



## Meeting Minutes Nevada Earthquake Safety Council

<b>Attendance</b>	<b>DATE</b>	Wednesday, February 3, 2016	
	<b>TIME</b>	9:00 A.M.	
	<b>LOCATION</b>	Nevada Division of Emergency Management Executive Conference Room 2478 Fairview Drive Carson City, NV 89701	
		Clark County Fire Department, Station 18 2 <sup>nd</sup> Floor Conference Room 575 E. Flamingo Road Las Vegas, NV 89119	
	<b>METHOD</b>	Videoconference	
<b>RECORDER</b>	Janell Woodward		
<b>Council Members</b>	<b>Present</b>	<b>Staff and Others</b>	<b>Present</b>
Alan Bennett	X	Janell Woodward (DEM)	X
Michael Blakely		Rick Martin (DEM)	X
Ian Buckle	X	Henna Rasul (DAG)	X
Wayne Carlson	X	Karen Johnson (DEM)	
Oscar Delgado	X		
Craig dePolo	X		
Jim Faulds			
Tim Ghan	X		
Jeff Hahn	X		
Graham Kent	X		
Chris Lake	X		
Ron Lynn	X		
Connie Morton	X		
Jim O'Donnell	X		
Vance Payne	X		
Jim Reagan	X		
Woody Savage	X		
Stephen Silberkraus			
Wanda Taylor	X		
Jim Werle	X		
Michael Wilson	X		

### 1. CALL TO ORDER AND ROLL CALL

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

## **2. PUBLIC COMMENT.**

Chair, Ron Lynn opened discussion for public commentary for this meeting. There were no comments.

## **3. APPROVAL OF THE MEETING MINUTES.**

Chair Lynn asked for a motion to accept the meeting minutes from the November 10, 2015 joint quarterly meeting. Mike Wilson made a motion to approve the minutes. Woody Savage seconded the motion. All were in favor of approving the minutes from November 10, 2015 meeting and the motion passed unanimously.

## **4. PRESENTATION ON VIGILANT GUARD (VG) 17 EARTHQUAKE EXERCISE**

Captain Geir Gabrielson of the Nevada National Guard provided a presentation on the upcoming VG-17 exercise. Vigilant Guard is a NorthCom (the combined U.S. Northern Command unit for the military in the U.S.) sponsored exercise along with the National Guard. The purpose of the exercise is to allow the National Guard to work with various federal, state and local emergency response agencies. This is to exercise a regional response to a catastrophic event.

This exercise will be an earthquake-based scenario in which a 6.7 magnitude event along the Frenchman Fault causes damage requiring local response and calling out the National Guard. As the Nevada National Guard does a lot of Hazmat work, the scenario will trigger a Hazmat event. This will be big enough to exceed their capacity and they will pull in California National Guard to assist. National Guard will work with civilian agencies to see what type of responses they might request. Two days after the Las Vegas earthquake, there will be an earthquake in California added for the purpose of joint interaction with Nevada and California. A magnitude 7.8 earthquake will occur along the San Andreas Fault tying into the Ardent Sentry exercise from last year in California. In this scenario, the Las Angeles basin will be devastated and Nevada and California will be able to exercise their mass migration plans with 700,000 to 1 million people displaced.

November 12 will be the initial earthquake in Nevada. There will be a cold start with no actual play. November 14 will be the beginning of exercise play. This will also be the same time of the California earthquake.

Chris Lake indicated the hospitals were talking about having a catastrophic failure during the scenario and inquired as to whether the National Guard would provide any response for this. Captain Gabrielson indicated there is no plan to do that for this exercise. Additionally, the National Guard is happy to discuss with the hospitals regarding what they might look for in this exercise. However, the Nevada National Guard does not have medical assets and in a real life scenario would be required to bring in assets from elsewhere. Another question was asked how long it would take to bring in medical assets and Captain Gabrielson indicated he was unsure but it would likely be approximately 48 hours.

Another question was asked regarding mass migration from California to the Las Vegas area that is stressed with a Hazmat incident. The key here would be exercising how to keep a mass migration moving past Las Vegas who is unable to accommodate them.

Finally, a last question was asked regarding exercising law enforcement capabilities between local jurisdictions and the National Guard. Captain Gabrielson indicated they are happy to work with the law enforcement to exercise this capability during Vigilant Guard 17.

## **5. REPORT ON FAULT MAPPING IN THE NORTH PROJECT**

Craig dePolo provided an overview of the fault map project that was funded by deobligated Emergency Management Performance Grant (EMPG) funds. Craig thanked the committee for ranking this project as number one providing the opportunity to qualify for possible funding.

Several people from the Nevada Bureau of Mines and Geology collaborated on this project with Craig. Copies of the maps were available for viewing at the meeting. A strategy is being considered to update faults in Nevada. This project only allowed for a couple of months to complete the work. Six quads across the northern portion of the state were reviewed as part of this project and some small faults were added. Each quad was reviewed for the committee. Craig added the need to conduct a survey of the volcanoes in Nevada.

Jim Werle asked about green faults that Craig indicated were rare. This is a difficult criterion with the age of the fault indicating that you can see something moved but you do not really know what it is. Discussion of the age of faults ensued.

Craig indicated they will come up with a systematic way to map the faults including a suspected fault category. These maps should be on line with NBMG in the next week or so.

## **6. NEVADA DIVISION OF EMERGENCY MANAGEMENT (NDEM) UPDATE.**

Rick Martin provided an overview update from the Division of Emergency Management.

Jim Walker is now with the Division of Emergency Management as the Preparedness Manager.

Janell has been working hard to coordinate earthquake training through the National Earthquake Technical Assistance Program (NETAP). Training this year will be in both Reno and Las Vegas and will consist of FEMA P-154/ATC-20 which is pre and post-earthquake inspection, as well as FEMA P-767 which is Earthquake Mitigation for Hospitals. This training will take place the week of March 7-11. Craig dePolo asked how hospitals were finding out about this training. Chris Lake indicated that he is working with Janell and the Hospital Association is getting this information out to all of the hospitals. Grant funding is also available for the rural areas to make it possible for their participation.

Next week is the Emergency Manager's workshop put on by NDEM. This is a 2-day conference held in Douglas County this year. Dr. Kent will be on the agenda on day two. Jeff Hahn asked if there was any consideration for webcasting that conference. Rick indicated that this has been considered but will likely not be available until next year.

The EMPG grant will be dropping on February 15 with a 30-day turnaround. This grant supports the NESC.

The Pre-Disaster Mitigation grant is due to be out about mid-March. This grant is rumored to be three times more money this year. A lot of people are applying for this grant money as the grant program has become more well-known throughout Nevada.

NDEM put together a new strategic plan with our new chief. This includes a road show with representatives from the sections within NDEM going out to the local jurisdictions explaining what our organization does.

The National Earthquake Program Manager's Conference is coming up May 2-3 in conjunction with the National Earthquake Conference May 4-6 in Long Beach, CA. Rick will be attending this meeting but would like some company from NESC members if anyone would like to attend. Ron Lynn will attend on Friday, May 6.

## **7. RECENT SEISMICITY IN NEVADA AND REPORT FROM THE SEISMOLOGICAL LABORATORY, UNIVERSITY OF NEVADA, RENO.**

Vice Chair, Graham Kent provided an update on recent seismicity in Nevada and the UNR Seismological Laboratory. Annie Kell is putting out a monthly update newsletter from the Nevada Seismological Laboratory.

An overview of the seismographs and fire cameras around the state was given. A quarter of the USGS budget is coming from the private sector in placing fire cameras. This provides the resiliency and hardening to ensure that the seismic data remains. Several earthquakes near magnitude 5 occurred during 2015 with one by Caliente, one by Vya, and one by Death Valley. In reviewing magnitude 4 earthquakes for Nevada for one year, this equaled 20 years of seismicity in Utah. At the magnitude 3 level, there was almost one every other day. We had over 19,000 earthquakes in Nevada which is certainly more than preceding years.

Most everyone felt the Reno earthquake that occurred a few days before Christmas. This is a sequence associated with the larger Mt. Rose fault system. This system is capable of rupturing all the way to at least the southern end of Washoe Valley in the magnitude 6 to 7 range. This was a normal fault and dips to the west. This was not the "big" one. Putting this information all together, they are able to put together what a magnitude 6.8 would really look like. Of note, the rupture was not quite the size of the UNR campus and took less than a second to rupture. The shaking lasted for 30-40 seconds.

Another sequence is occurring to the southwest with the largest around a magnitude 3.0. Those were strike-slip.

Seismological Laboratory staff is only working about a quarter of the time on the statewide network and the rest of their time on other projects. They do not have the money or support to go out and fix all of their equipment. Some of their equipment is not working. Of note, the Seismological Laboratory pays the State of Nevada \$250,000 a year to monitor the state.

Graham indicated the Council should probably discuss the need to put something out from the Council regarding the geothermal plants. There is a geothermal plant east of Fernley with largest magnitude 2.8. This means it will be felt if you are there. Additionally, we can record in Elko when in Death Valley. These are anthropogenic earthquakes, human-triggered earthquakes. We should potentially be monitoring these plants at some level.

USGS has supplied some extra funding and the Seismological Laboratory is rebuilding their communications system in Southern Nevada.

Comment was made regarding the White House Earthquake Resiliency Forum which was very well done. Speakers commented during the forum that they would like to bring earthquake early warning (EEW) to Nevada. Washington and Oregon drove most of this resiliency meeting and their ability to capitalize on Cascadia. In order to obtain federal money, a state needs to ensure that their governor, senators, congressmen, major cities, and companies are all involved.

As a reminder, the Seismological Society of America conference is in Reno this year, April 20-22 with a few events earlier in the week. An Earthquake Economic Resiliency Forum will be held on April 19 which will serve as a template for a similar meeting in southern Nevada.

Wanda Taylor asked if there were plans to add additional instrumentation in Lincoln County notably south of Pioche and Graham indicated it is on their list of locations to be added.

Jim Werle asked if there is more activity in the southern Nevada seismic belt or just more instrumentation. The consensus from Council members is that there is more activity.

Graham will make the slides from this presentation available and Janell will post them on the meeting website.

## **8. UPDATE FROM THE WESTERN STATES SEISMIC POLICY COUNCIL (WSSPC).**

Chair, Ron Lynn provided an update from the Western States Seismic Policy Council. The WSSPC annual meeting will be held on May 6 and Ron will attend this meeting. Policy 16-4 was accepted by the board with one statement added of the code being accepted on code amendment. Policy 16-7 with regard to schools was tabled as California had some issues of the recommendation. If a school is going to be designed to shelter in place students, it should be designed to a higher risk category. Everyone agreed except California secondary to cost issues. This issue has not yet been resolved. Policy 16-10 is great. As well, Policy 16-11 and Policy 16-2 have also been accepted.

Ron asked Craig about the status of the handbook for incident commanders. WSSPC appears to be trying to prod another conference call on this project. Ron emphasized that simple is better.

There was nothing to report from the Basin and Range committee.

Ron indicated that WSSPC came and took pictures of the billboards from the billboard project. This project garnered many good comments and articles with regard to earthquake awareness and overall was a good success.

## **9. PRESENTATION REGARDING NEVADA UNREINFORCED MASONRY (URM) BUILDINGS – NEXT STEPS BEYOND THE INVENTORY**

Craig dePolo provided a presentation regarding the URM inventory projects and next steps after inventory. He worked with Carson City on their survey of URMs in Carson City. Carson City has performed a drive-by windshield survey of their buildings.

The first step is creating a list of URM buildings throughout the state. Craig discussed the various types of buildings including buildings with eccentricities. The best way to handle this type of building is to build two separate buildings with a seismic joint between the two but this can cause arguments because of cost issues. Several communities have been completing URM surveys.

The surveys seem to be reducing the number of estimated URMs compared to what are actually present. Most of the buildings being removed from the list seem to be cinder block masonry buildings.

For Napa, CA, URM buildings have become a community conversation. Once you have a list of the buildings, communities need to determine what needs to be done next. The idea

is to take the inventory and make a prioritized list of these buildings with regard to risk and then to determine how to address each of these buildings.

Craig suggested perhaps a subcommittee could be formed to come up with criteria for prioritization of these buildings. Additionally, if there is funding available in the future, thought should be given to updating the inventory study.

Potential next steps were discussed. Clark County has put those buildings determined to be URM into a GIS system as well as into their computer system so that if anyone applies for a permit on a URM building, those buildings are flagged to require retrofit for buildings changing occupancy.

In the past, NESC proposed a simple state law for the identification of URM buildings and rural Nevada stated it would be financially debilitating to just identify those buildings and the law was squashed. Craig indicated that communities need to be educated about the danger of these buildings. The Council has always led the way regarding URM structures and Craig indicated it would be great for the Council to address next steps at this time.

Annie Kell discussed Salt Lake City's "Fix the Bricks" project program in which funding is available to help citizens retrofit their URM homes when doing a re-roof project. A program such as this would be great for Nevada to adopt.

Ron Lynn indicated taking to the State Fire Marshall about obtaining their help in marking buildings as potentially unsafe in an earthquake.

Graham added that San Francisco has their soft story retrofit program to help citizens with retrofits with low-cost loans. This is accomplished obtaining private money for these loans. LA has mandated that everyone is required to retrofit their buildings. Graham also asked for an update on the City of Reno URM project and this will be provided at the next NESC meeting.

This item will be placed on the agenda for the next meeting for further discussion and action regarding ideas for next steps. If we could find a champion for this cause, it might be a good time to bring before legislature again. Ron will contact the Fire Marshall, Pete Mulvihill as well.

## **10. DISCUSSION OF DRAFT PLAN FOR AN 'ALL HAZARDS' APPROACH TO MONITORING OF EARTHQUAKES, WILDFIRE, AND EXTREME WEATHER IN NEVADA AND STEPS FORWARD**

A vote was held at the November 10, 2015 NESC meeting for support of this concept. Chief Cage suggested a subcommittee be formed to create a written document reflecting the input from the full committee. If funding sources for the Seismological Laboratory go away, there is no longer a monitoring system in Nevada. If the state invests in an all hazards network, the system could pay for itself within a year.

Ron Lynn suggested that in asking for money, this document should be backup for the request. Essentially, if we are to be a resilient state, we need to have x, y, and z, emulating other states that have this resiliency already. This document should be very short.

Wanda Taylor agreed with Ron's suggestions. Basically, again, if there is any decrease in soft funding, the monitoring system goes away.

All Hazards Subcommittee created with the following members:

Graham Kent  
Craig dePolo  
Woody Savage  
Wanda Taylor  
Ron Lynn

Wanda made a motion to create an All Hazards Subcommittee and Jeff Hahn seconded. All were in favor and the motion passed unanimously. The timeline is in the next month or so in order for Chief Cage to obtain the document by May or June.

#### **11. DISCUSSION REGARDING CLEARINGHOUSE AND THE CENTRAL U.S. EARTHQUAKE CONSORTIUM (CUSEC)**

Ron Lynn contacted the Central U.S. Earthquake Consortium (CUSEC) which is similar to WSSPC. Jim Wilkerson is their CEO and provided Ron with information on their clearinghouse. All of this information is available on their website [www.cusec.org](http://www.cusec.org). Ron suggested that instead of recreating the wheel, we can utilize their ideas. He referred members to the September and December CUSEC newsletters.

Craig voiced support of this idea. CUSEC also developed an app that they seem to like better than FEMA's Rover. This is an app that can everyone in the area can utilize on their phones. Ron will send everyone the information from Jim Wilkerson. This will be an agenda item for the next meeting. A question was asked whether these apps upload directly to a database. Connectivity can be an issue in an earthquake situation if cell and internet have gone down.

Craig dePolo made a motion to send a letter to WSSPC from NESC to utilize some of the tools that CUSEC has for establishing and beginning an earthquake clearinghouse. Vance Payne seconded. Janell will create this letter.

#### **12. UPDATE REGARDING THE SEISMOLOGICAL SOCIETY OF AMERICA CONFERENCE IN APRIL 2016**

Evening of April 18 at the JOE UNR, Steve and Ian will provide talk on Katmandu. April 19 from 9-3 pm will be an Earthquake Economic Resiliency Forum at the Peppermill with ice breaker in the evening of April 19. Next three days, April 20-22 will be the Seismic conference. There will be two fieldtrips on Saturday.

#### **13. COUNCIL MEMBER COMMENTS.**

Chair, Ron Lynn indicated the triggering point for the White House Earthquake Resiliency Forum was an executive order stating that any government-owned buildings need to adhere to the building codes. Of note, San Francisco was the dominant city in California until their 1906 earthquake from which they have never recovered. Additionally, the President has supported the adherence to building codes with an executive order.

Graham Kent and Ken Smith attended the California Seismic Safety Commission meeting in January. At that meeting, they had a gentleman from UCLA. They were trying to model

how long it took to recover to approximately 95% of the economy with retrofit or no retrofit. The results showed the more you did, the greater likelihood it would be 3-5 year event versus a 20-30 year event. Small measures can make a huge difference. Ron asked Graham to obtain the results of that study to be made available to everyone. Graham will check with Dick McCarthy.

Rick Martin stated last year in the Homeland Security Grant process, the State requested a recovery project that is moving forward starting now. This will be an update to the Response and Recovery Guide to local government and tribal nations and also going to provide a template to mirror the National Recovery Framework. They are getting ready to put together a task force. The first meeting will be March 15. If anyone from NESC would like to be on the task force, Rick will forward that information to the group. They will address not only the recovery aspect but also the resiliency as well.

#### **14. PUBLIC COMMENT**

Chair, Ron Lynn opened the meeting for public comment. Irene Navis indicated the strategies for All Hazards could be incorporated into county hazard mitigation plans as well as the state plan. These help position counties and the state for additional grant funding. Her other suggestion was that she was on a call with Homeland Security and they indicated they would be launching a new innovation grant program related to resiliency. They are looking for new tools and research projects to support \$250,000 to \$1 million. Craig indicated they will follow up on the state plan side of Irene's comments.

#### **15. ADJOURN**

Chair, Ron Lynn declared the meeting adjourned.