
**State of California
Seismic Safety Commission**



Annual Report for 2005



California Seismic Safety Commission
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Table of Contents

Transmittal Letter to Governor Schwarzenegger and Members of the State Legislature	
Mission Statement & Vision Statement	1
Commission Membership.....	1
Commission Staff.....	2
Seismic Safety Commission Role, Responsibilities, and Ongoing Activities	2
Seismic Safety Legislative Summary for 2003-2004.....	3
Governor Appointments Officers Elected and Vacancies.....	6
Commission Holds Tsunami Workshop.....	9
Commission Forms Ad Hoc Committee for California’s Tsunami Risk	9
Commission Testifies Before Senate Committee on Governmental Organization	12
Commission Distributes Report “Seismic Safety in California Schools”	12
Homeowner’s Guide to Earthquake Preparedness Updated.....	13
Homeowner’s Guide to Earthquake Preparedness Released in Spanish	13
Statewide Mitigation Plan Updated.....	14
Progress Report on Earthquake Loss Reduction Plan	14
Report to Commission on Effort on Retrofit State and Local Government Buildings	15
San Francisco Public Utilities Commission Water System Improvement Program Review Committee	15
California Unreinforced Masonry (URM) Progress Report.....	16
California’s Urban Search and Rescue Teams Testify Before Commission.....	17
Local Outreach for 2005.....	19
Presenters Before the Commission in 2005	23
Commission Budget Summary.....	24
Commission Vision and Projects for 2006.....	25



State Of California

SEISMIC SAFETY COMMISSION

Arnold Schwarzenegger, Governor



January 13, 2006

Lawrence Klein
Utilities
Chairman

The Honorable Arnold Schwarzenegger, Governor
Members of the California State Legislature

Dr. Lucy Jones
Seismology

Dear Governor Schwarzenegger and Members of the State Legislature:

Hon. Richard Alarcon
State Senate

Losses from the Asian earthquake and tsunami (274,000 dead, 200,000 missing), Hurricane Katrina (over 1300 dead) and a major earthquake in Pakistan (80,000 dead), remind us that world-wide losses from natural disasters are on the rise. Therefore, we must remain dedicated to working towards developing and applying the most efficient and cost-effective mitigation, response, and recovery actions.

Chris Modrzejewski
Senate Representative

Hon. Mark Church
County Supervisor
Local Government

Dr. Bruce Clark
Geology

The mission of the Seismic Safety Commission is to provide decision makers and the general public with cost-effective recommendations to reduce earthquake losses and expedite recovery. Therefore, the Seismic Safety Commission is pleased to present its Annual Report as required in Government Code Section 8870.1. This report highlights the seismic risk reduction accomplishments by the Seismic Safety Commission in 2005 including:

Hon. Carol Liu
State Assembly

1. A report on the Tsunami Risk to California
2. A report on the Seismic Safety in California Schools
3. An update of the Homeowner's Guide to Earthquake Safety
4. A report to the Legislature on the Status of the Unreinforced Masonry Building Law

Donald Manning
Assembly Representative

Celestine Palmer
Insurance

Daniel Shapiro
Structural Engineering

Keith Wheeler
(Emergency Services)

Gary McGavin
Architectural Planning

Jeff Sedivec
Fire Protection

Dennis Mileti
(Social Services)

Aruk Arulmoli
(Soils Engineer)

Richard McCarthy
Executive Director

The Seismic Safety Commission, working with the federal government, state agencies, local governments, business, industry, and individuals, has provided leadership and support actions to reduce losses and speed recovery when earthquakes strike California. We must never be complacent about the threat and risk of damage to property and loss of life from earthquakes to California. We must be continually committed to applying cost-effective and innovative solutions to reduce the State's risk before the next earthquake strikes.

Sincerely,

Lawrence Klein, Chairman

Jeff Sedivec, Vice Chair

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 to earthquakes.

Commission Membership as of December 2005

- | | |
|---|----------------------------------|
| 1. Lawrence Klein, Chairman | <i>Public Utilities</i> |
| 2. Jeff Sedivec, Vice Chairman | <i>Fire Protection</i> |
| 3. Senator Richard Alarcon | <i>State Senate</i> |
| 4. Dr. Arul Arulmoli | <i>Soils Engineering</i> |
| 5. Supervisor Mark Church | <i>Local Government</i> |
| 6. Dr. Bruce Clark | <i>Geology</i> |
| 7. Dr. Lucile M. Jones | <i>Seismology</i> |
| 8. Assemblywoman Carol Liu
Donald Manning, <i>Representative</i> | <i>State Assembly</i> |
| 9. Gary McGavin | <i>Architectural Planning</i> |
| 10. Dr. Dennis Mileti | <i>Social Services</i> |
| 11. Celestine Palmer | <i>Insurance</i> |
| 12. Daniel Shapiro | <i>Structural Engineering</i> |
| 13. Keith Wheeler | <i>Emergency Services</i> |
| 14. Vacant | <i>County Government</i> |
| 15. Vacant | <i>City Government</i> |
| 16. Vacant | <i>Mechanical Engineering</i> |
| 17. Vacant | <i>Cities/Building. Official</i> |

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

**Seismic Safety Commission Role, Responsibilities
and Ongoing Activities**

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 Section 8870, et seq.). The Commission is an independent agency composed of 17 commissioners chosen for their technical expertise and experience. The Governor appoints 15 commissioners, and the Senate and the Assembly each choose a representative from their respective memberships.

The Commission investigates earthquakes, reports on earthquake-related issues, and evaluates and recommends to the Governor and Legislature policies needed to reduce earthquake risk. To ensure a coordinated framework for establishing earthquake safety policies and programs in California, the Commission:

- Uses the expertise and experience of commissioners and stakeholders throughout the state in earthquake-related fields, to review, evaluate, and translate technical information.
- Makes recommendations to propose, develop and shape earthquake safety policies;
- Coordinates the State's mitigation efforts through publication and promotion of the *California Earthquake Loss Reduction Plan* as required by the California Earthquake Hazards Reduction Act of 1986. This regularly-updated five-year plan fills several needs:
 - (1) It serves as the State's policy statement describing what actions need to be taken to reduce earthquake risk are current;
 - (2) It serves as the State's strategic plan, guiding the executive and legislative branches with overall implementation strategies and priorities for seismic safety; and
 - (3) Maintains and updates the seismic portion of the State's Multi-Hazard Mitigation Plan thereby allowing the State to remain eligible for federal disaster relief funds.

- Responds promptly after earthquakes to gather information, support emergency response efforts, improve communications, and recommend policy changes to apply lessons learned from these events;
- Creates and directs specialized committees of experts from the private and academic sectors and representatives of state and local government agencies to investigate specific policy areas and recommend regulatory changes and legislation to the full Commission and Legislature for action;
- Oversees the Strong Motion Instrumentation Advisory Committee (SMIAC) which was established by law to advise the California Geological Survey in the operation and goals of the instrumentation program;
- Exercises leadership in seismic safety issues by conducting public hearings on earthquake and tsunami-related issues of statewide importance;
- Offers guidance to increase effectiveness and promote application of loss reduction policies and techniques;
- Educates professionals and the general public about earthquake risk and how to manage that risk through publications and development and distribution of non-technical guides to help homeowners, building owners, and business owners;
- Establishes and maintains relationships with boards, commissions, departments, agencies and other public and private organizations to implement policies to improve seismic safety;
- Promotes applications of research findings and sponsors training programs to improve construction in the State from the planning stage to ongoing building code enforcement;
- Serves on the Hospital Building Safety Board that counsels the Office of Statewide Health Planning and Development on hospital seismic safety improvements;
- Serves as a state representative in the Division of the State Architect Advisory Board on school safety issues;
- Serves on the advisory committee for the California Earthquake Authority; and
- Advises the Insurance Commissioner on earthquake loss reduction issues.

Seismic Safety Legislative Summary for 2004-2005

Commission-sponsored Bills

AB 1374 (Liu) - This measure repeals the existing sunset (July 2007) on the Seismic Safety Commission's funding through the Insurance Fund and extends funding through July 2013. The Governor vetoed the bill on October 7. In the veto message, the Governor cited duplicative functions of the Commission and the California Performance Review's original recommendation to eliminate boards and commissions. Members of the Commission are working with the Administration to clarify the role of the Commission and to ensure that the public's best interest regarding seismic safety remains foremost and that California continues seismic mitigation efforts to protect California.

AB 584 (Blakeslee) - This bill repeals references to the obsolete Alquist Fund and transfers funds remaining in the Alfred E. Alquist Earthquake Fund to the Seismic Safety Account for expenditure in the 2005-06 fiscal year. This bill was signed into law by the Governor on July 21.

SB 1054 (Soto) - This bill imposes a threshold building code standard on charter schools by establishing that the Uniform Building Code applies to charter school facilities. This bill also imposes a January 2007 deadline for compliance, exempts charter schools operated by federal agencies, and clarifies that local agencies are responsible for enforcement. The Governor signed this bill into law on July 19.

Position Bills

AB 304 (Hancock) - Supported by the Commission. Authorizes local government to establish reconstruction standards applicable to existing wood-framed, multiunit residential soft-story buildings. The Governor signed this bill into law on October 5.

AB 1047 (Levine) – Supported by the Commission. This bill establishes the "Safe Hospitals Bond Act of 2005" authorizing the issuance of state general obligation bonds to finance hospital improvements required under the Alquist Act. This bill failed in the Assembly Health Committee on April 27.

AB 1275 (Frommer) – Opposed by the Commission. Authorizes a \$5 billion state bond sale to finance hospital seismic safety improvements and suspends existing hospital seismic deadlines if bonds are not approved by voters. This bill is a two-year bill.

SB 167 (Speier) - Supported by the Commission. This bill accelerates the current 2030 standards to 2020 if a hospital adopts a formal resolution and agrees to a new progress schedule. The amended version includes a 2015 milestone and penalty for missing the 2015 deadline. This bill is pending before the Assembly Health Committee

SB 477 (Soto) - Supported by the Commission. - This bill authorizes OES to establish a post-disaster (community-based) recovery process with guidelines for community recovery. This bill was signed into law by the Governor.

SB 1024 (Perota) – Supported by the Commission. This bill creates the Safe Facilities, Improved Mobility and Clean Air Bond Act of 2005 authorizing the issuance of \$7.7 billion in general obligation bonds for retrofitting of state-owned bridges, ports and other essential facilities The bill is a two-year bill.

**Governor Appointments
Officers Elected and Vacancies**

Appointments

Governor Arnold Schwarzenegger appointed new Commissioners: Jeff Sedivec, Gary McGavin, Dr. Kandiah Arulmoli, Keith Wheeler, and Dennis Mileti. He reappointed Commissioner Dr. Lucy Jones.

Commissioner Sedivec of San Marcos is currently a member of the California State Firefighters' Association and served as the President of the Association from 1994 to 2004.

Commissioner McGavin of Redlands is an as Associate Professor of Architecture of California State Polytechnic University, Pomona. Commissioner McGavin previously served on the Commission from 1991 to 1999.

Commissioner (Dr.) Arulmoli of Huntington Beach, is a principal of Earth Mechanics, Inc., a geotechnical engineering consulting firm. Previously, he was a senior engineer for CH2M Hill, Inc., from 1994 to 1997.

Commissioner Wheeler of Toluca Lake served as Earthquake Preparedness Training Instructor for the American Red Cross since 1993. Commissioner Wheeler previously served on the Commission from 1995 to 1999.

Commissioner (Dr.) Dennis Mileti of Rancho Mirage, is Professor Emeritus at the University of Colorado at Boulder and served as Director of the Natural Hazards Center and chair of the Department of Sociology. He is a member of the Earthquake Engineering Research Institute and the Department of Homeland Security's National Social Science Research Center on Terrorism.

Commissioner (Dr.) Lucile Jones of La Canada. Commissioner Jones serves as Scientist-in-charge for southern California U.S. Geological Survey Earthquake Hazards Team.

These positions require Senate confirmation. Compensation is \$100 per commission meeting (typically monthly) and travel reimbursement.

New Officers Installed

At the October 2005 meeting, the Commission confirmed Lawrence Klein as Chairman, and in November 2005 elected Jeff Sedivec as Vice Chairman. Chairman Klein represents *public utilities*. Vice Chairman Sedivec represents *fire protection*. Their terms as Chair and Vice Chair are for one year.

Vacancies Remaining

As of December 2005, four positions remain vacant on the Commission:

- Cities/Building Official
- Mechanical Engineer
- City Government
- County Government

**Commission Holds Tsunami Workshop to
Review Issues Facing California in Light of Indian Ocean Tsunamis**

On December 26, 2004, the M9.3 the Sumatra Andaman Island earthquake and tsunami caused massive casualties and destruction (274,000 dead, 200,000 missing). The tsunami motivated many decision-makers to re-evaluate California's tsunami risk. On March 15, 2005, the Commission held a workshop to focus on tsunami risk issues facing California with experts from around the world. The workshop was informative and approximately 80 people attended. Topics and speakers included:

Tsunami Risk to California—

Overview of the Indian Ocean Tsunamis of December 26, 2004, Dr. Jose Borrero/Dr. Costas Synolakis, University of Southern California Tsunami Research

Investigation and Modeling Overview of Potential Tsunami Sources, Dr. Michael Reichle, California Geological Survey

Overview of Coastal Processes on Tsunami Inundation, Dr. Reinhard Flick, California Department of Boating and Waterways, Scripps Institution of Oceanography and Mr. Hany Elwany, Coastal Environments, Scripps Institution of Oceanography.

Proposed Expansion of Pacific Tsunami Warning System—

Disposition of Tsunami Warning System and Proposed Expansion of Tsunami Warning System, Dr. Eddie Bernard, Pacific Marine Environmental Laboratory, N.O.A.A.

Status of California Tsunami Warning and Mitigation Actions, Mr. Rich Eisner, Administrator Coastal Region, State of California OES

Tsunami Inundation Mapping Update, Dr. Costas Synolakis/Dr. Jose Borrero, University of Southern California Tsunami Research Center

Status of Tsunami Warning and Mitigation in the State of Washington, Mr. George Crawford, State of Washington, Emergency Management Division

Tsunami Mitigation—

Structural Damage and Response to Historic California Tsunamis, Mr. Orville Magoon, Coastal Zone Foundation

Overview of Infrastructure Performance in the Indian Ocean Basin and Design Issue for California Infrastructure, Mr. Martin Eskigian, State Lands Commission
Overview of Performance of Ports, Harbors, and Infrastructure Indian Ocean Basin and the Port of Los Angeles Tsunami Planning, Preparedness and Mitigation Activities, Mr. Peter Yin, Port of Los Angeles

Tsunami Public Education/Outreach—

Tsunami Education Outreach in Northern California, Dr. Lori Dengler, Humboldt State

University/Redwood Coast Tsunami Work Group

Los Angeles County Tsunami Assessment and Preparedness and Mitigation Activities, Mr. Jeff Terry, Los Angeles County Office of Emergency Management
Inundation Mapping

Using Computer Animation and Beach Evacuation Issues, Captain Angus Alexander, Los Angeles County Fire Department Lifeguard

Tsunami Hazards Response and Planning, Captain Larry Collins, Los Angeles County Fire Department

Program Overview and the Role of the NWS in Tsunami Warning, Dr. Eric Boldt, National Weather Service, Oxnard, California Office, *Tsunami Ready*

**Commission Forms Ad Hoc Committee to
Recommend Mitigation Efforts for California’s Tsunami Risk**

As a result of the Sumatra event, past damaging California tsunamis, and information obtained during the Commission’s Tsunami workshop, the Seismic Safety Commission created a Tsunami Safety Committee to evaluate the status of tsunami readiness in California. This committee held six meetings, took testimony from representatives of local governments and the scientific community. Based on this testimony, the Seismic Safety Commission made the following findings:

Findings

- 1 Tsunamis, generated either locally or from events elsewhere in the Pacific Basin, pose a significant threat to life and property in California.
- 2 Tsunamis present a substantial risk to the economy of the State and Nation, primarily through the impact on our ports.

3. Californians are not adequately educated about tsunamis and the risk they pose; consequently, many are unaware how to respond to natural or official tsunami warnings.
4. The existing tsunami warning system has not achieved all of its objectives for several reasons including problems with communications, agency coordination and protocols.
5. Present building codes and guidelines do not adequately address the impacts of tsunamis on structures. Currently available tsunami inundation maps are not appropriate for code or guideline applications.
6. Federal programs have provided resources to initiate tsunami hazard mapping and mitigation programs. However, more effort and a better understanding of the risk is required to bring the treatment of tsunamis to a level comparable to other State hazards such as earthquakes.
- 7 The Governor's Office of Emergency Services and many local governments have been proactive in addressing the State's tsunami risk and since the Sumatran tsunami and the June 14, 2005 tsunami warning in northern California that renewed interest in improving warning dissemination and other aspects of tsunami planning and preparedness.

Committee Scope of Work

The Committee conducted six meetings to establish the scope of work, and draw on the expertise of invited participants from earth scientists, university researchers, medical professionals, emergency responders, social policy experts and others.

From testimony received, the Committee was tasked with reviewing tsunami detection, warning, evacuation, response, education and outreach, developing few key findings and recommendations.

The Committee will identified efforts undertaken by state and local governments to assess and mitigate tsunami risk, including review of existing building and planning practices in the coastal zone.

Committee Membership

Former Commissioner Donald Parker	Committee Chairman, Former Seismic Commissioner, Fire Chief, City of Vallejo
Commissioner (Dr.) Lucy Jones	U.S. Geological Survey and Seismic Commissioner representing seismology
Commissioner Daniel Shapiro	Shapiro, Okino, Hom and Associates, Engineers and Seismic Safety Commissioner representing structural engineering
Linden Nishinaga	City of Long Beach, Former Seismic Safety Commissioner
Dr. Jose Borrero	Tsunami Research Center, University of Southern California
Jeff Terry	Program Specialist, Los Angeles County Emergency Management
Dr. Michael Reichle	Chief Seismologist, California Geologic Survey
Dr. Lori Dengler	Humboldt State University, Redwood Coast Tsunami Work Group
Rich Eisner	Coastal Region Administrator, Governor's Office of Emergency Services
Orville Magoon	President, Coast Zone Foundation
Jeff Terry,	Program Specialist, Los Angeles County Office of Emergency Management
Dr. Michael Reichle	Chief Seismologist for the California Geological Survey
Crystal Rockwood	National Director of Communications for Pillsbury Winthrop

Committee Staff Support Membership

Richard McCarthy	Commission Executive Director
Henry Reyes	Commission Project Manager, Structural Engineer
Robert Anderson	Commission Senior Engineering Geologist
James Lee	Commission Student Intern
Veronica Ramirez	Commission Student Intern

**Commission Testifies Before Senate Committee on Governmental Organization
Regarding the Threat of Tsunamis to California**

On October 24, 2005, the Joint Legislative Committee on Emergency Services and Homeland Security held a hearing entitled “Is California Prepared for The Big One: Earthquake, Tsunami, Wildfire, Flood, An Act of Terrorism?” The Committee Chairman was Senator Christine Kehoe. Speakers on the panel “Will State Essential Services Be Available in an Emergency,” were Seismic Safety Commission Chair Lawrence Klein; Elizabeth Lyman, Deputy Director Department of Health Services; Les Harder, Acting Deputy Director for Flood Management, Department of Water Resources; and Randy Isasaki, Chief Deputy Director, California Department of Transportation.

Additional hearings were scheduled throughout the state to determine the State’s preparedness for both natural and man-made disaster. The Committee’s powers include providing a public forum for discussion of California’s emergency services and homeland security issues, making recommendations as to legislation and forming technical advisory committees to assist it in carrying out its duties.

**Commission Distributes Recently-Released Report on
Seismic Safety in California’s Schools**

The California Seismic Safety Commission examined the seismic safety requirements for schools in California after concerns were raised about the risks posed by older school buildings and the different seismic standards for public, private, and charter schools. A review of policies and standards was conducted by the Commission and a report was developed to address these questions. The Commission’s Report, entitled *Seismic Safety in California’s Schools* was approved in December 2004 and distributed to members of the Legislature in January 2005. The report is available on the Commission’s web site.

Homeowner's Guide to Earthquake Preparedness
Updated and Simplified

The Commission contracted with the Collaborative for Disaster Mitigation, San Jose State University to update and simplify the Commission's *The Homeowner's Guide to Earthquake Safety*. The booklet was developed and adopted by the Seismic Safety Commission per existing law. California law contains several provisions to help protect buyers and sellers in home transactions. With respect to a residential buildings' ability to resist earthquakes, the law requires that sellers inform buyers about known weaknesses. This booklet helps the seller fulfill the legal requirement for transferring a residence built before 1960 by explaining how to complete the required disclosure report(s). The effective date for the updated booklet to be used in real estate transactions is July 1, 2005.

Homeowner's Guide to Earthquake Preparedness
(in Spanish)

The Commission contracted with the Collaborative for Disaster Mitigation, San Jose State University to translate the Commission's *The Homeowner's Guide to Earthquake Safety* into Spanish. The booklet was developed and adopted by the Seismic Safety Commission. California law contains several provisions to help protect buyers and sellers in home transactions. With respect to a residential buildings' ability to resist earthquakes, the law requires only that sellers inform buyers about known weaknesses. This Spanish version of the guide will help sellers fulfill the legal requirement for transferring a home built before 1960 by explaining how to complete the required disclosure report(s). The Guide was released December 2005. Check the Commission's website www.seismic.ca.gov

Statewide Mitigation Plan Update

In collaboration with the Governor's Office of Emergency Services, the Seismic Safety Commission and the California Geological Survey provide the Governor's Office of Emergency Services the expertise and guidance for the seismic portion of the State's Multi-Hazard Mitigation Plan. The Mitigation Plan is required by the Federal Emergency Management Agency (FEMA). The Plan was approved by FEMA in October 2004 and the Seismic Safety Commission continues providing OES with quarterly updates throughout the year. Some updates to be included:

- The Commission formed the a tsunami safety committee and released report
- A new Earthquake Shaking Potential Map for Portions of eastern California and Western Nevada was officially released on April 26th.
- The Commission revised edition of the 2005 edition of the Home Owner's Guide to Earthquake Safety being released.
- The Commission released a Spanish version of the Home Owner's Guide to Earthquake Safety

Progress Report on Earthquake Loss Reduction Plan

The Commission maintains the *Progress Report for the Earthquake Loss Reduction Plan*. This report gauges the progress of all the initiatives contained within the *California Earthquake Loss Reduction Plan, 2002 - 2006*. The report is a living document and is updated continually. The Commission submitted quarterly updates to the seismic hazard/mitigation portion of the State Multi-Hazard Mitigation Plan to the Governor's Office of Emergency Services. In 2005, some examples of progress made includes:

- San Francisco Public Utilities Commission Water System Improvement Project is underway, with Commission review of the seismic risk.
- CalTrans bridge seismic retrofit program
- Pacific Gas and Electric Company seismic retrofit and natural gas replacement program.
- Revised totals on unreinforced masonry buildings that have been mitigated or torn down.

Commission staff and OES been discussing the updating of the tsunami hazard and mitigation portion of the plan. The Progress Report is available on the Commission's website, www.seismic.ca.gov.

**The Department of General Services Reports to Commission
On Effort to Retrofit State and Local Government Buildings**

The California Department of General Services (DGS) appeared before the Seismic Safety Commission in June 2005, and summarized the State's 15-year effort to retrofit state and local government buildings that are at risk of collapse and life loss in earthquakes. Mr. Joel McRonald, Chief, Seismic and Special Programs Section, Real Estate Services Division represented DGS. The Seismic Safety Commission sponsored legislation creating a successful \$300 million bond program in 1990 under Proposition 122. With those funds, the DGS completed 142 state government retrofit projects and 124 local government projects. The Commission was instrumental in helping DGS establish priorities for the funding and evaluating proposed projects.

Mr. McRonald noted that while his Department has made excellent progress, many more government buildings remain vulnerable within the 17,000 state-owned building stock and tens of thousands of local government buildings. Now that Proposition 122 funds are largely depleted, DGS has plans underway for an additional twenty new seismic retrofit projects using other funds in capital improvement projects. Without additional funds, retrofit progress will diminish in coming years.

**San Francisco Public Utilities Commission Water System
Improvement Program Review Committee**

In November 2005, San Francisco Public Utilities Commission (SFPUC) representatives made a presentation to the Commission regarding proposed changes in the Hetch Hetchy capital improvement projects and their impact on seismic safety. The Seismic Safety Commission is responsible for determining if any of the proposed changes to the Hetch Hetchy project will significantly impact seismic safety risk.

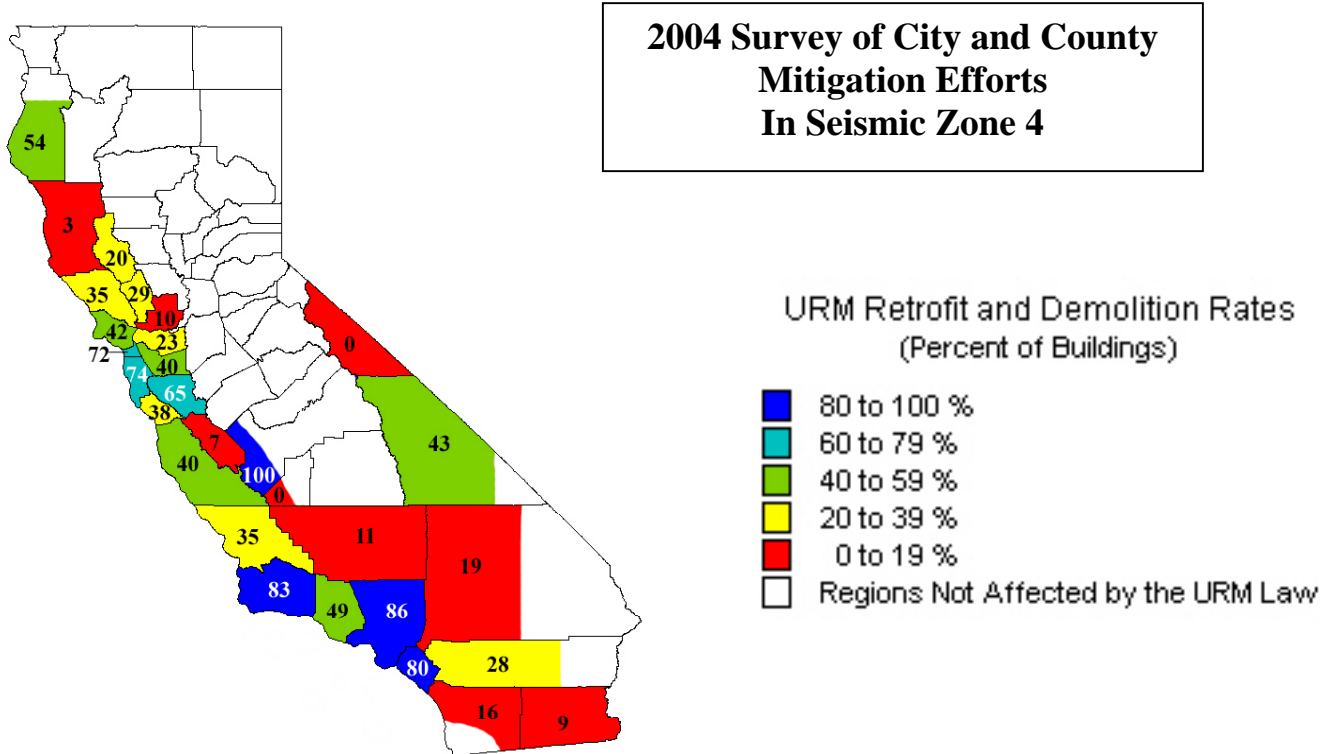
Once the revised program is approved by the SFPUC, the Seismic Safety Commission will have 90 days to review and comment to the Governor and Legislature on the potential seismic safety impacts. Delays in the SFPUC work schedule are anticipated which could produce short-term increases in seismic risk. However, enhancement to the program could create long-term seismic benefits. Because of this, the Commission will carefully weigh those tradeoffs.

California Unreinforced Masonry (URM) Progress Report

The Commission approved its latest progress report on the State's unreinforced masonry (URM) building program at the June 9, 2005 meeting.

URM's buildings are vulnerable in earthquakes causing more earthquake-related deaths worldwide than all other building types combined. Since the passage of the State's URM Law in 1986, California has lost ten lives from the collapse of these buildings in earthquakes. Retrofits work, since no lives were lost in fully retrofitted buildings in recent earthquakes.

256 local governments within the State's highest seismic hazard regions established programs to retrofit old brick or stone buildings. The cities and counties inventoried over 25,000 buildings and to date owners retrofitted or demolished 69 percent of them. About 8000 URM buildings remain unretrofitted. This latest progress report includes for the first time a map showing the variation of mitigation progress across the State. It also includes a new mitigation rate for each jurisdiction so that the public can compare local progress with neighboring communities and the State's average of 69%.



**California's Urban Search and Rescue Teams Testify Before the Commission on
Hurricane Katrina Experience -- Lessons Learned
To be Included in Commission Report**

At the October 13, 2005 Commission meeting, members of California's Urban Search and Rescue Team testified on their experience with Hurricane Katrina. Fire Chief Rick Martinez, Sacramento Metropolitan Fire District and Los Angeles Assistant Fire Chief Gregory West gave presentations on the extreme conditions and challenges they experienced. They were deployed to the Gulf Coast as part of an urban search and rescue (US&R) team dispatched to help victims of Hurricane Katrina.

Chief West described California's US&R teams and resources. Chief West praised the leadership of the Biloxi Fire Department, noting it was fortunate the California US&R teams had enough supplies for 12 days of self-sufficiency. He said key problems were infrastructure failures, slow response times, transportation difficulties, and lack of support in the face of overwhelming damage and devastation.

Chief Rick Martinez, Sacramento Metro Fire Department, stated that he had spent 31 years in fire service and had responded to many disasters, including the 1995 Oklahoma City bombing and the 9/11 attack on the World Trade Center in New York. He said the devastation from Hurricane Katrina was widespread, like earthquake damage, but the disaster dwarfed the World Trade Center event because of the many difficult challenges facing the Gulf Coast.

Chief Martinez said one problem facing responders is the limited number of debris-free areas available for staging and sheltering purposes. Military assets were not available for Hurricane Katrina response, possibly because of the forces and equipment deployed to the war with Iraq. He added that homeland security concerns have overshadowed emergency management and disaster preparedness efforts in recent years and recommends public education and outreach to local jurisdictions so they understand the importance of providing in advance for food, clothing, and shelter. He noted local agencies were sometimes slow in asking for help, so additional training would be useful. He added that some of the problems would not have happened in California because of the well-developed mutual aid system here.

Chief Martinez commented that getting information to the public is an ongoing challenge. He noted that with events like a hurricane, people have only a few days to prepare and evacuate, but California has earthquake hazards year-round without warning, and citizens should know how to minimize their impacts. He expressed his opinion that people are too dependent on modern technology, so problems multiply when technology fails. He advocated setting reasonable objectives and attainable goals and taking small steps in terms of educating the public and promoting mitigation. He said he will be retiring soon and plans to spend more time advocating for public awareness and education. He noted people need to know how to provide for their own family safety first, and then deal with community safety.

In 2003, the Seismic Safety Commission formed a special committee and released a Report on Findings and Recommendations on the Resource Needs of Urban Search and Rescue Teams in California. This committee will meet again and update the 2003 report based on the latest lessons gleaned from Katrina. The report update is expected in early 2006.

To better engage local governments in statewide policy development and to provide an opportunity for the Commission to exchange important information with local residents and officials, the Commission visited several communities in 2004. Following are some of the Commission's outreach activities for 2005.

**Safetyville USA 7th Annual Family Safety & Health Expo
– Rancho Cordova, California**

The Commission participated in the May 7, 2005 Family Safety & Health Expo with its informational display and earthquake prediction contest. The purpose of the Expo was to offer information to protect the health and safety of families in the Sacramento area. The Expo was well attended with over 3,000 in attendance. Staff members Robert Anderson, Richard McCarthy and Karen Cogan represented the Commission.

**Grand Opening of Operation Hope, Hope Center
– Oakland, California**

The Commission congratulates organizers of Operation Hope for the grand opening of their Hope Center in Oakland on January 13, 2005. Insurance Commissioner John Garamendi and Oakland Mayor Jerry Brown were present for the ceremony. The Hope Center provides financial assistance and information to victims following a natural disaster. John Bryant, Executive Director of Operation Hope, was one of last year's keynote speakers at the OES Disaster Resistant Conference giving an overview of some of the opportunities for financial relief after a disaster. The Commission is looking for future opportunities to partner with Operation Hope for Educational and Outreach purposes.

**Sacramento Living History Day Remembers 1906 San Francisco Earthquake
– Sacramento, California**

On April 30, 2005, the Sacramento Museum Volunteer Association, California State Capitol Museum reenacted scenes from the State Capitol Experience of the 1906 San Francisco Earthquake. The scenes chosen were well orchestrated, very interesting and quite factual. They emphasized the challenges Sacramento faced with the earthquake refugees that came from San Francisco. The volunteers acted out several scenes in the State Capitol and wore period costumes. The members of the Museum Volunteer Association are to be commended for their talent and dedication.

**Nestle Corporation Annual Earthquake Fair
– Glendale, California**

On May 4, 2005, Nestle Corporation held its Annual Earthquake Fair. Commissioner Donald Manning, Executive Director Richard McCarthy, and Newsletter Editor Karen Cogan enjoyed educating Nestle employees about earthquake probabilities and earthquake preparedness. This event provided a great opportunity for education and awareness. The winner of the prediction contest that day was Dennis Wun-Young of South Pasadena, California. who chose Monterey County, for the largest earthquake in California for the day. A magnitude 2.7 occurred that day in Monterey County.

**OES Disaster Resistant Conference
– Sacramento, California**

The Commission attended the Governor’s Office of Emergency Services Disaster Resistant California Conference in April 2005. OES officials provided the Commission an opportunity at their press conference to unveil the Commission’s newly revised Homeowner’s Guide to Earthquake Preparedness which is available on the Commission’s website.

**Commission Participates in (OES)
1st Annual “Day of Preparedness” Education Fair
- Sacramento, California**

OES and more than a dozen local and state emergency response and disaster preparedness agencies (including the Seismic Safety Commission) participated in California’s first annual “Day of Preparedness” Education Fair. More than 400 area school children and adults attended the education fair and actively learned how they can prepare themselves, their families and their communities for disasters. The event took place on September 20, 2005. State OES Director Henry Rentiera introduced First Lady Maria Shriver, along with Chief Rick Martinez, Sacramento Metro Fire Department during the ceremony. The Seismic Safety Commission participated by providing its *Prediction Contest*.

Technical Tour of Seismic Risk to Ports - Los Angeles, California

On March 14, 2005, Port Officials James MacLellan, Director of Marketing, Port of Los Angeles; and Peter Yin, Senior Structural Engineer, Port of Los Angeles, provided the Commission and members of the public a technical tour on the seismic risks to the Port of Los Angeles. Presentations were also made by Geologist Bruce Schell and Seismic Safety Former Commissioner Linden Nishinaga.

Port experts pointed out that the 7,500-acre Port of Los Angeles is the busiest container seaport in the United States and the 6th busiest in the world, with an annual container volume in 2004 of 7.4 million TEU's (twenty-foot equivalent units). Its cargo value in 2003 was \$122 billion and total operating revenue in 2004 was \$352 million. Port economic benefits include 259,000 full and part-time jobs in Southern California, 1.3 million jobs nationwide, and \$1.4 billion annual state and local taxes. Earthquakes and tsunamis would have devastating potential effects on port personnel as well as on the local, state, and national economies. During a harbor tour, the physical layout, infrastructure, and recent 2020 Program expansion developments were explained.

National Earthquake Engineering Simulation (NEES Inc) Open House - Davis, California

On November 17, 2005, National Earthquake Engineering Simulation Consortium (NEES) held its first open house at their national headquarters in Davis, California. NEES Inc. is a National Science Foundation-sponsored non-profit organization that manages activities, earthquake engineering research equipment and resources at 15 experimental facilities, collaborative tools, a centralized data repository, and earthquake simulation software. This virtual super laboratory allows researchers to participate or to run experiments and computer simulations in support of earthquake engineering research.

Commission Executive Director Richard McCarthy was one of several invited speakers to provide some remarks at the ribbon cutting ceremony.

Commission Recognizes Retrofit Activities by Riverside Inn - Riverside, California

The Commission held its September 8, 2005 Commission meeting and workshop in Riverside, California, and commended the extensive retrofit efforts completed by the Mission Inn. Mr. Rick Byrd, Structural Engineer (Byrd and Associates), was the project manager for the renovation/retrofit of the Mission Inn. Mr. Byrd provided interested commissioners, staff and members of the public visual detailing of the retrofit work at the Mission Inn, and gave an overview of the challenges surrounding the unique project. The firm that did the structural retrofit design was Johnson & Nielsen Associates. The Commission commends this magnificent effort to preserve such a landmark.

Web-Related Activities for 2005

The Commission website is the Commission’s primary outreach tool to the public. During the month of December 2005, the Commission website had 297,000 hits. This was 54% above the monthly average for 2005. The average website hit count per month in 2005 was 193, 000 with a total web hit count for 2005 of just over 2,310,000. The low was in February with 106,000 and the high was in June with 405,000 hits. The highest single day hit count was June 14 with 102,000 hits (the day of a tsunami warning) while the second highest daily hit count was December 12th. On this day 38,000 downloads (over 19 days) of the Commission’s new report on **The Tsunami Risk to California occurred**. The most requested Commission document in 2005 was the new “*Homeowner’s Guide to Earthquake Safety*” (2005 edition) at 74,000 requests and the second most requested publication was the “*Homeowner’s Guide to Earthquake Safety*” (2002 edition) at 51,000 requests. The Spanish version of the Guide was released in early December.

In general, the daily hit count per day depends on the size or frequency of earthquakes in California and/or major earthquakes in other parts of the United States and the world. Volcanic activity can also impact the daily hit count. The Commission’s website has become a major resource for users all over the world.

Month 2005	Number of File Requests	Number of Page Requests	Distinct Hosts Served Per Month	Average Page Requests Per Day
January	167,294	13,193	12,266	340
February	106,724	9,474	5,307	338
March	126,726	10,740	6,229	346
April	131,302	11,851	7,315	395
May	141,402	13,196	7,034	425
June	405,812	29,274	16,368	975
July	117,815	12,178	6,110	392
August	123,279	11,644	6,246	375
September	235,822	17,826	11,353	594
October	259,228	20,081	13,801	674
November	206,018	16,962	10,738	565
December	297,967	23,237	13,627	749
Average per Month	193,282	15,805	9,699	514

Presenters Before the Commission in 2005

Dr. Mary Lou Zoback, United States Geological Survey
Dr. Jose Borrero, University of Southern California Tsunami Research
Dr. Costas Synolakis, University of Southern California Tsunami Research
Dr. Michael Reichle, California Geological Survey
Dr. Reinhard Flic, California Department of Boating and Waterways, Scripps
Institute of Oceanography
Mr. Hany Elwany, Coastal Environments, Scripps Institute of Oceanography
Dr. Eddie Bernard, Pacific Marine Environmental Laboratory
Mr. Rich Eisner, Administrator Coastal Region, State of California Governor's
Office of Emergency Services
Mr. George Crawford, State of Washington, Emergency Management Division
Mr. Orville Magoon, Coastal Zone Foundation
Mr. Martin Eskijian, State Lands Commission
Mr. Peter Yin, Port of Los Angeles
Dr. Lori Dengler, Humboldt State University/Redwood Coast Tsunami Work Group
Mr. Jeff Terry, Los Angeles County Office of Emergency Management
Captain Angus Alexander, Los Angeles County Fire Department Lifeguard
Captain Larry Collins, Los Angeles County Fire Department
Dr. Eric Boldt, National Weather Service, Oxnard, California Office, *Tsunami Ready*
Mr. Fred Smith, Managing Director for HOPE Coalition America, a division of
Operation HOPE
Mr. Takayoshi Iwata, Director, Disaster Preparedness Bureau, Shizuoka Prefecture
Mr. Joel McRonald, California Department of General Services
Professor Tom Heaton, California Institute of Technology
Assistant Fire Chief Greg West, Los Angeles city Fire Department
Chief Rick Martinez, Sacramento Metro Fire Department
L. Thomas Tobin, Tobin and Associates and former Executive Eirector of the Seismic
Safety Commission
Brian Sadden, Paul Mazza, and Tony Irons from the San Francisco Public Utilities
Commission

Commission Budget Summary

	<i>2003/04 Appropriation And staff</i>	<i>2004/05 Appropriation And staff</i>	<i>2005/06 Appropriation And staff</i>
Insurance Fund (Seismic Safety Account)	\$ 874,000	\$ 919,000	\$ 1,022,000
Reimbursements	75,000	75,000	75,000
Total	\$ 949,000	\$ 1,089,000	\$ 1,097,000

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. In 2003-04, to support the Commission's \$884,000 operating budget, the assessment was estimated at \$0.07 per in-force policy. Under the law, the Department of Insurance collects the assessment revenue and transfers it to a special account for the benefit of the Commission. The law establishing the new funding mechanism for the Commission has a July 1, 2007 sunset. Efforts to extend this sunset date to 2013 were expended through AB 1374 which was vetoed by the Governor. Members of the Commission are working with the Administration to communicate the role of the Commission and to ensure that the public's best interest regarding seismic safety remains foremost and that California continues seismic mitigation efforts to protect California.

Commission Vision and Projects for 2006

During its 30 years of service, the Seismic Safety Commission has been dedicated to reducing earthquake risk and speeding recovery for the People of California. It accomplishes these goals by providing an independent voice to the Governor and the Legislature. In addition, cost-effectiveness is considered before the Commission releases or implements its actions, products, findings, and recommendations. This cost-effectiveness is amplified by utilizing the expertise of 17 volunteer commissioners representing a wide range of expertise.

The Seismic Safety Commission believes that its unique perspective is critical to the continued development and implementation of seismic safety policy in the State. Therefore, the major challenge for the Seismic Safety Commission in 2006 will be securing a continued funding source that will support its work past the June 30, 2007 sunset date. In addition, other major projects for 2006 include:

- Review of the San Francisco Public Utilities \$4.6 billion Water Delivery Improvement Project
- Revising the Commercial Property Owner's Guide to Earthquake Safety
- Updating its report on *The Urban Search and Rescue Needs for California; Based on Lessons Learned from Hurricane Katrina*
- Updating the *California Earthquake Loss Reduction Plan and the Progress Report* for the California Earthquake Loss Reduction Plan
- Assisting in implementing recommendations contained in the Commission's report on *The Tsunami Threat to California*
- Working to include a natural hazard curriculum in California Public Schools
- Continue to coordinate a public education awareness campaign

The Seismic Safety Commission believes that it is better to prepare rather than respond after the earthquake. This policy will save lives and reduce property damage. We must never become complacent about the continued earthquake risk to our citizens.