

State of California Alfred E. Alquist Seismic Safety Commission



Annual Report for 2011



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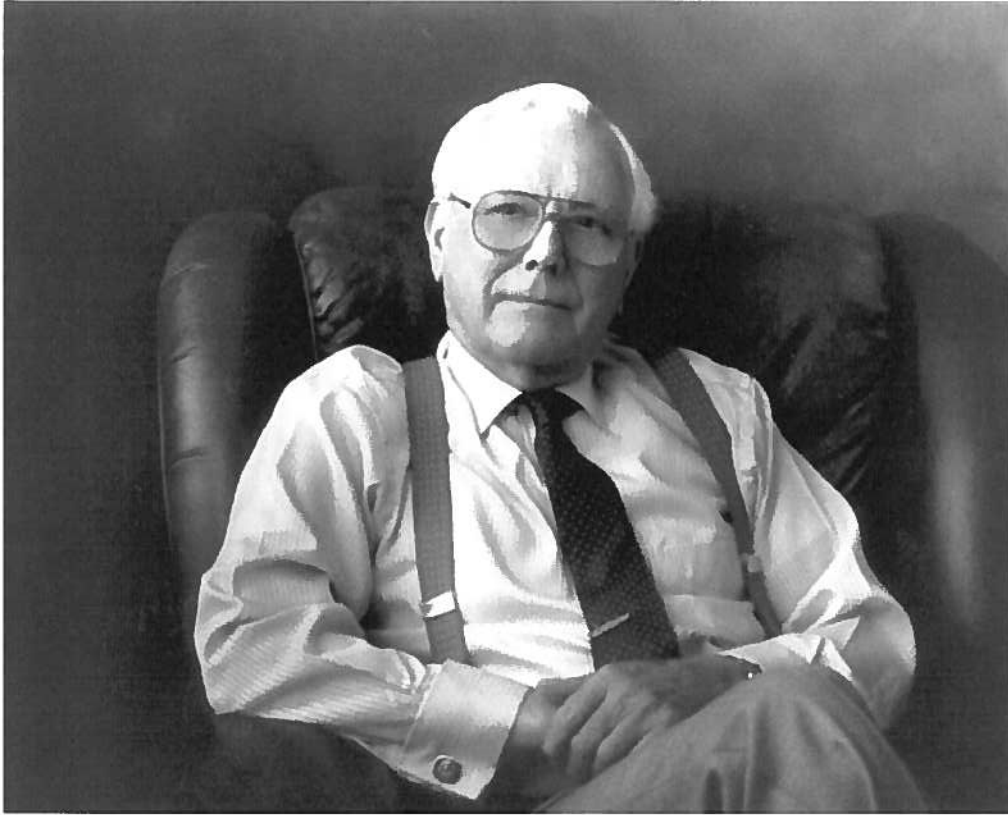
California Seismic Safety Commission

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Senator Alfred E. Alquist
Seismic Safety Commission
Founder



Senator Alfred E. Alquist was born in Memphis, Tennessee on August 2, 1908, the eldest son of eight children. After a 40-year career in the railroads, where he started at the age of 11 as a water boy, he served in the California Legislature for 34 years. He was elected to the Assembly in 1962 where he represented Santa Clara County for four years and then to the Senate in 1966 where he served for 30 years.

Senator Alquist had a long and distinguished career advocating for earthquake safety in the Legislature. Among his numerous legislative accomplishments was the creation of the Seismic Safety Commission in 1975. He envisioned the Commission as a forum to provide California with a consistent policy framework and a means for coordinating earthquake related programs at all levels of government with contributions from the private sector.

In 2006, the Legislature passed Senate Bill 1278 which changed the name to the Alfred E. Alquist Seismic Safety Commission in recognition of his leadership and achievement. Today, the Commission's work in state, national and international seismic related issues is testament to the strong foundation Senator Alquist built.

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2011 Annual Report
Seismic Safety Commission

Executive Summary

The Alfred E. Alquist Seismic Safety Commission (Commission) is the central seismic resource and guardian for the State of California and acts as adviser to the Governor and the Legislature on earthquake policy, providing California with cost-effective recommendations to reduce earthquake losses and speed recovery. Dedicated to reducing earthquake risk for the people of California since 1975, the Commission investigates earthquakes, reports on earthquake-related issues, and evaluates and recommends to the Governor and Legislature policies needed to reduce earthquake risk and to ensure a coordinated framework for establishing earthquake safety policies and programs in California.

Major earthquakes in 2011 are a reminder that the State must remain vigilant in its earthquake programs. The 2011 Japanese earthquake and tsunami represents one of the greatest disasters of all time. The continuing aftershocks from the 2010 Christchurch earthquake in New Zealand illustrates how earthquakes can impact rebuilding efforts for many months. Even this year's past tremblors on the east coast and mid-west illustrate that preparedness will always require a constant commitment by the State.

These earthquakes are reminders that even with the Commission's leadership and support in reducing losses and speeding recovery, California must continue to make significant progress toward earthquake safety.

The Commission's accomplishments in 2011 helped reduce earthquake risk and improve post-earthquake recovery capabilities in California. Here are just a few highlighted accomplishments:

- The Risk of Fire Following Earthquakes -- this project identified where vulnerabilities exist in the water supply after earthquakes and listed mitigation actions that can be developed to reduce the loss of life and property in California from post earthquake fires.
- Restoring California Commerce After Earthquakes - this project will identify actions to be taken immediately after a major earthquake that will reduce losses to employment and business market share.
- Agricultural Disaster Preparedness – this effort will save California's agriculture industry billions of dollars.

The Commission's goals for next year are:

- Shake test of a full-scale five story hospital building that will simulate an earthquake and then conclude with burn tests. This project will assist in the development of new codes for public emergency facilities and help to better understand how fires spread through damaged buildings.
- Update the *California Earthquake Loss Reduction Plan* to cover the period of 2012 through 2017.
- Examine the earthquake and tsunami hazards impacting the Lake Tahoe Basin.

Mission Statement

To provide decision makers and the general public with cost-effective recommendations to reduce earthquake losses and expedite recovery from damaging earthquakes.

Vision Statement

To provide leadership in implementing and achieving the goals and objectives in the *California Earthquake Loss Reduction Plan*, including to advance learning about earthquakes and risk reduction in both the short and long term, advance the earthquake-resistant designs of buildings and other important structures, and advance the preparedness and emergency response systems for earthquakes.

Commission Membership

- | | |
|--|---------------------------------|
| 1. Honorable Michael Gardner, Chair | <i>City Government</i> |
| 2. Senator Elaine Alquist (Matt Ortiz) | <i>State Senate</i> |
| 3. Assembly Member William Monning (Kathy Smith) | <i>State Assembly</i> |
| 4. Sheriff Mark Pazin | <i>Emergency Services</i> |
| 5. Mike Dayton, <i>State Representative</i> | <i>Cal EMA</i> |
| 6. Kit Miyamoto | <i>Structural Engineering</i> |
| 7. Chester Widom, <i>State Representative</i> | <i>State Architect</i> |
| 8. Jim McGowan, <i>State Representative</i> | <i>Building Standards</i> |
| 9. Vacant | <i>Cities/Building Official</i> |
| 10. Emir Jose Macari | <i>Geotechnical Engineering</i> |
| 11. Vacant | <i>County Government</i> |
| 12. Vacant | <i>City Government</i> |
| 13. Margaret Hellweg | <i>Seismology</i> |
| 14. Helen Knudson | <i>Social Services</i> |
| 15. Timothy Strack | <i>Fire Protection</i> |
| 16. Vacant | <i>Public Utilities</i> |
| 17. Vacant | <i>Mechanical Engineering</i> |
| 18. Vacant | <i>Geology</i> |
| 19. Vacant | <i>Architectural Planning</i> |
| 20. Vacant | <i>Insurance</i> |

Commission Staff

Richard J. McCarthy, *Executive Director*
Robert Anderson, *Senior Engineering Geologist*
Sue Celli, *Executive Secretary and Office Manager*
Karen Cogan, *Administrative Manager and Annual Report Editor*
Dave King, *Legislative & Special Projects Manager*
Henry Reyes, *Structural Engineer (Special Projects)*
Fred Turner, *Senior Structural Engineer*

Commission Authority

The California Seismic Safety Commission was established in 1975 to advise the Governor, Legislature, state and local agencies, and the public about strategies to reduce earthquake risk (Government Code §8870, et seq.). The Commission reports through the State and Consumer Services Agency and consists of 20 commissioners chosen for their technical expertise and experience. The Governor appoints 15 commissioners, the Senate and the Assembly each choose a representative from their respective memberships (2), and three (3) state agencies are represented (*California Emergency Management Agency, California Building Standards Commission, and the Division of the State Architect*).

Elected Officers

Mark Church served as Chair and William Chubb served as Vice Chair through July 2011. Michael Gardner served as Chair and Jay Elbettar was elected Vice Chair in July 2011. Jay Elbettar was not confirmed by the Senate.

Commission Funding

The Commission is supported by the Insurance Fund through June 30, 2012. Chapter 49, Statutes of 2006 (AB 1809, Committee on Budget), contained language in a budget trailer bill that extended the sunset date on the Insurance Fund from July 1, 2009 until July 1, 2012. The Commission's operational budget for fiscal year (FY) 2010/2011 is \$1.3 million with an additional \$2.0 million in monies to be used exclusively for the Earthquake Research and Projects Program. The Commission has proposed continued funding through the Insurance Fund after July 1, 2012.

Commission 2011 Projects

Fire Following Earthquake Risk – Will Water Be Available for Firefighters?

The risk of fire following earthquakes is a significant problem in California. Fire services in California have not been tested by a major earthquake since 1906. This study shows that a major earthquake in major metropolitan cities in California will result in simultaneous ignitions and water distribution breaks. The purpose of this project is to identify where the vulnerabilities are in fighting fires after a disaster so that mitigation efforts can be developed to reduce the loss of life and property in California.

On June 10, 2010, the Commission voted to provide funding for \$49,000 from the California Research and Assistance Fund to the Pacific Earthquake Engineering Research Center (PEER) to conduct a study on the fire risk following earthquakes. The focus of the paper is on fire following earthquake in urban areas (including the special problem of tall buildings).

PEER started work on the project on September 16, 2010. Conducting the study for PEER is Professor Charles Scawthorn, Ph.D. The end date was extended from March 31, 2011 to December 2011 to allow Dr. Scawthorn to pursue data from the 2011 earthquake and tsunami in Tohoku, Japan, and the approximately 260 fires that occurred in that event.

The report was approved by the Commission in July 2011. *This project will identify where the vulnerabilities exist in the water supply after earthquakes and identify mitigation actions that can be developed to reduce the loss of life and property in California.*

Commission Contribution: \$49,000

Commission Review of San Francisco Public Utilities Commission's Water System Improvement Plan

The San Francisco Public Utilities Commission (SFPUC) initiated a \$4.3 billion project to retrofit its water delivery system. This program calls for the construction of a new dam and pipelines, repair of existing pipelines and facilities, and construction of new earthquake fault crossings. Enabling legislation requires the SFPUC to make annual reports and provide notice to the Seismic Safety Commission of any changes resulting in delays, additions, or deletions in the work or scheduling of its Water System Improvement Program (WSIP). When completed, this program will significantly reduce the risk from major earthquakes to the water supply for over 2.4 million people in the greater San Francisco Bay region. The Seismic Safety

Commission last reviewed changes and delays to the SEPUC's Water System Improvement Program (WSIP) in the fall of 2009.

The SFPUC issued an annual report updating its progress on the water system improvements in September 2011. Seismic Safety Commission staff determined that a review by the full Commission of further program delays was not yet required by the state's Water Code since the SFPUC had not yet adopted its delays.

The Commission conducted an independent review of delays in the San Francisco Public Utilities Commission's WSIP. The State Water Code requires the California Seismic Safety Commission to report to the Joint Legislature Audit Committee annually regarding the public safety implications on the delays and changes. The Commission reviewed a draft letter report at its November 2011 hearing. *The Commission's review will assist the SFPUC to manage the Water System Improvement Program*

Diablo Canyon Independent Peer Review Panel Participation

The Commission is a member of the California Public Utilities Commission (CPUC) Independent Peer Review Panel (IPRP) to review the new geologic information obtained by PG&E regarding seismic hazards that could impact PG&E's Diablo Canyon Nuclear Power Plant. The IPRP's task is to review PG&E's seismic, geotechnical, and geological information related to a new seismic hazard assessment of the Diablo Canyon Nuclear Power Plant and advise the CPUC regarding the reasonableness and adequacy of the collection of new seismic, geotechnical, and geologic data, its processing and analysis and interpretation.

New geologic and seismic data are now being gathered by extensive onshore and offshore geophysical surveys. This project is being carried out by the California Geological Survey, the California Coastal Commission, and the California Energy Commission and is under the leadership of the CPUC. It is currently anticipated to conclude in November 2013. *This project will help identify seismic hazard issues that may affect the Diablo Canyon Nuclear Power Plant and California's electric transmission system.*

California's Enhanced Multi-Hazard Mitigation Plan

Commission staff advised the California Emergency Management Agency (Cal EMA) and other participating state and local agencies and private sector and non-profit organizations on the most appropriate ways to describe hazard mitigation progress in an update of the state's Enhanced Multi-Hazard Mitigation Plan. The Federal Emergency Management Agency (FEMA) approved the 2010 version in October 2010, enabling California's government agencies to receive more mitigation funding from FEMA following future disasters. Commission staff also advised Cal EMA on ways to improve outreach to private and public sector stakeholders who benefit from disaster mitigation efforts. Staff is also working with FEMA and Cal EMA to develop more consistent methods of measuring and reporting mitigation progress and measuring mitigation effectiveness following future earthquakes.

The Commission is invested in a partnership with the California Earthquake Authority (CEA) and the California Geological Survey providing technical assistance to the CEA on the development of the first update to the Uniform California Earthquake Forecast (UCERF) and the Next Generation Attenuation West, 2 programs which are needed by loss modeling companies and earthquake insurance companies throughout California. The Commission's Senior Engineering Geologist works half time on this project. The UCERF program covers several critical issues that were observed during recent earthquakes in Chile, China, California, Mexico, Japan, Turkey, and New Zealand. This will lead to a much greater understanding of the relationships of physical aspects of faults and earthquakes' ground motion potential and assist loss modeling companies and insurance companies in setting premium rates by developing a better understanding of seismic hazard potential over time periods relevant to the CEA's loss model results. Results from both projects will be used by the United States Geological Survey in updating California's portion of the National Seismic Hazard Map in 2014. This map will then be integrated into building codes in the United States.

This will lead to a much greater understanding of the relationships of physical aspects of faults and earthquakes and assist loss modeling companies and insurance companies in setting premium rates.

Restoring California Commerce After Earthquakes

The Commission recognizes California needs precise plans to get businesses back to work to prevent loss of California's market share after a disaster. Because of this, the Commission secured a consultant to assemble a list of business executives to invite them to a roundtable discussion regarding the economic impact of a catastrophic event and what assistance the state could provide to reduce the economic impact to their business and minimize the loss of jobs and market share to other states and counties.

The Commission is in the process of outlining concepts, establishing a team of business leaders to discuss the concepts, solicit ideas, and recommendations. Those recommendations will be submitted to the Agency Secretary once approved by the Commission. The Commission worked with PAC West Communications to develop a comprehensive list of large corporate executives, large Chamber of Commerce organizations, medium size business executives, and appropriate business associations in Northern and Southern California that will participate in discussions about what role state government can provide to expedite California businesses and its citizens back to work.

The Commission has entered into an agreement with Deloitte (Deloitte's work is being done pro bono) and will begin to develop a strategy to meet with high level corporate business leaders (small business leaders as well). Deloitte provided a commitment to develop a plan, create appropriate questions, set up meetings, and review the results from the meeting. This assistance from Deloitte is pro bono and will help the Commission complete this project in the Spring of 2012. Deloitte and the Commission will assemble their comments as to what they believe the state can do to get the economy back on its feet after major disasters.

This project will identify where billions of post-disaster dollars can be saved in the form of employment and market share loss after disasters.

The Commission will work with the Department of Food and Agriculture to understand the current plans that the agriculture industry has in place for a disaster of any type. A meeting will occur in the Spring of 2012 with industry representatives and the Department of Food and Agriculture to review what, if any, plans exist. Once there is a better understanding of the current plans, the Commission will work in partnership to develop plans that could be applied to all hazards. CalEMA will also be invited to the meetings to ensure integration with the Multi-Hazard Mitigation Plan (SMHMP). The devastation to Japan's agricultural community will provide lessons on what measures California could take to reduce similar losses. *This will help save California's agriculture industry billions of dollars in case of a devastating earthquake.*

Statewide Drop, Cover, and Hold Earthquake Exercise

2012 is the fourth year for the statewide Great California ShakeOut -- a drill designed to educate the public about how to protect themselves during a large earthquake, and how to get prepared. This year's exercise was built on the momentum of last year's exercise. This year's statewide exercise was held on October 20, 2011 and over 8 million people participated. Participants are asked to participate in the drop, cover and hold on exercise which is held the third Thursday in October each year. Participants register at Shakeout.org website where a myriad of information is available on preparedness. *This statewide exercise will help individuals as well as businesses become better prepared for a disaster.*

Enhancement to the California Emergency Management Agency's Building Safety Assessment Program Emerging from Recent Earthquakes in New Zealand, Turkey, and Japan

CalEMA is studying and documenting lessons emerging from Japan and New Zealand about what worked and what didn't work with respect to placarding, barricading and stabilizing damaged buildings. CalEMA is seeking a consensus from its many advisors on how to enhance the State's safety assessment program. Once CalEMA has developed a consensus, they are updating a training manual to train Safety Assessment Program trainers about the enhancements. They are then providing training throughout the state that will help implement new enhancements. The Commission has a new interagency agreement (\$34,380) with CalEMA to conduct this work. The Commission approved of this project in May 2011. *This project will recommend improvements to the state's methodology to evaluate damaged buildings after earthquakes.*

The Seismic Safety Commission
Earthquake Research &
Assistance Program

In 2007, the Commission received \$6.5 million of the California Research Assistance Fund (CRAF) settlement for seismic projects. These non-General Funds are designated for earthquake risk reduction projects and are being administered and awarded through the *Commission's Earthquake Research Program*. Projects in 2011 included:

Pilot Program for Evaluation of the Most Seismically-Vulnerable California Public School Facilities.

The Commission contributed a total of \$250,000 to the Office of Public School Construction (OPSC) to develop an engineering template to be used by public schools to apply for \$199.5 million Prop 1D (Seismic Retrofit Funds). The template was finalized in late September 2010 and work on contacting and scheduling site visits to the school districts began in October 2010. Nine school districts containing 38 buildings participated in the evaluation process, of which 21 met all qualification standards and 17 did not. Seismic evaluations were completed for all the 21 buildings and submitted to Division of State Architect (DSA) for review and approval.

Approximately \$72,000 funds remain from the original \$200,000 of the contract agreement, and \$50,000 funding was added by the Commission for OPSC to include more vulnerable buildings between the current date and December 31, 2011. The start date of the project was December 1, 2009, and the termination date was extended from May 31, 2011, to December 31, 2011 in order to provide additional opportunity for OPSC to include more vulnerable buildings. A progress update was given at the Commission meeting on November 10, 2011. An additional six school districts submitted requests for 45 school buildings, resulting in the encumbrance of the remaining funds. Final results of funding disbursement to school districts will be submitted to the Commission in 2012. ***This will enable more children to be safer during earthquakes in California's schools.***

Commission Contribution: \$250,000. The Commission provided sole funding and increased its contribution by \$50,000. The product will enhance the release of \$199.5 million plus local funds provided by school districts.

Lake Tahoe Hazard Survey

In 2010, the Commission entered into agreements with Northern Illinois University and the California Geological Survey to co-fund the use of a new remote operating vehicle (a remote-controlled submarine) that needed to be field tested before being sent to its research site in Antarctica. The use of the device for observing faults and landslides in Lake Tahoe while conducting test dives allows the Commission to obtain, at low cost, data pertinent to seismic hazards in the Lake Tahoe basin. Test dives at Lake Tahoe are scheduled for April 2012.

Previous studies have documented evidence of past earthquake activity in the Lake Tahoe region that suggests a magnitude-7 earthquake potential. Data suggests past earthquakes produced a nearly 4-meter-high offset of the Lake floor, creating a tsunami or seiche (a standing wave in an enclosed or partially enclosed body of water) many years ago. This research can be utilized not only in the Lake Tahoe area, but findings can be applied to other underwater landslide risks with potential result of a tsunami, for example, along the coast. *This information will be used to gauge the risks in the Lake Tahoe Region and communicate those risks to local officials and the public so they will be better prepared.*

Commission Contribution: \$75,600
(\$25,700 to California Geological Survey and \$49,900 to Northern Illinois University)

Public Education through California Public Television – “Totally Unprepared” Campaign

The Commission entered into a partnership with PBS Television in an effort to encourage emergency preparedness in a multi-faceted program with Cal EMA, CEA, and the insurance industry for education and outreach projects. Project objectives include preparation of: 1) an outreach strategy of primetime programs on earthquakes, 2) an integrated website, and 3) social marketing programs with partner channels such as Facebook® and Twitter®. Ideas include a short video; a Drop, Cover, and Hold On exercise; a Shake Room; and, advanced social media. The goal is to provide education and community outreach, encourage interaction, and spur individuals to become more aware of their own earthquake risk and get prepared. The project was completed in December 2011. *This project reminds Californians to prepare for disasters, avoid becoming victims, and be more self-reliant.*

Commission Contribution \$300,000

High-Performance Shake Table

The Commission contributed \$300,000 towards a \$5.5 million collaborative project with UC San Diego and other universities and industry groups to assess fire safety and structural integrity of healthcare facilities after an earthquake. The first three years of the effort will entail constructing of an existing shake table a full-scale five-story office building with an acute-care component, and the fourth year will focus on fire safety aspects.

Recent earthquakes highlighted the poor performance of nonstructural systems in older buildings. For example, three hospitals were partially evacuated due to nonstructural damage in the Baja California earthquake on April 4, 2010. This test will focus on documenting the interaction of nonstructural and structural systems during ground shaking and in fires that can occur following earthquakes. The test structure will include hospital and other building equipment, heating and ventilating systems, as well as a fully functional elevator that has never been tested on a shake table. The Commission prepared a letter of support to the National Science Foundation (NSF) urging funding for the project. In August, NSF awarded UC San Diego the grant.

This test will document the response of hospital nonstructural components and systems to earthquakes and post earthquake fire: A contract for \$300,000 with UC San Diego was approved to:

1) Design an intensive care unit to be built on a shaking table; 2) Design a seismic isolation system and testing plan for the shaking table; and 3) Develop an educational video targeted to hospital personnel. Video production design and construction is underway. Construction of the test building can be viewed live at nees.ucsd.edu/video/. A contract addendum for \$50,000 was authorized by the Commission at the November 2011 hearing to address the adverse effects of shaking-related damage on the ability of the test building to resist the spread of fires and smoke following earthquakes. *The end result of the tests will be safer hospitals for personnel and patients during earthquakes and an educational video.*

Commission Contribution: \$300,000

Survey and Evaluation of Recent Hospital Evacuations Following Earthquakes:

The Commission staff has an interagency agreement (\$49,900) with the Pacific Earthquake Engineering Research Center to survey hospitals in New Zealand, Mexico, and El Centro, California about post earthquake response and evacuations. *Findings from this survey will identify areas needed to improve and speed the post disaster recovery of hospitals.*

Completed in 2011

Project Name	Description	CSSC Funds	Amount Leveraged Partner Contributions)	Contractor	Status
Tall Buildings Initiative	Developing seismic performance objectives and alternative design acceptance criteria for future tall buildings.	Up to \$350,000	CA Geological Survey/SMIP \$100,000 CA Governor's OES \$100,000, LA Dept of Building & Safety \$200,000, NSF through PEER \$500,000, USGS \$130,000, The Charles Pankow Foundation \$250,000 FEMA \$50,000 (\$1,330,000)	Pacific Earthquake Engineering Research Center	Completion Date May 2011
Pilot program for Evaluation of the Most Seismically Vulnerable California Public School Facilities	Developing a workable template that provides a standard procedure for an efficient, effective, consistent, and standardized method for seismic evaluation of vulnerable public school buildings at a minimum cost.	\$250,000	OPSC \$200,000 <i>Assists in release of \$199 million in Prop 1D seismic retrofit funds</i>	Office of Public School Construction	Completion Date Dec 2011
Fire Following Earthquake Risk	Identifying Water sources for Post-Earthquake fire Suppression	\$49,000	\$50,000 Pacific Earthquake Engineering Research Center	Pacific Earthquake Engineering Research Center	Completion Date: Nov 2011
Public Education through Public Television	Program for Public Television on how to take action to reduce injuries and damage from earthquakes	\$300,000	CEA \$250,000 CalEMA \$500,000 American Insurance Assoc. \$20,000 (\$770,000)	PBS Television	Comp. Date: Dec 2011
High Performance Shake Table	Shake Table Test of a Hospital Facility and an Educational Video	\$350,000		University of California San Diego	March 2012

Status of Seismic Safety Commission Research and Assistance Fund Underway

Project Name	Description	CSSC Funds	Amount Leveraged Partner Contributions)	Contractor	Status
Lake Tahoe Hazard Survey	Identify geologic hazards and seiche sources at the bottom of Lake Tahoe using a unique remotely operated vehicle CGS – Provide technical resources and produce reports.	\$149,900 \$25,589	\$50,000 Northern Illinois University, \$25,000 California Geological Survey (\$75,000)	Northern Illinois University, California Geological Survey	Underway
	Total				

**Status of Seismic Safety Commission Research and Assistance Fund
Completed in 2010**

Project Name	Description	CSSC Funds	Amount Leveraged (Partner Contributions)	Contractor	Status
California Earthquake Structural Retrofitting Program	Developed a building code for residential seismic retrofitting.	\$49,000	\$59,718 CA Dept of Housing & Community Development	CA Dept of Housing and Community Development	Completed May 2010
Distant Tsunami Risk to the Ports of Los Angeles/Long Beach Harbor	Estimated current velocities within the Ports of Los Angeles/Long Beach from multiple sources around the Pacific Basin.	\$50,000	NOAA \$350,000	National Oceanic and Atmospheric Admin./Univ. of Washington	Completed March 2010
	TOTAL				

**Status of Seismic Safety Commission Research and Assistance Fund
Completed in 2009**

Household Preparedness Survey	Survey of the state of household earthquake mitigation and preparedness in 2008 for selected racial and ethnic minorities, and different geographical areas at high risk. Partnership with the OES, California Volunteers, Governor's Office Insurance Advisor, Office of Homeland Security, and the University of California at Los Angeles.	Actual Final Cost \$320,181	CalEMA \$350,000 Institute for Home & Business Safety \$35,000, Southern California Association of Governments \$15,000 (\$400,000)	University of California, Los Angeles	Completed Spring 2009 At Governor's Office
Field Act Building Performance Study	Evaluated the differences in the earthquake performance of public schools constructed to Field Act standards and buildings constructed to non-Field Act standards.	\$277,785	\$0 No partnerships; requested by CSSC	San Jose State University	Completed October 2009
	TOTAL				

**Status of Seismic Safety Commission Research and Assistance Fund
Completed in 2008**

The Los Angeles Earthquake: Get Ready	Disseminated public information and outreach regarding earthquake preparedness activities for the Shakeout in collaboration with other expert advisors and project partners.. Served as a “prototype” for the first Statewide Shakeout held on 10/15/09.	\$250,000	\$1,510,000 USGS, SCEC, CEA, And 31 other partners	The Art Center College of Design	Completion Date: Dec 2008
	TOTAL				

Progress Report on California's Earthquake Loss Reduction Plan

The California Earthquake Loss Reduction Plan (Plan) 2007-2011 was last revised and released in January 2007. This Plan continues to identify current and proposed seismic safety efforts, goals, and priorities for the State through 2011. The Plan satisfies three needs:

- Reduces earthquake loss.
- Advises the executive branch on overall priorities and implementation strategies
- Supports the state's requirement to update the Governor's Office of Emergency Services Statewide Multi-Hazard Mitigation Plan.

The Plan is a living document that continues to evolve. The following is a summary of progress made in 2011. These include all Seismic Safety Commission projects:

Strategic Plan Element	Plan Initiative	Brief Project Description
Research and Technology Education & Information Emergency Response Recovery	2.1.4 2.2 3.2 3.3 10.4 10.4.5 11.1 11.2 11.3	<i>Fire Following Earthquake. Will there be Water for Firefighters?</i>
Utilities & Transportation Geosciences Existing Buildings	8.3.1 8.4.1 8.4.2 8.4.3 1.2.2 6.4.2	<i>Commission Review of San Francisco Public Utilities Commission Water System Improvement Plan</i>
Economics Utilities & Transportation Geosciences	4.4 8.4 8.4.3 1.2.2 1.2.3	<i>Diablo Canyon Independent Peer Review Panel Participation</i>
Utilities, Transportation, Geosciences, Economics, Land Use, Existing & New Buildings	5.3 5.4 6.4 8.2 8.3	<i>California's Enhanced Multi-Hazard Mitigation Plan</i>

	8.4 1.2.3 4.1	
Existing Buildings & Preparedness	6.4.1	<i>Pilot Program for Evaluation of Most Seismically-Vulnerable California Public Schools.</i>
Geosciences Research & Technology Economics	1.2 1.4 2.1.1 2.2.4 2.4.1 3.3.1 2.1.4 2.4 4.2.1 thru 4.2.5	<i>Partnering with Other Agencies – SCCS supports CEA,</i>
Education, Information & Preparedness	3.1 3.2 9.1 9.2 9.3	<i>State-wide Drop Cover, and Hold Earthquake Exercise</i>
Research & Education & Information	2.3.1 3.2 3.2.3 2.1.3 7.4.1	<i>High Performance Shake Table</i>
Recovery & Economics Standards	4.1 thru 4.4 9.1 thru 9.3 11.1 thru 11.4	<i>Restoring California Commerce after disasters</i>
Land Use Geosciences Land Use	5.3.2 5.3.4 1.3.1 thru 1.3.3 3.2.2 3.2.3 3.2.4	<i>Agriculture Disaster Preparedness</i>
Emergency Response	10.4.5	<i>Enhancement to the California Emergency</i>

Recovery	11/3/3	<i>Management Agency's Building Safety Assessment Program Emerging from Recent Earthquakes in New Zealand, Turkey and Japan.</i>
Preparedness Education & Information	9.1.1 9.1.2 9.2.2 9.3.4 3.2.1 thru 3.2.5	<i>Public Education through California Public Television - "Totally Unprepared" Campaign</i>
Geosciences Research & technology	1.4 2.4	<i>Lake Tahoe Hazard Survey</i>
Emergency Response	10.2.3 10.4.5	<i>Survey and Evaluation of Recent Hospital Evacuations Following Earthquakes</i>

Commission Budget

	Budget Year 2009/2010	Staff 2009/2010	Budget Year (current) 2010/2011	Staff (current) 2010/2011
Special Fund <i>Insurance Fund (Seismic Safety Account)</i>	\$1,191,000	7.8	\$1,144,000	7.8
Reimbursements	\$(82,000)		\$(82,000)	
Total	\$1,109,000	7.8	\$1,062,000	7.8

With the enactment of Chapter 741, Statutes of 2003 (SB 1049), the Commission's operations are funded from fee revenues derived from assessments on property insurance policies. Insurance companies in California are assessed an annual fee reflecting the volume of property insurance policies underwritten at a rate calculated to equal the Commission's annual operating budget. The Commission will continue to provide advice to the Legislature and public on earthquake and other seismic issues in addition to policy recommendations.

