



State Of California

ALFRED E. ALQUIST
SEISMIC SAFETY COMMISSION



Arnold Schwarzenegger, Governor

Minutes of Meeting
March 12, 2009
Estancia Hotel & Conference Center
9700 N. Torrey Pines Road
San Diego, California

Members Participating

Mark Church, Chair
Ken Cooley, Vice Chair
Andrew Adelman
Kandiah (Arul) Arulmoli
Jonathan Changus
William Chubb
Lucy Jones
Brad Mitzelfelt (arrived 9:20 a.m.)
Elizabeth Mathieson
Gary McGavin
Dennis Mileti
Don Parker
Ali Sadre (arrived 9:28 a.m.)
Michael Stevens
David Thorman

Members Absent

Christina Curry
John Littrell
Sharron Leason
James Schwab
David Walls

Staff Participating

Richard McCarthy, Executive Director
Karen Cogan, Executive Assistant
Robert Anderson, Staff Geologist
Henry Reyes, Structural Engineer
Fred Turner, Senior Structural Engineer

I. CALL TO ORDER/ROLL CALL

Commission Chairman Mark Church called the meeting of the Alfred E. Alquist Seismic Safety Commission to order at 9:04 a.m. Executive Assistant Karen Cogan called the roll and confirmed the presence of a quorum.

II. CHAIRMAN'S REMARKS

Chairman Church welcomed everyone and thanked Commissioner Ali Sadre for his hospitality in hosting a reception at his house for the Commission and guests. He expressed appreciation to Ms. Cogan arranging the accommodations and the field trip to see the University of California at San Diego's large high-performance shake table the previous day. He also thanked the hotel and audio-visual service for offering discount rates.

Chairperson Church informed the Commission that Secretary Rosario Marin had resigned from her position at the State and Consumer Services Agency.

Chairman Church noted that state employees, including the Commission, were taking furloughs on alternate Fridays. He observed that the Commission's still doing well, and he thanked the staff for their efforts.

Chairman Church invited commissioners and guests to attend a demonstration of an unmanned aerial vehicle immediately after the meeting at the glider port adjacent to the hotel grounds.

III. APPROVAL OF FEBRUARY 11, 2009 MEETING MINUTES

ACTION: Commissioner Ken Cooley made a motion, seconded by Commissioner Don Parker that:

The Commission approve the minutes of the February 11 Commission meeting as presented.

* Motion carried, 13- 0 (Commissioners Brad Mitzelfelt and Ali Sadre absent during voting).

IV. EXECUTIVE DIRECTOR'S REPORT

Budget Update

Executive Director Richard McCarthy advised that the Commission would receive a full budget briefing at the May meeting. He noted that Governor Schwarzenegger signed the 2009-2010 state budget recently. He drew attention to the materials in the meeting packet describing the six budget initiatives appearing on the ballot for the May 19 special election. Mr. McCarthy added that the effects of the federal stimulus package were still uncertain, but indicated he would have more details for the Commission in May.

Mr. McCarthy referred to the most recent versions of the budget spreadsheets, reflecting the repayment to the Federal Emergency Management Agency last year.

Mr. McCarthy stated that the staff would like to present some options for any reserves to the Commission at the May meeting. He added that the Commission might need to schedule an emergency meeting before then, depending on the special election results and the Governor's revised budget in May.

Mr. McCarthy noted that the Commission still has a balance of \$50,000 in the emergency earthquake investigations account, and overhead for the research program, approximately \$100,000 at this time, has not yet been charged. He said four of the contracted research projects are expected to be completed by July. Mr. McCarthy advised that the Commission's funding arrangement through the Department of Insurance has been extended three years, so the Commission has assurance of being funded for at least that long. He recommended holding back the total \$650,000 in overhead charges, just in case funding is uncertain after that.

Personnel - SSM I Position

Mr. McCarthy reported that the Commission is now authorized to fill the vacant legislative position so candidates will be actively recruited and interviewed. He said the Commission will request an extension from Agency if six months is not enough time.

FPPC Deadline

Ms. Cogan reminded commissioners that April 1 was the deadline to file annual disclosures (Form 700) to the Fair Political Practices Commission. She asked commissioners to send their completed forms to her before that date.

Proposition 13 Property Tax: New Construction Exclusion for Seismic Retrofitting

Mr. McCarthy indicated that the Proposition to exclude seismic retrofitting from property tax calculations has been delayed until June of 2010. He said he would have more details to report at the May meeting.

V. UC SAN DIEGO STRUCTURAL ENGINEERING DEPARTMENT'S PROPOSAL: PROPOSAL TO RESEARCH THE PERFORMANCE OF HOSPITAL NONSTRUCTURAL SYSTEMS - REQUEST FOR LETTER OF SUPPORT

Mr. Robert Bachman, Consulting Structural Engineer, showed a PowerPoint presentation regarding the UC San Diego shake table testing project for nonstructural components in acute-care hospital buildings. He explained that UC San Diego is planning a \$5.5 million collaborative project with other universities and industry groups to assess fire safety and structural integrity of healthcare facilities after an earthquake. He said the first three years of the effort will entail constructing a full-scale five-story office building with an acute-care component, and the fourth year will focus on fire safety aspects. Mr. Bachman pointed out that the test structure will include a fully functional elevator, a component that has never been tested in conjunction with building performance. He requested that the Commission send a letter of support to the National Science Foundation urging approval of funding for the project.

Mr. Bachman identified the key participants in the project, including representatives from industry, government, standards development organizations, practicing engineers, and international groups. He reviewed the proposed schedule of milestones and deliverables, noting the seismic testing is slated to begin in January of 2011, fire testing will begin in March 2011, and the final report will be published in October 2013.

Mr. Bachman stated that the goals of the research are to evaluate the performance of fire safety systems, elevators, and products, focusing especially on the interaction between structural and nonstructural components. The researchers plan to assess the adequacy of current design standards and propose modifications.

Mr. Bachman introduced Professor Jose Restrepo, from UC San Diego, and he offered to answer questions from the Commission.

Mr. Bachman noted that representatives from government, regulatory agencies, industry groups, and code development organizations are part of the project's advisory group. Professor Restrepo added that firefighters are also participating in an advisory role.

ACTION: Commissioner McGavin made a motion, seconded by Commissioner Ken Cooley, that:

The Commission send a letter of support for the project as requested.

* Motion carried, 15 - 0.

Chairman Church thanked Mr. Bachman and Professor Restrepo for their presentation.

VI. DISTANT TSUNAMI THREAT - RESEARCH PROJECT UPDATE

Dr. Eddie Bernard, Director, Pacific Marine Environmental Laboratory, National Oceanic and Atmospheric Administration (NOAA), provided an update on the research project investigating tsunami threats to the Ports of Los Angeles and Long Beach. He said that although the project was approved in December, 2007, funding was not released until last October. He reported that the project was currently on track.

Dr. Bernard showed slides of the Sri Lanka coastline and pointed out effects from the December 26, 2004 tsunami. He noted that one of the major lessons learned was about the vulnerability of harbors because they tend to fill quickly and then do not drain fast enough. He played a 2006 video clip of a tsunami entering the harbor in Crescent City, California, causing damage from inundation and swift currents. He pointed out that the marina inside the harbor made the tsunami effects worse.

Dr. Bernard stated that the NOAA research project uses existing inundation models to identify potential tsunami sources and develop scenarios simulating their impacts. He noted that the \$50,000 provided by the Seismic Safety Commission will pay for the study and report, and NOAA's \$50,000 will be used to develop a tsunami forecasting system. He said the forecast models for five harbors in California have been completed; he added that models for 11 California harbors will be finished by 2012.

Dr. Bernard reported that the researchers identified 975 potential tsunami sources in the Pacific Ocean and concluded that events in Alaska, Chile, and Central America pose the biggest threats to California ports. He showed a simulation of a tsunami hitting the Port of Los Angeles after an earthquake in Alaska, and he pointed out areas of inundation and damage caused by swift currents in the harbor areas. He advised that the first phase of the study will be described in a report that will be completed in July of 2009; he recommended proceeding with a second phase after that to examine harbor-induced currents. He said the results of the research can then be applied to other California ports.

Chairperson Church thanked Dr. Bernard for his report.

VII. CALIFORNIA EARTHQUAKE AUTHORITY - PROJECTS OVERVIEW, FIRST QUARTER OF 2009

Mr. Glenn Pomeroy, Chief Executive Officer, California Earthquake Authority (CEA), said he was very pleased to provide an overview of the CEA's goals and projects for the coming year. He noted that he began working with the CEA in April of 2008, and he gave a brief description of his background. Mr. Pomeroy noted that Robert Anderson, the Seismic Safety Commission's staff geologist, was working closely with the CEA. He added that he hopes to continue this great partnership in future efforts with the Commission.

Mr. Pomeroy explained that the CEA was established twelve years ago in response to a crisis in the earthquake insurance market after the Northridge earthquake. He said the state experienced about \$14 billion in losses from the Northridge earthquake, prompting commercial carriers to threaten to leave the California homeowner insurance market. To resolve this problem, the state formed the CEA as a way of funding insurance and providing coverage to homeowners at risk. Mr. Pomeroy noted that the CEA now has a \$9.6 billion capacity and insures 770,000 policy holders. He pointed out that this group represents only about 12 percent of the homeowners in California, so more needs to be done to promote earthquake insurance.

Mr. Pomeroy advised that the high cost of insurance and high deductible levels are barriers for many people. He described his ideas for ways of reducing the price of insurance and lowering deductibles. He recommended pursuing federal legislation to provide disaster loans that would decrease California's reliance on reinsurance, and proposed using the savings to decrease premiums. He estimated that premiums could be reduced by as much as one third or one half if the state could borrow federal money in the event of a major disaster. He added that the debt could be repaid by increasing premiums in the future. To ease the burden of high deductibles, Mr. Pomeroy advocated giving homeowners the option of insuring only 50 percent of the value of their homes rather than requiring 100 percent coverage. He pointed out that most earthquake damage is less than half the value of a house, and less coverage would make insurance more affordable. He estimated that deductibles could probably be cut in half by offering this option.

Mr. Pomeroy also stressed the need to encourage homeowners to do more mitigation as a way of reducing future losses. He said the CEA would be holding a brainstorming session on March 16 to explore possibilities like incentives, tax rebates, and federal stimulus funds to promote mitigation. He commended Assemblyman Blakeslee for his leadership role and said he looks forward to working closely with the Commission in the future.

Chairman Church thanked Mr. Pomeroy for his report and invited him to return with future updates.

VIII. SAN BERNARDINO COUNTY MUSEUM'S DENNIS HAUSBERGER HALL OF GEOLOGICAL WONDERS - OPENING SPRING 2010

Commissioner Mitzelfelt introduced Mr. Robert McKernan, Director, San Bernardino County Museum, and Ms. Kathleen Springer, Senior Curator, Division of Geological Sciences, and

invited them to brief the Commission on the museum's new annex. He said the museum in Redlands is funded by county and federal money as well as private donations.

Mr. McKernan described the history of the museum and its facilities. He noted that the museum, with its emphasis on research and outreach, has emerged as a leader in informal education.

Ms. Springer stated that the San Bernardino County Museum was established in 1952 and moved to its current location in 1975. She said the museum was an active participant in the Southern California ShakeOut event last November.

Ms. Springer showed slides of the museum's new annex, the Hall of Geological Wonders. She advised that the \$6.5 million, 12,000-square-foot facility was constructed in 2007 and 2008, and about \$6.5 million worth of exhibits are now in various stages of development and preparation. She pointed out the new amphitheater, the large exhibit space, and the three-story turret structure overlooking the San Andreas Fault. She said the museum plans to become the epicenter for informal science education for the entire region.

Ms. Springer described the exhibits being created for the Hall of Geological Wonders, including displays on plate tectonics and the San Andreas Fault, as well as information about individual preparedness and applying the lessons learned in the ShakeOut exercise.

Commissioner Mitzelfelt advised that the new annex is scheduled to open in the spring of 2010. He offered to host a meeting of the Seismic Safety Commission at the new facility.

Commissioner Mathieson recommended taking advantage of the opportunity to teach people that building codes do not necessarily equate to earthquake-proof buildings. She noted that this is a common misperception.

Chairman Church thanked the museum staff and wished them well in their efforts.

IX. CALIFORNIA'S GREAT DISASTERS: EARTHQUAKES AND WILDFIRES - RESEARCH PROPOSAL

Mr. McCarthy noted that since the Commission discussed a draft proposal from California Public Television at the last meeting, the California Emergency Management Agency (CalEMA) has committed \$500,000 in funding for this project. He said the Department of Insurance reviewed the proposal as well. Mr. McCarthy recommended that the Commission authorize \$300,000 and work with the applicant to pursue this research opportunity. He invited the California Public Television representatives to discuss the project in more detail.

Mr. Mark Benscheidt, Executive Director, California Public Television, introduced Mr. Mike Sanford, Vice President of Content Creation, KVIE Public Television, and Mr. Manolo Platin, Acting Director, Office of the Insurance Advisor, State and Consumer Services Agency. He said California Public Television is proposing a public-private partnership to encourage emergency preparedness. He explained that the multi-faceted outreach strategy includes two primetime programs on earthquakes and fires; offers an integrated Website, social marketing

programs, and partner channels; the goal is to provide education and community outreach, encourage interaction, and spur individuals to specific actions.

Mr. Benscheidt stated that California Public Television is working with California schools and the 14 public broadcasting stations in the state, to develop localized content, Spanish versions of all programs and materials, and follow-up broadcasts on primetime network television programs in the fall, with a continuous public education campaign reinforcing the information for the next couple years.

Mr. Sanford noted that the emphasis on local outreach and local programming will expand the audience and attract more viewers.

Mr. Platin, the Governor's Insurance Advisor, commented that the Public Broadcasting System (PBS) is a uniquely situated and respected source of information for many Californians. He said the Department of Insurance, CalEMA, and California firefighters are involved in creating the programs. Mr. Platin thanked Mr. McCarthy and the American Insurance Association for bringing this project to the state's attention.

Mr. McCarthy recommended that the Commission form an advisory committee to offer advice and oversight for this project; he recommended including Commissioner Jones and Commissioner Don Parker.

Mr. Benscheidt said the proposed project would use outside advisors in a multi-faceted approach leading the responsible action.

Commissioner Mitzelfelt asked how this proposal came to the Commission's attention. Mr. McCarthy said Commissioner Stevens had suggested this kind of project over a year ago, and the American Insurance Association provided funding to PBS and developed the proposal. He recommended that the Commission approve \$300,000 in research funds and have Commissioners Parker, Jones, Mileti, Curry, and Stevens serve as a review committee.

ACTION: Commissioner Cooley made a motion, seconded by Commissioner Arulmoli, that:

The Commission approve \$300,000 in research funding and establish the review committee as proposed.

* Motion carried, 15 - 0.

X. COMMISSION WEB PAGE UPDATE 2009

Ms. Jaime Marso, San Diego State University, introduced herself as the person responsible for designing and maintaining the Commission's Website. She displayed the Commission's Website, noting it uses the same template mandated for all state agencies. She said the Commission's Website has been validation for use and compatibility with all browsers and platforms.

Ms. Marso reported that visitors to the Commission's Website come for publications, information on seismic events, or education. She said people often download the *Homeowner's Guide to Earthquake Safety*, and the number of visitors tends to increase after big seismic events and major promotions, such as the ShakeOut last fall. She observed that people from universities visited the Commission's Website less frequently in 2008, reflecting the lack of seismic activity, no updates to the educational material, and no new publications.

Ms. Marso proposed updating the Website in 2009 to add new educational material and implement new technology to display on handheld devices.

Commissioner Parker suggested adding a short biography of each commissioner. Ms. Marso confirmed this information could be added easily. Mr. McCarthy said the staff will provide sample formats to commissioners.

Chairman Church thanked Ms. Marso for her report.

XI. THE PROPOSED GREAT CALIFORNIA SHAKEOUT

Mr. Mark Benthien, Southern California Earthquake Center, discussed plans to expand the ShakeOut exercise statewide as an annual event. He thanked Commissioners Thorman, McGavin, and Jones for attending SCEC's recent seminar on schools. He expressed appreciation to Commissioner Mitzelfelt and representatives from San Bernardino for their leadership role, and he acknowledged Commissioner Mileti's expertise and insight regarding social science issues.

Mr. Benthien gave a PowerPoint presentation highlighting last fall's ShakeOut exercise, which involved almost 5.5 million participants in Southern California. He noted that Home Depot and other home improvement stores saw a 200 percent increase in sales in November as a result of the ShakeOut. He said there was wide media coverage of this popular event. Mr. Benthien advised that SCEC was nearly finished compiling the results of the November 2008 ShakeOut, and indicated a report would be issued soon.

Mr. Benthien stated that SCEC is working with the Northern California Earthquake Alliance group to plan a statewide ShakeOut event next October, following National Preparedness Month in September.

Commissioner Jones pointed out that part of the success of the ShakeOut was due to the partnerships with corporations and the insurance industry, as well as a broad range of community groups.

Mr. McCarthy advised that he would be meeting with CalEMA representatives on March 18 to make further plans. He said the proposal calls for extensive outreach in September, and a statewide exercise on October 15. He added that he would have more details for the Commission at the May meeting.

Chairman Church thanked Mr. Benthien for his report.

At 12:02 p.m., the Commission recessed for lunch. Chairman Church reconvened the meeting at 1:17 p.m.

XII. EARTHQUAKE HAZARDS AND REDUCING RISK ALONG THE CALIFORNIA/MEXICO BORDER

Mr. George Bressler, Adjunct Faculty, Viz Center, San Diego State University, emphasized the need for the U.S. and Mexico to develop relationships focused on common language, common interests, and common needs. He noted that academic information and research results must be translated into actionable steps, and he applauded the organizers of the ShakeOut drill for so successfully engaging mass numbers of people in preparing and educating for disasters. He stated that both Mexico and Canada provide firefighting and response aid to the U.S., and these neighbors need to be treated as mutual partners. He identified several important low-cost solutions that could improve the transfer of information and resources between the U.S. and Mexico: use of unmanned aerial vehicles, maintaining Internet pathways, sharing images, geolocating vehicles, and voice, email, chat, and texting capabilities.

Mr. Bressler talked about large dams and bridges near the U.S.-Mexico border. Using the scenario from the 2008 ShakeOut exercise, he showed a simulation of the impacts of a major earthquake near Salton Sea on the border area. He pointed out the likely failure of the Rodriguez Dam near Tijuana, a structure built by the U.S. Army Corps of Engineers in 1933.

Mr. Bressler introduced Mr. Daniel de la Rosa, Secretary of Public Safety, State of Baja, Mexico, and invited him to address the Commission through his interpreter. Secretary De la Rosa offered the State of Baja's assistance and cooperation in dealing with common problems.

Mr. McCarthy asked if the Rodriguez Dam was ever inspected on behalf of the U.S., and Secretary De la Rosa indicated there were no follow-up inspections.

Commissioner Cooley asked if Mexico had a mutual aid system to fight fires and respond to emergencies along the border. Secretary De la Rosa said Mexico has provided help to the U.S. on some occasions. He noted that the government typically uses emergency centers to coordinate efforts.

Commissioner Jones expressed interest in sharing seismic monitoring techniques, rapid information regarding levels of shaking, and GPS dam monitoring data, and she said USGS representatives were very interested in working with Mexico. Secretary De la Rosa thanked Commissioner Jones and welcomed assistance and advice, especially regarding dams.

Mr. McCarthy invited Secretary De la Rosa to meet with representatives from the Governor's Office and CALEMA in Sacramento to explore joint project possibilities.

Secretary De la Rosa thanked the Commission and said he looked forward to working with California on these issues.

XIII. ALQUIST-PRIOLO ACT UPDATE

Commissioner Mathieson advised that a geotechnical hazards committee was considering revisions to the Alquist-Priolo Act, the law passed in 1972 after surface fault ruptures caused considerable damage during the 1971 San Fernando earthquake. She said the committee was considering changing the law to allow structures to be built on “minor” active faults, but the word “minor” had not yet been defined, and the committee was considering reducing the current 11,000-year occurrence interval for active faults to 2,000 to 5,000 years.

Commissioner Mathieson stated that proponents of the changes cite the fact that surface fault ruptures have not killed anyone in California; that such an event has an extremely low probability compared to floods, fires, and other disasters; and that structural engineers can design buildings across faults. She noted that opponents point out that surface rupture still contributes to significant property damage that can be avoided altogether by prohibiting building on any active fault. She said there are also concerns that extra design will cause an increase in construction costs because of the more intense engineering analysis required, and there may be legal liability issues as well. Commissioner Mathieson commented that she was not sure how the insurance industry would react to the proposed changes.

Mr. Anderson noted that neither the Commission nor the State Mines and Geology Board had been tracking this effort, so he and Commissioner Mathieson attended a conference to find out more. He advised that the Technical Advisory Committee seems rather limited in terms of stakeholders, lacking representatives from the construction industry, law, or structural engineering. He said the TAC will be sending a report to the board in July or August, and indicated that he would be contacting the TAC soon to discuss the need for a broader range of stakeholders and to determine how acceptable risk will be defined.

Mr. Anderson suggested tracking this issue over the next two years. He said that with the UC Berkeley stadium construction on the horizon, there might be placeholder legislation next year to adopt the changes.

Commissioner Andrew Adelman observed that the UC Berkeley stadium project would be affected by this change. He said he was intimately familiar with that project, and noted that the law allows structures occupied less than 2,000 hours per year to be built on active faults, and the Berkeley stadium meets that occupancy criteria. He commended Mr. Anderson and Commissioner Mathieson for investigating this matter.

Commissioner Adelman noted that it is often difficult for building officials to trace the exact location of faults, and he cited maps of Fremont showing the Hayward Fault jogging around property lines and stopping at the Fremont border. He expressed discomfort with allowing building over active faults and said he considered them very dangerous.

Commissioner McGavin said the current law places some unsafe structures in a Catch-22 situations: he talked about an elementary school in Arcadia that was prohibited from modernizing because it was located on a fault. He pointed out that some of the improvements

would have benefited the safety of the students, and he recommended that the Division of the State Architect reconsider its interpretation of modernization.

Mr. McCarthy observed that renovations involving over 50 percent of a total building's cost trigger other requirements.

Commissioner Thorman offered to confer with Commissioner McGavin and DSA staff to resolve the interpretation issue. He added that occupancy is measured per person, so 10,000 people present for one hour would count as 10,000 occupancy hours. He pointed out that the UC Berkeley stadium would exceed the occupancy threshold under this definition.

Commissioner Jones said she was appalled the Technical Advisory Committee was considering such changes to the Alquist-Priolo Act. She noted that surface ruptures can occur on 9,000-year to 50,000-year intervals, but prudent scientists would not recommend building on a fault.

Commissioner Cooley commented that the California Association of Realtors should be included in the stakeholders. Commissioner Mathieson said a member of the state Mines and Geology Board planned to be present at the next meeting. Mr. Anderson noted that he and Commissioner Mathieson would continue to track the progress of the changes and would keep the Commission informed.

Chairman Church thanked Commissioner Mathieson and Mr. Anderson for bringing this issue to the Commission's attention.

XIV. PUBLIC COMMENT

There were no members of the public who wished to address the Commission.

XV. MISCELLANEOUS AND GOOD OF THE MEETING

There were no other items brought to the Commission's attention.

XVI. ADJOURNMENT

Chairman Church thanked everyone for attending. There being no further business, the meeting was adjourned at 2:02 p.m.

Sue Celli
Office Manager

Approved by:

Richard McCarthy
Executive Director