



State Of California



ALFRED E. ALQUIST SEISMIC SAFETY COMMISSION

Governor Edmund G. Brown Jr.

Alfred E. Alquist Seismic Safety Commission
Minutes of Workshop and Meeting
November 10, 2011

Members Participating

Michael Gardner, Chairman
Christina Curry
Peggy Hellweg
Emir Macari
Kit Miyamoto (afternoon)
Jim McGowan
Mathew Ortiz
Mark Pazin

Members Absent

Helen Knudson
Howard Smith, Jr.
Kathy Smith
Timothy Strack

Staff Present

Richard McCarthy, Executive Director
Karen Cogan, Administrative Manager
Robert Anderson, Senior Engineering Geologist
David King, Legislative Director
Henry Reyes, Senior Structural Engineer
Fred Turner, Senior Structural Engineer

I. WELCOME AND INTRODUCTIONS

Commission Chair Michael Gardner called the workshop meeting of the Alfred E. Alquist Seismic Safety Commission to order at 10:06 a.m. and welcome anyone. He began the session commissioners and staff introducing themselves.

II. COMMISSION'S HISTORY

Executive Director Richard McCarthy explained that the Seismic Safety Commission was established in 1975, largely by the efforts of Senator Alfred Alquist in response to the damaging San Fernando earthquake in 1971. The Commission functioned as an independent entity until about five years ago, when it became part of the State and Consumer Services Agency. The Commission's membership was expanded to 20 members, including representatives of three state agencies, the California Emergency Management Agency (Cal EMA), the Building Standards Commission, and the Division of the State Architect. At the same time, the Commission's funding source changed from the general fund to a share of assessments collected by the Department of Insurance from insurance companies. Mr. McCarthy advised that the Commission's staffing has been affected by budget constraints over the past several years, down from 12 eight years ago to seven at this time.

III. COMMISSION FUNDING SOURCES

Mr. McCarthy provided an overview of the Commission's funding sources. He explained that the Commission receives about \$1.3 million per year from the Insurance Fund. This represents a 12-cent assessment on each commercial and residential policy in California. Mr. McCarthy added that insurance companies have opted to pay this assessment directly to the state rather than pass the costs on to policyholders.

Mr. McCarthy said that like all state agencies, the Commission is subject to mandated budget cuts, and more are likely in the coming year. He noted that the Department of Finance and Legislative Analysis will be announcing budget projections soon, and the extent of the deficit at that time could trigger substantial cuts in certain areas already identified by the Legislature. Mr. McCarthy observed that the Commission will know more about what to expect at the January meeting. By that time, the state will have updated its projections and the Governor's proposed budget will be released. Mr. McCarthy cautioned that the Commission may need to call an emergency meeting before then if a fiscal crisis arises.

Mr. McCarthy stated that the Commission had access to about \$6 million in funds to support research projects, and he referred to a list of past and present research projects and some in development. He explained that these funds were awarded to the Commission as part of a legal settlement, and the fund was just renewed for another three-year period. Mr. McCarthy indicated that the Commission looks for projects that provide useful products to the state and those that leverage scarce funds wisely. He said the Commission typically works through universities and public entities to expedite state government contracting process.

IV. BUDGET CHANGE PROPOSAL

Mr. McCarthy said the Commission's current funding arrangement with the Department of Insurance will expire after June 30, 2012 unless it is renewed or replaced by another source. He reported that the staff submitted a budget change proposal (BCP) in September to the Department of Finance to request an extension the Department of Insurance funding. He added that he had asked the Department of Insurance for a letter of support and would be attending a meeting with Department of Insurance representatives the following week.

Mr. McCarthy noted that ideally, the Governor's proposed budget in January will identify a permanent source of funding for the Commission.

Legislative Director David King observed that the Department of Insurance has reacted positively so far. He referred to a list of insurance companies and the assessment amounts they were providing to support the Commission. He emphasized the importance of reinforcing the nexus between the Commission's work in seismic safety and the insurance industry's interest in minimizing the risk of earthquake damage in California.

Mr. McCarthy said the staff will have more detailed information on the status of this year's budget at the January meeting.

V. COMMISSIONER ROLES AND COMMITTEES

Mr. McCarthy observed that there were still 8 vacancies on the Commission, and it appeared likely some of them would be filled by Governor Brown during the coming months. He suggested that the Commission defer dealing with important policy issues until a full complement of commissioners was on board.

Mr. McCarthy noted that the Commission has both permanent and ad hoc committees, and he encouraged all commissioners to participate. Chairman Gardner asked commissioners to let him know what their primary interests were. He requested that the staff provide commissioners with committee rosters.

Ms. Cogan remarked that the Commission's committees have not been very active for the past two years because the frequency of meetings has been scaled back considerably. She suggested establishing small committees of just a couple commissioners to help the staff manage research projects.

California Integrated Seismic Network Funding

Commissioner Christina Curry informed the Commission the Cal EMA was being required to cut a number of programs in order to reduce costs, and one of the items to be eliminated is funding for the California Integrated Seismic Network, a statewide system that produces real-time shake maps of earthquakes. She said Cal EMA provided \$375,000 to cover maintenance of the sensor system and other program costs, so the network will have to find replacement sources of funds in the future.

VI. COMMISSION MEETING LOCATIONS

Mr. McCarthy stated that the Commission has traditionally held meetings on the second Thursday in alternating months. He said two meetings per year are normally held in Sacramento, and others are either conducted telephonically or at various cities throughout the state.

Ms. Cogan advised that any meeting location must be open and accessible to members of the public. Commissioner Emir Macari offered CSU's meeting facilities. Ms. Cogan added that commissioners need to comply with open meeting laws, which require public notification and access to all meetings that involve three or more commissioners.

At 11:51 a.m., the workshop was concluded and commissioners recessed for lunch. Chairman Gardner reconvened the meeting at 1:16 p.m.

VII. CALL TO ORDER/ROLL CALL

Chairman Gardner called the Commission meeting to order at 1:16 p.m. Ms. Cogan called the roll and confirmed the presence of a quorum.

VIII. CHAIRMAN'S REMARKS

Appoint Nominating Committee

Chairman Gardner explained that the Commission needed to elect a new vice chair to replace Commissioner Jay Elbettar, who was elected to that position, but whose appointment was not confirmed by the statutory deadline. He asked Commissioners Curry and McGowan to serve as a Nominating Committee to interview interested commissioners and recommend a candidate. Chairman Gardner encouraged commissioners interested in serving at vice chair to contact the Nominating Committee.

IX. APPROVAL OF JUNE 14, 2011 MINUTES

Chairman Gardner drew attention to the minutes of the June 14 meeting.

ACTION: Commissioner Macari made a motion, seconded by Commissioner Pazin, that:

The Commission approve the minutes of the June 14 meeting as presented.

* Motion carried, 6 - 0 - 1 (Commissioner McGowan abstaining).

X. EXECUTIVE DIRECTOR'S REPORT

Mr. McCarthy proposed switching the order of certain agenda items to accommodate guest speakers. He suggested having Dr. Scawthorn's presentation on fire following earthquake first, then the Deloitte proposal for Restoring California Commerce after Disasters, and then the report on the San Francisco PUC Water Improvement Program before other items.

XV. FIRE FOLLOWING EARTHQUAKE REPORT (Out of Order)

Mr. McCarthy welcomed Dr. Charles Scawthorn, Pacific Earthquake Engineering Center. He noted that Dr. Scawthorn discussed his findings at the last meeting and the Commission approved the report.

Dr. Scawthorn provided a summary of his findings and requested Commission funding for a second phase of research. He explained since 1906, most damage from earthquakes has come from fire, not earthquake shaking, and he showed slides depicting catastrophic fires in past earthquakes. He pointed out the increasing population density, aging infrastructure, and highrise buildings have added to California's fire risk. Dr. Scawthorn stated that the purpose of his research project was to look at one particular element of the picture, the water supply for firefighting, and to assess the status of preparedness and identify future improvements. He noted that the study included the availability of water supply as well as equipment, trained personnel, and reliable transmission and distribution systems.

Dr. Scawthorn described his research methodology. He said he contacted fire departments and water departments throughout the state and asked them to complete online surveys gauging the

adequacy of firefighting water supplies and services. He reported that about 35 percent responded, a reasonable rate of success.

Dr. Scawthorn indicated that the responses from fire agencies show that most have not practiced transmitting emergency firefighting water for distances greater than one mile, and many are not well informed about local earthquake risks. Fire agencies tend to communicate infrequently with water departments. They believe their normal water supplies will be unreliable after disasters, and some have identified alternatives, but most are not well drilled in getting the water from the alternate source to where it is actually needed.

Dr. Scawthorn stated that water agencies' responses to the online survey suggest a similar state of unreadiness. Although 2/3 of responding agencies expect major water outages, few have upgraded their distributions systems, identified alternate sources, or practiced transmission from alternate sources. Dr. Scawthorn concluded that firefighting water supply is a significant problem that is falling through the cracks in California.

Dr. Scawthorn advised that his research also looked at what can be done to improve the situation and several approaches were identified, ranging from infrastructure upgrades to special high-pressure or portable firefighting systems, installation of gas shut-off valves, and use of neighborhood emergency response teams. Dr. Scawthorn showed examples of high-pressure and portable water systems in use in San Francisco, Vancouver, Oakland, and Vallejo.

Dr. Scawthorn noted that the Los Angeles Basin currently has no emergency firefighting water system, but the risk of fire is very high in the densely populated sections of the region. He recommended considering a high-pressure system using pumps and existing drainage channels to move ocean water inland. He said the entire state would benefit from having a standardized portable water system and gas shut-off valves.

Dr. Scawthorn drew attention to the next steps outlined in his report. He recommended highlighting the problem to the California Fire Service, Metro Chiefs organization, and other groups, and then reaching out to water departments and holding joint meetings with them. He advocated forming an interagency task force focusing on three issues: 1) development of a statewide portable system; 2) a high-pressure system for Los Angeles; and 3) establishing neighborhood caches of firefighting equipment.

Commissioner Ortiz thanked Dr. Scawthorn and expressed Senator Elaine Alquist's appreciation for his work. He asked what Dr. Scawthorn would advise the Legislature to do to address this problem. Dr. Scawthorn commented that there is already a law requiring water departments to plan for disasters, but the law is not always enforced. He said he would work with the Metro Chiefs, former Commissioner Don Parker, and the League of California Cities to draw attention to the issue.

ACTION: Commissioner Macari made a motion, seconded by Commissioner Peggy Hellweg, that:

The Commission authorize expenditure of \$49,000 in research funds for the follow-up activities proposed.

* Motion carried, 7 - 0.

XI. RESTORING CALIFORNIA COMMERCE AFTER DISASTERS

Mr. King noted that the Commission began exploring the idea of expediting post-disaster business recovery last year. He recalled that Mr. McCarthy had made a presentation on the topic to the Cal Volunteers organization, and the Commission engaged a consultant to contact businesses and identify their chief recovery issues. He stated that Deloitte Consulting has offered to assist with researching ways the state can help businesses recover as quickly as possible after a disaster. He introduced Ms. Julie Quinn, Sacramento Office Managing Director, Deloitte Consulting LLP, and invited her to discuss the project.

Ms. Quinn thanked the Commission for providing this opportunity for Deloitte to offer important pro bono services to the state. She said Deloitte plans to reach out to businesses and contact other states, synthesize their feedback, report on the findings, and identify specific things the state can do to help.

Commissioner Macari encouraged Ms. Quinn to include agricultural sectors as well as urban areas. He noted that farms and ranches are a critical component of California's economy. Ms. Quinn confirmed that Deloitte will reach out to businesses of different sizes, sectors, and geographic areas.

Ms. Quinn observed that in past disasters, many communities have found communication to be a critical tool in recovery so people know what's going on, which businesses are open, and where to find certain kinds of services.

Commissioner Macari asked about the value of Deloitte's pro bono contribution. Mr. McCarthy estimated that the services were worth \$265,000.

XIII. REVIEW OF SAN FRANCISCO PUBLIC UTILITIES (SFPUC) WATER DELIVERY SYSTEM (Out of Order)

Senior Structural Engineer Fred Turner said that whenever the SFPUC makes changes in its water delivery system improvement program, the Commission is required to comment on the extent to which the changes affect seismic safety. He noted that this process has taken place three times so far. He drew attention to the draft letter to the joint committee detailing the Commission's comments on the changes announced this past fall. Mr. Turner stated that the Department of Public Health is also required to submit comments, primarily dealing with potability issues. He said the Commission received written comments from the SFPUC staff and BAWSCA on November 9, and a few minor editorial changes were made.

Mr. Turner reviewed and discussed the gist of the Commission's comments on the proposed modifications to the water system improvement program. He said the changes result in a seven-

month delay compared to 2002, with a number of important projects being bunched to the end of the schedule. He pointed out these substantial delays will have adverse seismic safety impacts the Legislature should consider. He recommended that the Commission approve the report in concept, noting that the Commissioner Macari and the staff will continue refining the comments before the December 6 deadline.

ACTION: Commissioner Pazin made a motion, seconded by Commissioner Hellweg, that:

The Commission approve the letter in concept and authorize the staff and Commissioner Macari to continue discussions with the SFPUC, finalize the comments, and submit them to the joint committee.

Commissioner Ortiz explained that he would be abstaining because Senator Alquist sits on the joint committee.

* Motion carried, 6 - 0 - 1 (Commissioner Ortiz abstaining).

XIV. REPORT ON OCTOBER 21 STATEWIDE EARTHQUAKE DRILL

Ms. Cogan reported that an estimated 8.6 million people participated in the statewide earthquake drill on October 21, an event that has continued to grow each year since its inception in 2008. She said many schools and government agencies participate, but the event organizers would like to involve more businesses and local governments. She noted that people are still not well prepared for earthquakes in California, and the ShakeOut event provides a wealth of tips and information about what people can do. Ms. Cogan encouraged commissioners to visit with ShakeOut Website for more details.

XVI. COMMISSION RESEARCH PROGRAM UPDATE

Hospital Shake Table Test and Fire Following, University of California at San Diego

Mr. Turner discussed the hospital building shake test project underway in San Diego. Mr. Turner explained that this project consists of an actual five-story building outfitted with nonstructural components, including a complete hospital ICU area and surgical room, constructed on top of a large shake table. He observed that the shake testing will help researchers assess the reliability and safety of various nonstructural elements, including sprinklers, electrical connectors, cables, and batteries; fire walls and compartmentalization; passive architectural systems like cladding, floors, doors, stairs, and ceilings; and mechanical and electrical equipment, including elevators, HVAC, and piping. Mr. Turner advised that the first step will be ground motion tests. He indicated that the entire structure will be shaken until damaged, and then fire researchers will light a series of fires and assess the effects of fire damage as well.

Mr. Turner introduced Professor Jose Restrepo, UC San Diego, and invited him to discuss the work in more detail. Professor Restrepo played a short video clip showing the building's construction. He said the Commission's \$300,000 contribution to this \$5 million project helped

pay for the design of the ICU, design of the base isolation system, and an educational video documentary.

Professor Restrepo requested that the Commission provide another \$50,032 for the post-earthquake fire testing phase of the project. He said the researchers intend to examine the effectiveness of passive and active fire safety measures, as well as the impacts of fire damage on building systems, equipment, and components.

Chairman Gardner observed that this research dovetails nicely with the Commission's project on fire following earthquake.

ACTION: Commission Pazin made a motion, seconded by Commissioner Curry, that:

The Commission authorize expenditure of \$50,032 from the research fund as proposed.

* Motion carried, 6 - 0 (Commissioner Macari absent during voting).

Proposition 1D Seismic Retrofit for Public Schools

Mr. Reyes introduced Mr. David Zian, Office of Public School Construction (OPSC), to update the Commission on the Proposition 1D seismic retrofit template project. He said the Commission approved an additional \$50,000 at the last meeting so OPSC could use the seismic evaluation template to assess more potentially eligible buildings.

Mr. Zian reported that OPSC implemented its new seismic mitigation program regulations on September 8, and the Division of the State Architect published a procedure and guidelines for school districts to follow. He recalled that after the last meeting, OPSC had approximately \$127,000 available for template reviews. He noted that OPSC solicited more schools and has committed all of the remaining funds to evaluate 50 school buildings with the new template. He thanked the Commission for providing this much-needed assistance.

Mr. Zian stated that there were 12 Proposition 1D retrofit projects in process. He said eight school districts applied for template evaluations, of which six are moving forward, and four have already been assigned to contractors. He added that the actual costs and work orders will be available later.

Chairman Gardner expressed appreciation to OPSC for this progress.

Tahoe Hazard Study

Mr. McCarthy suggested deferring the update on the Lake Tahoe hazard study to the January meeting.

XII. NUCLEAR POWER PLAN HAZARD REVIEW

Mr. Anderson informed the Commission that he and Mr. McCarthy were serving as a member of the CPUC peer review group mandated by AB 1632 in 2006 to examine the safety of the state's electrical system, transmission system, and large power plants, including the nuclear facility at Diablo Canyon. He said the peer review panel will be looking at seismic safety issues only, not plant design. He noted that representatives from the California Geological Survey, California Energy Commission, California Coastal Commission, and the Seismic Safety Commission are participating.

Mr. Anderson noted that the CPUC had recently forwarded a draft agreement reimbursing the Commission for its oversight and peer review activities. He requested the ongoing assistance of a commissioner to help the staff review and comment on documents, and Commissioner Hellweg volunteered her services.

XVII. PUBLIC COMMENT

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

XVIII. GOOD OF THE MEETING

Chairman Gardner introduced and welcomed newly appointed Commissioner Kit Miyamoto to the meeting.

XIX. ADJOURNMENT

There being no further business, Chairman Gardner adjourned the meeting at 3:20 p.m.

Sue Celli
Office Manager

Approved by:

Richard McCarthy
Executive Director