

Summary Minutes

Nevada Earthquake Safety Council

16 May 2003

The Nevada Earthquake Safety Council (NESC) met from 9:00 a.m. to 3:10 p.m. at the University of Nevada, Reno. These and previous minutes are posted on the NESC Web site (www.nbmng.unr.edu/nesc).

Ron Lynn chaired the meeting. Individuals attending the meeting are members of the Council:

John Anderson*, Nevada Seismological Laboratory
 Rasool Anooshehepoor, Nevada Seismological Laboratory
 Bob Berry, Nevada Division of Emergency Management
 Mike Blakely*, Blakely, Johnson, and Ghusn
 Web Brown, Brown Engineers
 Ian Buckle*, UNR Center for Civil Engineering Earthquake Research
 Wayne Carlson*, Nevada Public Agency Insurance Pool
 Robert Cox, Cox and Associates
 Craig dePolo, Nevada Bureau of Mines and Geology, who held the proxy for Michael Lynch*, Builders Association of Northern Nevada
 Diane dePolo, Nevada Seismological Laboratory
 Greg Flanigan*, Farmers Insurance
 Terri Garside, Nevada Bureau of Mines and Geology
 Mark Harris, Nevada Public Utilities Commission
 Deborah Hinman, SBC, who held the proxy for Jim Reagan*, Sierra Pacific Power Company
 Jenelle Hopkins*, Clark County School District, Las Vegas
 Ron Lynn*, Clark County Building Department
 Robert Martinez, State Engineer's Office
 Jim O'Donnell*, UNLV
 John Perry, FEMA
 Jon Price*, Nevada Bureau of Mines and Geology
 Gary Rasmussen, geological consultant
 Ed Ruttan*, American Red Cross
 Burt Slemmons*, University of Nevada, Reno (retired, Las Vegas consultant)
 Ken Smith, Nevada Seismological Laboratory
 Wanda Taylor, who held the proxy for Catherine Snelson*, UNLV Geoscience Department
 Jim Werle*, Converse Consultants

* indicates member of the Board of Directors.

A quorum of directors (the necessary 11) was present.

Board Members unable to attend or send a proxy included:

Bernie Anderson*, Nevada State Assemblyman
 Tim Crowley*, Nevada Resort Association
 Phil Herrington*, Carson City Building Department
 Greg Moss*, The Moss Group

The minutes from the meeting on 21 February 2003 were approved.

COMMITTEE REPORTS

Education Committee

Diane dePolo noted the committee will continue with the poster contest for Earthquake Awareness Week. They will also push for K-12 science education to include use of the NESC-supported school seismic network.

Diane reported that Tim McAndrew, Emergency Manager for the City of Las Vegas, is seeking two individuals from the NESC to participate in a FEMA course on August 11 to 15, in Emmitsburg, Maryland, where the City will conduct an earthquake exercise. Jon Price was asked to attend and can do so if he can return to Las Vegas on the evening of August 14, in time for the August 15 NESC meeting. If others are interested in participating, please contact Tim by phone (702-383-2888) or e-mail (tmcandrew@ci.las-vegas.nv.us). Jim O'Donnell volunteered to participate. Ed Ruttan mentioned that he will be attending as well.

ACTION ITEM: Jon Price will alert Tim McAndrew that Jim O'Donnell volunteered to participate in the FEMA course in August. (Note after the meeting: Jon sent Tim an e-mail regarding this matter.)

Diane reported on the priorities suggested by the committee for the three proposals that it received for discussion later during the NESC meeting.

Research Committee

Craig dePolo reported that the State of Utah has asked him to participate in the Utah Preliminary Fault Parameters Working Group, which will strive for consensus on fault hazards in that state. This experience will help to determine how to set up a similar group in Nevada. Craig also noted that he is working on a proposal for FEMA's new pre-disaster mitigation grant program on implementing knowledge about fault and related earthquake hazards in the Reno-Carson City area.

Craig distributed a one-page sheet on "Beat the Quake," as a guide for action by the public and a central theme for NESC in the next year or two.

Craig noted that the hotel-tourist guide that John Anderson prepared a couple of years ago should be reactivated and submitted for review. This document gives guidance to hotel operators and managers. John Anderson remarked that it currently is on the Nevada Seismological Laboratory Web site (www.seismo.unr.edu/).

ACTION ITEM: John Anderson will circulate the latest draft of the hotel-tourist guide to the NESC board of directors for review. Members of the board should submit comments to John by June 30. The Council will put a discussion of how to distribute and encourage the use of the guide on the agenda for the August 15, 2003 meeting. John Anderson distributed copies of the draft document to those in attendance.

Jim Werle chaired a subcommittee that included committee members who had not submitted proposals for funding. They suggested priorities for funding among the nine proposals received by the committee, for discussion later during the NESC meeting.

Strategic Planning Committee

No report.

All Hazards Mitigation Advisory Committee Liaison Report

Jon Price reported that AHMAC has not met for about one year. Ron Lynn noted that the Steering Committee for the State Hazard Mitigation Plan has recommended that AHMAC or a similar advisory committee be activated to assist DEM in setting priorities for pre-disaster mitigation grants.

Policy Recommendation Committee

Wayne Carlson reported the committee prepared one proposal for funding, which will be discussed later during the NESC meeting.

On AB 57, the earthquake safety bill that Assemblyman Bernie Anderson introduced on behalf of the NESC, Wayne reported that he and Ron Lynn recently discussed the bill with Senator Dennis Nolan and Assemblyman Bernie Anderson. In the end, the assessment that Wayne reported is that the provisions of the bill will likely pass, perhaps attached to another bill. We should know by midnight on May 23 whether the bill moves forward. The amended bill did pass the Assembly and the committee in which it was heard in the Senate.

Ron Lynn spoke with Senator Ray Schaffer, who has agreed to serve on NESC, if chosen. The Council unanimously endorsed adding Senator Ray Schaffer for the position of Senator on the Nevada Earthquake Safety Council.

ACTION ITEM: Jon Price will request that Frank Siracusa approve the nomination of Senator Ray Schaffer for the position of Senator on the Nevada Earthquake Safety Council. Upon approval, Ron Lynn will write a formal letter to Senator Schaffer, thanking him for volunteering to join the Council.

Division of Emergency Management Update

Bob Berry distributed a brochure from the International Window Film Association, provided by Craig Hartman from Nevada Eclipse in Carson City. Window film is used to reduce the hazard from broken glass in the event of an earthquake or explosion. For more information see www.iwfa.com.

Bob reported that DEM is putting together a Preliminary Damage Assessment Team. Volunteers from state agencies, local government entities, private businesses, and volunteer organizations may be members of the team. PDA Team members will be deployed to a disaster site on short notice to collect information on the extent of the damage (impact and magnitude of damage; needs of individuals, businesses, and the public sector; and emergency and recovery needs of the affected communities). Starting June 25, 2003, meetings will be conducted monthly for the four to six months in order to select and train personnel, then quarterly thereafter. If you are interested in participating or have questions or comments, please contact Rick Martin (775-684-8641) or Gwen Hadd (775-687-7361). The first meeting will begin at 9:00 a.m. on Wednesday, June 25, at the DEM Emergency Operations Center, 2525 South Carson Street, Carson City.

Bob announced that he will be leaving DEM to take a position of Associate Professor of Emergency Management at Western Carolina University in North Carolina. His new address will be

Department of Criminal Justice
Belk Building
Western Carolina University
Cullowhee, NC 28723

On behalf of the Council, Ron Lynn thanked Bob for his contributions and wished him luck in his new career.

ACTION ITEM: DEM will designate a new liaison from their office to the NESC.

Jon Price reported that he received a letter from Frank Siracusa indicating that FEMA has opened the application process for fiscal year 2003 Pre-Disaster Mitigation (PDM) Planning Grants. FEMA is providing \$248,375 to the State of Nevada for State and Local mitigation planning. After November 1, 2003, local governments and Indian tribal governments applying for PDM funds through the State will have to have an approved local mitigation plan prior to the approval of local mitigation project grants. Local and tribal governments should submit an application for a planning grant to DEM by June 30, 2003, so that DEM can submit its package application to FEMA by July 31, 2003. To receive a PDM application form, please contact Bert Prescott, State Hazard Mitigation Officer at 775-684-8644.

In addition, DEM is eligible to submit proposals for the main portion of the PDM funding, which during federal fiscal year 2003 is making approximately \$132 million available to states, territories, and tribes for pre-disaster mitigation grants. A solicitation for projects should be forthcoming from DEM. Craig dePolo is working on mitigation project proposals that would incorporate updated maps of earthquake hazards and implementation of these maps in building codes and land-use planning.

Update on Recent Earthquakes

John Anderson reported that UNR reorganization is not likely to significantly affect the operations of either the Nevada Seismological Laboratory or the Nevada Bureau of Mines and Geology.

The Nevada Seismological Laboratory will host the April, 2005, annual meeting of the Seismological Society of America. John encouraged NESC participation in the meeting.

John reported that the SeismoWatch weekly item in the Reno Gazette-Journal is being discontinued by the paper. The Nevada Seismological Laboratory is discussing how to handle this information in the future. It is hoped that the newspaper will change its mind and restart its arrangement with Charles Watson.

John updated the Council on recent earthquakes. There have been only 29 earthquakes with magnitudes greater than 3 (and only two greater than magnitude 4) in the last six months; this is about one third of the long-term historical rates for Nevada (with comparably good records since about 1970). Several of the recent earthquakes were south of Fernley. With depths of 8 to 12 kilometers, these earthquakes are not likely to be induced by refilling of Lahontan Reservoir. The USGS Web site is now being used for reports on felt intensities by the general public. The USGS displays this information by zip code. Other hotspots of earthquake activity include Portola and the Stovepipe Wells area in Death Valley (both in California). KOLO TV did a good job of reporting on the earthquakes near Fernley.

John also reported on dealing with a series of erroneous predictions by Mr. Kenny Rogers from Corona, California. Mr. Rogers predicted that a magnitude 7.9 earthquake would occur in the neighborhood of Fallon on April 14 or 15, April 25, April 26, May 1, and May 3 or 4. He sent his predictions to Governor Guinn, the Nevada Seismological Laboratory, the Nevada Bureau of Mines and Geology, and the press. John Anderson and Jon Price responded quickly to the Governor, debunking the predictions, stating that we are not aware of any scientific evidence to suggest that there is a higher than normal probability of a major earthquake in Fallon. Diane dePolo reported that the Lahontan Valley News did contact the Nevada Seismological Laboratory and, as a result, did not hype the prediction. Unscientific predictions of this sort do not help in the long-term effort to encourage the public to be prepared for the inevitable earthquakes that will occur throughout Nevada.

Burt Slemmons noted that Cathy Snelson's paper presented at the recent annual meeting of the Seismological Society of America received some coverage in the Las Vegas Journal Review. The paper noted as much as \$11 billion of potential earthquake damage from a single event in Las Vegas Valley.

Review of Old Business

ACTION ITEM: Craig dePolo will submit a report from the Research Committee to Jim Reagan for the draft annual report of the Council.

The ATC-20 slides are available on PowerPoint for anyone who would like to use them. Please contact Terri Garside (tgarside@unr.edu or 775-784-6691 extension 126).

Wanda Taylor reported that their team lacks only one signature to get the permits to dig a trench across the Black Hills fault for studies on the history of movement along the fault.

Discussion of Council Priorities for Mitigation Projects

The Council received proposals for thirteen projects and set the following priorities using a voting process by which the top priority received the most votes. Before voting, the Council briefly discussed the merits of each proposal. Council members cast votes for five proposals (5 for their individual first priority, 4 for second, 3 for third, 2 for fourth, 1 for fifth, zero for lower priorities). The totals are given in the table below, along with relative overall priorities. The Council felt that all projects were worthy and all should be funded if sufficient money is available. Each project will have at least an equal match of non-federal dollars. We are assuming that we will receive permission from UNR's Office of Sponsored Projects to waive UNR overhead on grants to UNLV, so that only one institution is collecting overhead.

Project Dollars	Dollars Needed from DEM	Cumulative Needed from DEM
Top priority, #1 (with 52 votes) Paleoseismicity and Hazards, Las Vegas Wash, Southern Nevada, proposed by the Department of Geoscience, UNLV	\$25,287	\$25,287
Priority #2 (43 votes) Nevada K-12 Science Education Seismic Network, proposed by the Nevada Seismological Laboratory	\$20,000	\$45,287
Priority #3 (40 votes) Museum-Quality Displays for Seismology Visitors at UNR, proposed by the Nevada Seismological Laboratory	\$13,350	\$58,637
Priority #4 (30 votes) Dating Upper Basin-Fill Deposits in Las Vegas Valley, proposed by the Department of Geoscience, UNLV	\$20,993	\$79,630
Priority #5 (25 votes, tie) Generate PSH Map in Reno-Carson City Using Updated Inputs, proposed by the Nevada Seismological Laboratory, UNR	\$10,000	\$89,630
Also Priority #5 (25 votes, tie) The Economic Cost of Historical Earthquakes in Nevada, proposed by the Nevada Bureau of Mines and Geology	\$18,185	\$107,815
Priority #6 (24 votes, tie) Upgrade and Enhancement of HAZUS Nevada Fault Database, proposed by the Nevada Bureau of Mines and Geology	\$33,332	\$141,147
Also Priority #6 (24 votes, tie) Nevada Real-Time Earthquake Network: Las Vegas Valley, proposed by the Department of Geoscience, UNLV	\$23,000	\$164,147
Priority #7 (18 votes, tie) Non-Structural Earthquake Mitigation Outreach, proposed by the Policy	\$10,352	\$174,499

Recommendation Committee		
Also Priority #7 (18 votes, tie) Short Course on Role of Near Surface Soil and 1997 UBC/2000 IBC, proposed by the Department of Civil Engineering, UNR	\$6,355	\$180,854
Priority #8 (14 votes) Seismic Microzonation for Las Vegas: Shallow Soil Effects, proposed by the Department of Civil & Environmental Engineering, UNLV	\$19,999	\$200,853
Priority #9 (8 votes) Undrained Behavior of Liquefied Soil, proposed by the Department of Civil Engineering, UNR	\$20,000	\$220,853
Priority #10 (5 votes) Assessment of Pile Tip Capacity in Liquefiable Soil, proposed by the Department of Civil Engineering, UNR	\$15,000	\$235,853
TOTAL	\$235,853	

The Council unanimously approved these priorities, and suggested that if authors of the proposals can get together to combine projects and reduce costs, they should do so.

ACTION ITEM: Jon Price will communicate the Council's priorities for earthquake-hazard mitigation projects funding to Frank Siracusa.

New Business

No additional new business was brought before the Council.

Review of Damage to Building Structures from the Magnitude 6.7 Northridge Earthquake and Other Earthquakes

Robert Cox discussed ATC-20 and FEMA-383 approaches to post-disaster building inspections. The ATC-20 process takes about 30 minutes for a typical building inspection, whereas the new FEMA approach is much more detailed and will take about four hours.

Robert identified several common problems from post-earthquake inspections. Most problems appeared to be the result of improperly following building codes. For example, structural designs are based on common nails, but contractors typically use box nails, which are designed so that their heads pop off when a box is opened. Unfortunately, when box nails are used in houses, they can pop off during earthquakes or high winds. Another problem has been poorly designed bolts for anchoring buildings to their foundations. He termed these "fake bolts." The proper ones should have threading that is not larger in diameter than the bolts. Stucco tends to fail when contractors do not follow building codes; it is supposed to be attached to the wire, but often is not. Unreinforced cement block walls often fail. Cement columns without rebar indicated that the building practice was sometimes not up to code, and that building inspectors sometimes did not do their job. Chimneys commonly collapsed.

A lively discussion followed Robert's presentation. Overall, the responsibility of proper construction falls on the design, construction, and inspection professionals. Buildings that had poor design, poor construction, and poor inspections are much more likely to fail than ones with failures of either design, construction, or inspection alone.

ACTION ITEM: Ron Lynn will ask both the Northern Nevada and Southern Nevada Chapters of the International Code Council to invite Robert Cox to make presentations to their groups.

ANNOUNCEMENTS

The **next meeting** of the Nevada Earthquake Safety Council will be Friday, August 15, 2003 at the Clark County building department offices in Las Vegas.

The meeting after that is scheduled for Friday, November 21, 2003 (Reno).

REVIEW OF ACTION ITEMS

Jon Price will alert Tim McAndrew that Jim O'Donnell volunteered to participate in the FEMA course in August. (Note after the meeting: Later that afternoon, Jon sent Tim an e-mail regarding this matter.)

John Anderson will circulate the latest draft of the hotel-tourist guide to the NESC board of directors for review. Members of the board should submit comments to John by June 30. The Council will put a discussion of how to distribute and encourage the use of the guide on the agenda for the August 15, 2003 meeting.

Jon Price will request that Frank Siracusa approve the nomination of Senator Ray Schaffer for the position of Senator on the Nevada Earthquake Safety Council. Upon approval, Ron Lynn will write a formal letter to Senator Schaffer, thanking him for volunteering to join the Council. (Note after the meeting: Later that afternoon, Frank Siracusa approved the nomination by telephone.)

DEM will designate a new liaison from their office to the NESC.

Craig dePolo will submit a report from the Research Committee to Jim Reagan for the draft annual report of the Council.

Jon Price will communicate the Council's priorities for earthquake-hazard mitigation projects funding to Frank Siracusa. (Note after the meeting: Later that afternoon, Jon faxed the table of priorities to Frank and followed up with a mailing that included copies of the one-page proposals that the Council used in its discussions.)

Ron Lynn will ask both the Northern Nevada and Southern Nevada Chapters of the International Code Council to invite Robert Cox to make presentations to their groups.

respectfully submitted by Jon Price, 7 June 2003.

Nevada Earthquake Safety Council
 c/o Nevada Bureau of Mines and Geology
 University of Nevada/MS 178
 Reno, Nevada 89557
 775/784-6691 ext. 126

NEVADA EARTHQUAKE SAFETY COUNCIL
Members of the Board of Directors and Officers
(as of 16 May 2003)

Business and Industry, Southern Nevada	Tim Crowley Nevada Resort Association
Business and Industry, Northern Nevada	Michael Lynch Builders Association of Northern Nevada
Insurance Industry (statewide)	Greg Flanigan Farmers Insurance (Las Vegas)
State Government (statewide)	Mark Harris Public Utilities Commission (Carson City)
Local Government, City	Wayne Carlson Nevada Public Agency Insurance Pool (Carson City)
Local Government, County	Marge Gunn Nutman Nevada Assoc. of Counties & Lincoln Co. Office of EM
Seismology (statewide)	John Anderson Nevada Seismological Laboratory (UNR)
Geosciences, Southern Nevada	Burt Slemmons Las Vegas consultant, UNR (retired)
Geosciences, Northern Nevada	Jonathan G. Price Nevada Bureau of Mines and Geology
Engineering, Southern Nevada	Jim Werle Converse Consultants
Engineering, Northern Nevada	Mike Blakely Structural Engineers Association of NV
Education (statewide)	Jenelle Hopkins Clark County School District, Las Vegas
Community Organizations, Southern Nevada	Ed Ruttan American Red Cross
Community Organizations, Northern Nevada	Jim Reagan Sierra Pacific Power Company
University, Southern Nevada	Catherine Snelson UNLV Geoscience Department
University, Northern Nevada	Ian Buckle UNR Center for Civil Engineering Earthquake Research
Building Official, Southern Nevada	Ronald L. Lynn Clark County Building Department
Building Official, Northern Nevada	Phil Herrington Carson City Building Department
State Senate	Ray Schaffer Nevada State Senator (Las Vegas)
State Assembly	Bernie Anderson Nevada State Assemblyman (Sparks)
Member at Large, Southern Nevada	Jim O'Donnell UNLV
Member at Large, Northern Nevada	Greg Moss The Moss Group

Members of the Executive Committee

Chair	Ronald L. Lynn
First Vice Chair-South	Burt Slemmons
First Vice Chair-North	Jim Reagan
Second Vice Chair-South	Jim Werle
Second Vice Chair-North	Greg Moss
Secretary	Jonathan G. Price
Past Chair	John Anderson
Division of Emergency Management Representatives	Robert Berry