



NEVADA EARTHQUAKE SAFETY COUNCIL

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Jon Price, Secretary
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TO: Mr. Ron Lynn, Chairman, Nevada Earthquake Safety Council
Board of Directors, Nevada Earthquake Safety Council

FROM: Jim Reagan, Chairman, Strategic Planning Committee

RE: Annual Report of activities for Plan Year 2001

I am pleased to provide a summary of activities and efforts achieved by the Standing Committees and members of the Nevada Earthquake Safety Council for the calendar year 2001. In an organization such as this, where membership is derived from dedicated educators, scientists and professionals with a common interest, it is often difficult to measure the progress and successes that have been realized. As you review the attached committee reports, I'm sure you will agree that we are making substantial progress toward the Mission and Goals of the Council.

Executive Summary:

The attached pages provide information of projects and accomplishments either complete or in progress. Highlights of these activities include another successful "Earthquake Awareness and Preparedness Week" and the production of 20,000 School Safety Calendars that were distributed to every teacher, public and private, in the state of Nevada and at the Governor's Conference on School Safety. This year was a joint effort with the Division of Emergency Management and the State's All Hazards Mitigation Advisory Committee. This year also presented several opportunities for information sharing events such as the State Fair and school demonstrations.

The past year has also seen studies and improvements in structural design for transportation and adoption by some communities of building codes that will strengthen the design and survivability of new construction. Statewide and international building official organizations are embracing the need for better standards and enforcement of design and construction.

The Geoscience committee continues to move forward on numerous projects. Faculty and students at UNLV are evaluating non-structural seismic hazards and potential liquefaction in Las Vegas area schools. Through the efforts of the Seismic Hazard Map Committee USGS maps of Nevada will include expected magnitude and frequency of return for known earthquake faults. The Guidelines for Liquefaction Studies now resides on the Website and there is significant movement in strong-motion and real time instrumentation and studies.

Mitigation efforts have taken significant steps forward with the funding of programs for liquefaction potential in Las Vegas Valley, seismographs in Clark County high Schools and the development of an Amateur Seismologist program. There is development of a Post Event Response Plan for the council, policy for Post-Earthquake Technical Clearinghouse, and the Nevada Earthquake Risk Mitigation Plan has been updated.

2001 also saw another significant change for the council as its directors reviewed and re-established the goals of the Nevada Earthquake Safety Council, and in the process re-aligned the committee structure for the future. I am certain that this change will invigorate the activities of the council participants and next years annual report will reveal even more successes in the effort to make our communities and visitors to Nevada earthquake aware and earthquake safe.

GOAL A: *Increase earthquake awareness and education.*

Education and Awareness objectives include general public information on earthquake risks and hazards, earthquake education in school curricula, and seismic hazard education for government and industry. . Efforts in achieving these objectives during 2001 include:

- ❑ Earthquake Awareness and Preparedness Week
- ❑ Governor's Proclamation
- ❑ Newspaper articles and interviews
- ❑ Seismo-Watch weekly updates
- ❑ Presentations / Talks / Tours / Interviews
- ❑ Booth at the Nevada State Fair
- ❑ Nevada Seismological Laboratories web site
- ❑ Nevada Bureau of Mines and Geology web site with links to the Nevada Earthquake Safety Council
- ❑ Poster Contest - county winners received certificates signed by the governor. Overall winning poster reproduced (by Nevada Bell) and distributed with information packet sent to schools.
- ❑ Statewide Earthquake Drill
- ❑ Preparedness and Mitigation material sent to schools statewide
 - Copying donated by Nevada Bell
 - Mailing donated by Sierra Pacific Power Company
- ❑ School Safety Calendar
 - DEM, AHMAC, NESC combined efforts to produce 20,000 calendars
 - 19,000 distributed to teachers statewide - mailing donated by Sierra Pacific Power Company
 - 1,000 distributed at the Governor's Conference on School Safety
- ❑ Participated in Governor's Conference on School Safety (Speaker, Booth, UNLV portable shake table demonstration).
- ❑ School Demonstrations / Presentations / Talks / Tours
- ❑ Contact List
 - Statewide list of public and private schools addresses and phone numbers

GOAL B & C: *Improve emergency management, response and recovery systems, and Improve seismic safety of buildings and infrastructure.*

Emergency management and buildings and infrastructure objectives include promotion of exercises and workshops for government, business/industry and citizens, encourage adoption of building codes and design standards to recent seismic requirements, and promote reduced risk to highway and community infrastructure. Efforts in these objectives for 2001 include:

- Earthquake awareness, structural and nonstructural hazard mitigation, and business planning were one of the core targets for Project Impact communities of Carson City and Douglas County.
- All hazards community workshop developed in 2001 sponsored by Carson City and Douglas county Project Impact featured Craig dePolo in a discussion of earthquake hazards specific to the Eagle Valley and Carson Valley regions.
- With the cooperation of the Northern Nevada Chapter of the International Conference of Building Officials and the Nevada Organization of Building Officials the committee was able to make significant progress in the objectives of building codes and design standards.

GOAL D: *Improve essential geoscience information.*

Geoscience objectives include research and monitoring plan for seismic activities, loss reduction hazard mapping, performance criteria for geologic hazards investigation, and strong-motion and real time monitoring systems development. Efforts in achieving these objectives during 2001 include:

- The Nevada Bureau of Mines and Geology continues to conduct research and complete publications of many parts of the state that have an earthquake potential.
- Faculty and students of the University of Nevada Reno (UNR) and NSL are studying the earthquake and tsunami hazards in the Lake Tahoe area.
- The Seismic Hazards Map Committee (John Anderson) will review the USGS maps of Nevada, after the USGS completes the draft maps in 2002. This will include expected magnitudes and frequency of return for earthquakes on known fault systems (Craig dePolo).
- NESC posted the Guidelines for Liquefaction Studies its web site.
- The Nevada Seismological Laboratory (NSL) studies earthquakes in Nevada, precariously balanced rocks, and improves the instrumentation and station coverage with a real-time, statewide monitoring system. The basic studies include investigation of basin-fill effects in the Las Vegas and Reno areas.
- Faculty and students of the UNLV are evaluating the Las Vegas area with new studies of non-structural seismic hazards, potential liquefaction, and installation of seismographs in many Clark County schools. The seismic hazards and earthquake fault analysis using paleoseismologic and exploratory trench methods at the Black Hills fault, near Boulder City with funding grants initiated by NESC.
- The Nevada Seismological Laboratory is developing a major program to expand the strong ground motion coverage in the Reno and Las Vegas areas. UNLV staff is providing assistance for the selection of the best sites for the ANSS initiative seismometers in the Las Vegas area.

GOAL E: Promote the mitigation of earthquake risks resulting in increased safety for the citizens of and visitors to Nevada.

Mitigation objectives include Awards in Excellence, Nevada Earthquake Risk Mitigation Plan, publish and promote nonstructural mitigation projects, and encourage planning organizations to include hazard mitigation and hardened lifeline infrastructure. Efforts in achieving these objectives during 2001 include:

- Awards in Excellence were given to these organizations and individuals:
 - Carson City – Jail constructed to high earthquake standards
 - Mary Manning – Reporting in the Las Vegas Sun
 - Jim O'Donnell and Kent Smith – Development of the Amateur Seismologist program for schools
 - Nevada Public Agency Insurance Pool – Funding the Amateur Seismologist program for 12 rural school districts
 - IGO – Non-structural mitigation efforts and employee awareness campaign
 - Carson City School District – Non-structural mitigation efforts for new equipment and for its proposed bonding program
- With input from several other committees, the Nevada Earthquake Risk Mitigation Plan was rewritten and new timelines developed for activities.
- NDEM approved funding for the following projects:
 - Non-structural seismic hazards demonstration – Barbara Luke, UNLV
 - Earthquake Safety Calendar – Diane dePolo, UNR
 - Potential for liquefaction in Las Vegas Valley – Barbara Luke, UNLV
 - Seismographs for Clark County High Schools – Clay Crow, Jim O'Donnell, UNLV
 - Guidelines for the hotel/motel industry developed and distributed.
- Media Event conducted by NESC on May 18, 2001 at which “Living with Earthquakes in Nevada” was distributed. Craig dePolo participated in several educational outreach efforts and distributed copies there.
- Craig dePolo and Greg Moss developed an outline of NESC Post Event Response Plan; Jon Price recommended that NESC adopt a policy for creating a Post-earthquake technical clearinghouse.