficulties in viewing the slide presentation in the south venue. However, those in the north venue were able to see a clear picture. The PowerPoint was not available to send out prior to the meeting. However, the presentation was posted online.

Barbara Luke addressed the seismic hazard in the Las Vegas Valley area. The United States Geological Survey (USGS) has a nationwide probabilistic seismic hazard analysis tool available which allows you to put in the coordinates of the area that you are interested in and this tool will bring up an analysis of that area. Currently the viewpoint is that the faults in the Las Vegas Valley area, while active, do not have a high probability of causing a large amount of damage to the Las Vegas area. Contrary to that viewpoint, the work that Craig dePolo, Wanda Taylor and others in the field have accomplished have shown these

faults to be capable of causing a large amount of damage. The study that was done took the USGS 2008 model and showed a curve reflecting the new information and the differences from the 2008 model. Updated USGS maps are showing the increased risk with the Las Vegas Valley faults.

Discussion did ensue regarding subsidence and the faults. Craig dePolo stated that he did not feel that the changes are coincidental. Graham Kent asked if the presentation could be forwarded to USGS pointing out the need for better monitoring in the southern part of Nevada. Graham stated that he could send the USGS the presentation along with the publication. Ron Lynn asked what information actually has been sent to the Building Seismic Safety Council (BSSC). Craig elaborated on the information that they have found and what has been submitted. Craig also indicated that the Nevada Bureau of Mines and Geology (NBMG) also published an Open-File Report (OF1312) that is available on the NBMG website. Much of this information covers the Eglington fault. Craig stated that the USGS seems to still be a bit skeptical regarding the new findings and further studies need to be done. Updated dating needs to be performed. Craig also indicated that both he and Wanda Taylor are working on publishing more work to spark further discussion in the scientific world.

Again, the presentation is posted online.

9. RECENT SEISMICITY IN NEVADA

Ken Smith gave an update regarding the recent seismicity throughout Nevada. There has been quite a bit of activity along the Sierra Range Front in Southern Nevada with magnitude 4's in the Boulder City area and Lake Mead area. Ken showed the monitoring network for Nevada stating that much of it is actually in California. The need for increased monitoring in the Southern Nevada area was stressed and Ken stated that USGS is open to this in the next funding period. The Seismological Laboratory runs on a five-year period with USGS and they will renew next year so are trying to get the USGS to recognize this. Eastern and Central Nevada have little in the way of monitoring sensors.

Just for 2014, there have been 5000 earthquakes already, all less than 3 other than one on the Utah border which was near Caliente and had a little sequence. The rate will probably be around 12,000 for 2014. There are monitoring stations in the test site area supported by the Department of Energy (DOE). Virginia City had a recent short swarm and it allowed emergency management and first responders to having some meetings about how to deal with a larger event should it occur.

Ken also discussed the shaking events near the Barrick mines which happened over a couple of weeks. This included ground shaking of the buildings with pops underground. Seven seismological sensors are being installed in the area.

Permitting has finally been given for putting several sensors and cameras up at Lake Tahoe. Noble Energy is fracking in Eastern Nevada. Waste water injections are what cause the seismic events and not fracking itself.

Another reason to update Nevada's monitoring network is to be able to participate in California's early warning system.

10. REPORT FROM THE SEISMOLOGICAL LABORATORY, UNIVERSITY OF NEVADA

Graham Kent stated there has been an increased effort to update a URM plan on the University of Nevada campus. Additionally, there will be some positive news coming out regarding this in the near future.

Graham also stated that over the last 3-4 weeks, he has had 2-3 TV, radio or news print interviews with regard to fracking in Northeast Nevada and what may or may not happen. Noble Energy is on their way to producing over a billion barrels of oil per day and any seismic events will likely be tagged with fracking. This is because there are few sensors in that area. The Seismological Laboratory will meet with BLM and the Division of Minerals regarding what needs to be done.

Annie Kell will be taking the big shaker truck to two schools which will be a precursor to the Great Shakeout. They hope to bring the truck down to Las Vegas area right before the Shakeout.

Wanda Taylor asked for further explanation on the shaker truck. Annie stated that the shaking is spontaneous and is very real and accurate. Annie is going to try to set up some dates prior to the Shakeout with the shaker truck in the Las Vegas area. Big Shaker, LLC owns the shaker truck and they are based out of Escondido, CA with a website at www.bigshaker.com

11. UPDATE ON UNREINFORCED MASONRY (URM) STUDY WITH FEMA CONCERNING VERIFICATION IN CLARK COUNTY (NATIONAL EARTHQUAKE HAZARD REDUCTION PROGRAM (NEHRP) PROJECT)

Werner Hellmer gave an update regarding the NEHRP project with the verification of URM in Clark County. This project is doing some ground-truthing to the listed URM buildings in Clark County to determine whether these buildings are on the current list. Utilizing UNLV students, they will verify these buildings for accuracy. Clark County will manipulate some of the data regarding when Clark County adopted codes. Clark County currently has a draft contract with EERI. They also are close to having approval to fund two student engineers and will train them on visual identification methods. They are looking to purchase two Faro scanners which are essentially rebar detectors. They are reasonably confident they can send these scanners out with students to physically do evaluations of properties on the list from the state insurance and also perhaps identify locations that were missed on the original list. They will be able to determine higher risk neighborhoods. The process will be video documented for further use to other areas of the state.

Craig dePolo stated he would be able to the raw data from NBMG to Werner. Ron Lynn stated Clark County sees this as a pilot program that could be used in other areas of the state.

12. SUBCOMMITTEE FORMATION

Ron Lynn discussed the formation of subcommittees and the possible need for subcommittees. Subcommittees of NESC need to be chaired by a NESC member but the others in the group do not need to be NESC members. Outreach is an area which has come up in discussion. Ron would like to set up an outreach subcommittee. Ron will be reaching out to council members. In the past, NESC has had a legislative committee. Ron indicated NESC may need to work with NDEM to see whether a legislative committee might be necessary. This may become an issue with regard to unreinforced masonry. In the past, a bill was introduced but came out in discussion. The feeling was that it may be too

detrimental to communities if URM's were deemed unsafe. Wayne Carlson stated the bill got huge fiscal notes from entities regarding URM's and this was why the bill eventually died. There was also a misunderstanding that locals would have to go out and determine the URM's themselves. Discussion also included whether there should be a resolution, opinion or position from the state stating they recognize that URM's having the potential to be unsafe for citizens. Ron Lynn suggested a possible meeting with Chief Smith and several others regarding the state position and what has already been adopted by NESC. Could this be publicized in a better format to make the public aware?

Another comment in the meeting was the after-action playbook that might constitute formation of a subcommittee for developing this playbook.

Ron will communicate with the Council members indicating who he would like to see on these subcommittees and asked for input from the Council regarding others they feel might be good to add to these subcommittees. Ron also reminded everyone of the open meeting law and rules of a quorum being 1 more than 50% in which case a meeting would need to be posted.

13. UPDATE FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA)

Michael Hornick from FEMA Region IX reiterated that the Earthquake Program Manager's conference was attended by Rick Martin from NDEM representing Nevada. Michael confirmed that the outlook for future increased funding at this point does not look very good.

Craig dePolo gave the example of the 1915 Centennial booklet project and the fact that the project was actually taken outside of the state and given to a third party. Craig felt that more could have been done for the community than just a summarized brochure.

Michael stated he is happy to work as an advocate for Nevada and requested that anyone on the Council contact him if there was some way he could be of help.

Michael also suggested a presentation by Ann Rozinski regarding the California Earthquake Clearinghouse. She might be a potential speaker for the August workshop with the California Seismic Safety Commission.

14. SCHEDULED 2014 CALENDAR YEAR MEETING DATES FOR THE COUNCIL

Ron Lynn reminded the Council that the August quarterly meeting is canceled in lieu of the workshop with the California Seismic Safety Commission. The next quarterly meeting will be November 5.

15. PUBLIC COMMENT

Ron Lynn opened the meeting for public comment. There was none.

16. ADJOURN

Ron Lynn adjourned the meeting.