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ALFRED E. ALQUIST
SEISMIC SAFETY COMMISSION MEETING
In-person and Teleconference Meeting
Thursday, January 9, 2025

1. Call to Order and Roll Call

Chair Rabbitt called the meeting to order at approximately 10:00 a.m. A roll call was conducted to establish a quorum.

Commissioner	In-Person	Virtual	Absent
David Rabbitt, Chair, Local Government	X		
Debra Garnes, Vice-Chair, Local Government	X		
Stoyan Bumbalov, Building Standards Commission	X		
Ida Clair, CA Division of the State Architect		X	
Alegría De La Cruz, Social Services		X	
Representative Lori Nezhura for Nancy Ward, CA Governor's Office of Emergency Services (Cal OES)	X		
Joone Kim-Lopez, Public Utility		X	
Kevin McGowan, Emergency Services			X
Dr. H. Kit Miyamoto, Structural Engineer			X
Assemblymember Rodriguez, California (CA) Assembly Member			X
Cindy Silva, Local Government	X		
Vincent Wells, Fire Protection			X
Total Attendance:	5	3	4

2. Chair Remarks

Chair Rabbitt began the meeting by acknowledging the devastating fires affecting Los Angeles County. The state-level response was noted, along with the evacuation of one commissioner who was unable to attend the meeting. He then addressed recent seismic activity, referencing the December 5th magnitude 7.0 earthquake offshore near Cape Mendocino, California, which was part of a sequence of 340 events. It was noted that no major structural damage or injuries occurred. Additionally, a magnitude 7.1 earthquake struck



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China on January 7th, resulting in 126 confirmed deaths, 188 injuries, and the collapse of over 3,600 houses in the affected region.

3. Public Comment: Items on Agenda

Chair Rabbitt invited public comment on agenda items. No public comments were submitted regarding the agenda items.

4. Approval of Seismic Safety Commission (SSC) October 10, 2024, Meeting Minutes:

Commissioner Silva made a motion to approve the SSC meeting minutes of October 10, 2024, which was seconded by Vice-Chair Garnes. A roll call vote was conducted, and the motion passed.

Commissioner	Yes	No	Abstained	Not Present
David Rabbitt, Chair	X			
Debra Garnes, Vice-Chair	X			
Stoyan Bumbalov	X			
Ida Clair	X			
Alegria De La Cruz			X	
Representative Lori Nezhura				X
Joone Kim-Lopez	X			
Kevin McGowan				X
Dr. H. Kit Miyamoto				X
Assemblymember Rodriguez				X
Cindy Silva	X			
Vincent Wells				X
Total Votes:	6	0	1	5



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5. Approval of Seismic Safety Commission (SSC) December 12, 2024, Meeting Minutes:

Vice-Chair Garnes moved to approve the SSC meeting minutes from December 12, 2024, with Commissioner Bumbalov seconding the motion. Following a roll call vote, the motion was unanimously approved.

Commissioner	Yes	No	Abstained	Not Present
David Rabbitt, Chair	X			
Debra Garnes, Vice-Chair	X			
Stoyan Bumbalov	X			
Ida Clair	X			
Alegría De La Cruz	X			
Representative Lori Nezhura				X
Joone Kim-Lopez	X			
Kevin McGowan				X
Dr. H. Kit Miyamoto				X
Assemblymember Rodriguez				X
Cindy Silva	X			
Vincent Wells				X
Total Votes:	7	0	0	5

6. Election Policy

Executive Director Ewertsen reminded the SSC about the election policy adopted in January 2024. The policy specifies that at the first meeting of the year, Commissioners would be notified about the upcoming election, which is typically scheduled for the second meeting of the year. However, due to only six of the twelve current Commissioners being eligible to apply for Chair and Vice Chair at the second meeting, staff recommended moving the election to July 2025.



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Commissioner Silva then made a motion to schedule the annual election of the Chair and Vice Chair for the third meeting of the year, set for July 2, 2025. The motion was seconded by Vice Chair Garnes. A roll call vote was conducted, and the motion was unanimously approved.

Commissioner	Yes	No	Abstained	Not Present
David Rabbitt, Chair	X			
Debra Garnes, Vice-Chair	X			
Stoyan Bumbalov	X			
Ida Clair	X			
Alegria De La Cruz	X			
Representative Lori Nezhura				X
Joone Kim-Lopez	X			
Kevin McGowan				X
Dr. H. Kit Miyamoto				X
Assemblymember Rodriguez				X
Cindy Silva	X			
Vincent Wells				X
Total Votes:	7	0	0	5

7. Improving Post-Earthquake Firefighting Water Supply Capacity Reliability.

- *Dr. Charles Scawthorn, S.E., SPA Risk LLC, UC Berkeley*

Dr. Charles Scawthorn addressed the Commission and emphasized that fire and earthquake challenges, which were significant in 1906, remain pressing issues today.

Dr. Scawthorn recounted a 2011 study funded by the SSC, which he conducted on water supply and fire risks following earthquakes. The study, published by the University of California's Pacific Earthquake Engineering Research Center, involved a survey of fire and water departments across California.



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The study made several recommendations, with a fundamental focus on promoting a statewide approach to reducing fire risks following earthquakes. Key recommendations included organizing workshops for California fire and water agencies to foster collaboration, implementing a uniform assessment of fire risks and water requirements after earthquakes, and establishing portable water supply task forces for fire and water agencies.

Dr. Charles Scawthorn outlined his proposal, summarizing it into six tasks:

1. **Survey of Water and Fire Agencies:** Update and expand the 2011 survey of over 100 major urban California water and fire agencies to assess their progress and identify changes made over the past 14 years.
2. **Mitigation Measure Toolkit:** Develop a comprehensive toolkit to help agencies review available mitigation measures, such as resilient water grids, portable water supply systems, and earthquake early warning systems, and evaluate which measures are most appropriate for their needs.
3. **Total Damage Cost:** Analyze the total financial impact of earthquake damage on water agencies to provide a clear understanding of the associated costs.
4. **Workshop:** Present the developed materials to water and fire agencies during workshops.
5. **Follow-Up:** Provide follow-up support to agencies, including presentations to boards of directors, fire chiefs, and senior management, to address additional questions and promote further engagement.
6. **Final Report:** Produce a final report.

Dr. Scawthorn emphasized the need to determine whether the situation has improved or worsened and how climate change may have exacerbated challenges. Additionally, he noted the emergence of a new understanding regarding the long-term damage to water systems caused by earthquakes.

Due to technical difficulties, Dr. Scawthorn was briefly disconnected from the teleconference. To maintain the meeting's momentum, the committee opted to proceed with the next agenda item.

8. Ubiquitous Building Health Monitoring Using California's MyShake Smartphone App

- *Richard Allen, Director, Berkeley Seismological Laboratory, UC Berkeley*



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Richard Allen, Director of the UC Berkeley Seismological Laboratory, provided a presentation on a project aimed at expanding the ability to monitor the structural health of buildings and their likely performance during future earthquakes using the MyShake App. Mr. Allen introduced the concept of Structural Health Monitoring (SHM), which focuses on ensuring the safe performance of buildings during earthquakes. He explained that buildings are constantly vibrating, whether due to earthquakes, wind, or other environmental factors. These vibrations reveal critical information about a building's structural characteristics. The frequency at which a building vibrates provides insight into its fundamental structural properties, including mass, stiffness, and damping.

Mr. Allen continued by explaining that while MyShake is primarily used to deliver alerts, it was originally developed to collect seismic waveforms. The app automatically detects earthquakes and records seismic data. Additionally, when the system sends out alerts, it triggers the app to record and send back seismic waveform data. This makes MyShake a form of citizen science, as it not only provides alerts but also contributes valuable seismic data to the backend system. Mr. Allen outlined the goal of the project: to determine if MyShake waveforms can be used to monitor the structural health of buildings. The tests are being extended to the San Diego Shake Table; a project supported by the SSC.

Mr. Allen outlined a proposal with two key components. The first involves creating a comprehensive database of building natural frequencies across California by automating the extraction of data from four years of MyShake waveforms. This database would be shared with building engineers and other stakeholders. The second focuses on continuing shake table tests to study how structural damage impacts modal frequencies. The San Diego Shake Table building, set to undergo shaking until damage occurs, offers a unique opportunity to observe these changes during the damage process. The proposed project is expected to be completed within a year, with a funding request of \$100K to cover a postdoctoral researcher, travel, and computational resources.

Commissioner Silva raised concerns about potential privacy issues related to cell phone data usage in the MyShake project. Mr. Allen assured that privacy has been a top priority since the project's inception. He explained that waveforms collected by MyShake are used solely for research within the project and are never shared externally. He also highlighted the transparency



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of the privacy policy, which is presented to users upon downloading the app, and noted that the team has addressed privacy concerns effectively in the past. He affirmed that the team is committed to navigating privacy issues thoughtfully as the project evolves.

Commissioner Silva inquired about the practical application of MyShake data, emphasizing the need for rapid responses after an earthquake, especially in situations where buildings might be at risk of collapse. She stressed the importance of avoiding delays caused by privacy-related approvals in such critical scenarios. Mr. Allen acknowledged this concern, explaining that a key objective of the project is to refine how MyShake data can be used in real-world emergencies. He noted that while the technology can already extract valuable building information, scaling up the database is essential to fully understand its potential. Collaborating with the engineering community will also be crucial to define how this data could be applied in emergencies. He emphasized the importance of preparing privacy and response protocols in advance, ensuring decisions can be made efficiently without compromising privacy or safety in post-earthquake situations.

Representative Nezhura of Cal OES, a MyShake sponsor, explained that users are made aware of the privacy terms and must consent to them upon downloading the app. She highlighted that the app collects only essential data and does not record any personal information about the phone owner. Mr. Allen confirmed this, emphasizing that no personally identifiable information is linked to the collected data. The app solely records waveforms and location.

Commissioner Silva raised concerns about the "hit-or-miss" nature of relying on cell phones, noting that data availability depends on factors like the time of day and location. Mr. Allen agreed, emphasizing that while smartphones are not always present in every building, they vastly increase the coverage and provide significant advancements in data collection compared to traditional methods.

Commissioner Silva continued by asking whether permanently installed phones in buildings could enhance reliability. Mr. Allen acknowledged the potential benefits but highlighted the cost and maintenance challenges associated with such a system. He explained that the MyShake app leverages existing smartphones, with users essentially acting as network providers.

Additionally, Commissioner Silva asked if the research would compare the



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effectiveness of phones on different floors and if adding more phones or users would improve results. Mr. Allen confirmed that more phones would provide more data, but a single phone can still accurately measure modal frequency. Additional phones would help capture other engineering parameters, but the current focus is on leveraging existing smartphones to demonstrate basic value before encouraging broader participation.

Commissioner Silva inquired about testing different communication frequencies. Mr. Allen clarified that while changes in communication technology, such as between 4G and 5G, may influence data transmission, they do not affect the accuracy of the observations, which are based on the phone's accelerometer.

Vice-Chair Garnes asked whether the MyShake app data would be limited to high-rise buildings or if it would also cover residential and commercial buildings. Mr. Allen responded that while high-rise buildings are easier to study due to their larger movements, the methodology could also be applied to lower-rise buildings. They have already demonstrated the ability to measure modal frequencies in mid-rise buildings, and the goal is to expand the approach to all buildings, with the understanding that there may be some limitations.

Commissioner Kim-Lopez announced that she had to briefly step away from the discussion.

Representative Nezhura followed up by noting that the MyShake app has been downloaded 3.8 million times, with efforts focused on increasing that number to provide life-saving information to as many people as possible. They use "rapid response" efforts during and after earthquakes to encourage downloads, which often results in significant spikes in app usage, particularly in the Los Angeles Basin and Bay Area—regions with a high concentration of high-rise buildings. This outreach directly supports the objectives of Mr. Allen's research, linking increased app usage with better data collection for building safety.

Chair Rabbitt raised questions about the frequency data collected by the app, particularly regarding how it might identify building-specific impacts after an earthquake. He wondered if the app could distinguish between different parts of a building, especially if there are additions or structural variations, and how this might affect the data. Mr. Allen responded that the fundamental frequency data reflects the overall design of the building, so even if a small



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portion of the structure is damaged, it can influence the building's overall frequency. He noted that in test scenarios, even small changes in the building's frequency were detectable. In the case of more substantial damage, the change in frequency would be much larger and easier to identify. While engineers can certainly assess building damage, Mr. Allen emphasized the potential value of this technology, particularly in situations such as the Northridge Earthquake, where damage to internal walls was not immediately visible. The data is not a comprehensive solution, but it can offer an additional layer of immediate post-earthquake insights to help identify potential hazards.

Representative Nezhura moved to approve the Ubiquitous Building Health Monitoring Using California's MyShake Smartphone App Project and allocate \$105,000 in funding. Vice-Chair Garnes seconded the motion. A roll call vote was held, and the motion passed.

Commissioner	Yes	No	Abstained	Not Present
David Rabbitt, Chair	X			
Debra Garnes, Vice-Chair	X			
Stoyan Bumbalov	X			
Ida Clair	X			
Alegría De La Cruz	X			
Representative Lori Nezhura	X			
Joone Kim-Lopez				X
Kevin McGowan				X
Dr. H. Kit Miyamoto				X
Assemblymember Rodriguez				X
Cindy Silva	X			
Vincent Wells				X
Total Votes:	7	0	0	5



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9. SSC Annual Reporting

Executive Director Ewertsen provided an update on the annual report noting that the draft report was included in the commission materials for review. Once approved, the report will be submitted to the legislature and made available on the SSC website. The report outlines the various projects and their progress over the past year.

Commissioner Silva suggested adding a couple of sentences to the annual report to highlight the issue with California's building codes not adequately addressing the structural stability of mobile homes, especially in communities like Rio Dell that rely on them for affordable housing.

Commissioner Silva then moved to authorize SSC staff to make non-substantive edits, including amendments related to the mobile home building code, and finalize the SSC 2024 Annual Report. Vice-Chair Garnes seconded the motion. A roll call was conducted, and the motion was approved unanimously.

Commissioner	Yes	No	Abstained	Not Present
David Rabbitt, Chair	X			
Debra Garnes, Vice-Chair	X			
Stoyan Bumbalov	X			
Ida Clair	X			
Alegría De La Cruz	X			
Representative Lori Nezhura	X			
Joone Kim-Lopez				X
Kevin McGowan				X
Dr. H. Kit Miyamoto				X
Assemblymember Rodriguez				X
Cindy Silva	X			
Vincent Wells				X
Total Votes:	7	0	0	5



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Tanya Black, Administrative Processes Manager, provided an update on the Attorney General letter regarding the California Research and Assistance Fund (CRAF). The SSC received a \$6 million gift in 2007 for earthquake risk reduction research and projects, requiring an annual report to the Attorney General's office. The report includes a summary of activities, programs, and financials.

Commissioner Silva raised a concern about the ability to track the fund's spending over time and understand the annual burn rate, emphasizing the importance of such data for long-term planning, especially as new project funding requests arise. She noted that, as an 18-year-old fund, it was unclear how much was being spent per year or when the fund might run out. Ms. Black acknowledged the need for this information and explained that the fund had accrued significant interest during years when no projects were undertaken. She committed to retrieving historical financial data and providing a clearer picture of the fund's expenditure over time.

Commissioner Rabbitt acknowledged previously raising a similar question about the fund's burn rate and expressed agreement with the need for a fiscal impact analysis to accompany future discussions. He then asked whether the annual letter to the Attorney General was also subject to an audit. Ms. Black confirmed that an audit is part of the process, which is why the financial summary is included with the report. She clarified that, since she joined the SSC in 2020, this was the first year the financial summary reflected significant invoicing activity.

Vice-Chair Garnes moved to authorize SSC staff to make any non-substantive edits and finalize the 2024 Attorney General (AG) Report. Commissioner Silva seconded the motion. Following a roll call vote, the motion was approved unanimously.



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Commissioner	Yes	No	Abstained	Not Present
David Rabbitt, Chair	X			
Debra Garnes, Vice-Chair	X			
Stoyan Bumbalov	X			
Ida Clair	X			
Alegria De La Cruz	X			
Representative Lori Nezhura	X			
Joone Kim-Lopez				X
Kevin McGowan				X
Dr. H. Kit Miyamoto				X
Assemblymember Rodriguez				X
Cindy Silva	X			
Vincent Wells				X
Total Votes:	7	0	0	5

Resumed discussion of Agenda #7 - Improving Post-Earthquake Firefighting Water Supply Capacity Reliability

– *Dr. Charles Scawthorn, S.E., SPA Risk LLC, UC Berkeley*

Dr. Scawthorn apologized for the earlier interruption and resumed his presentation on mitigation measures developed over the past decade. Dr. Scawthorn continued by explaining that the mitigation measures would be presented in a workshop. The workshop agenda would cover the following key topics: the impacts of fire following an earthquake, available mitigation opportunities, results from the survey, and a toolkit to help agencies assess which mitigation options are most appropriate for their needs.

Additionally, Dr. Scawthorn emphasized the importance of understanding that water departments sustain far more damage than they typically recognize, and that the combined efforts of both fire and water agencies are crucial. The budget will cover these follow-up efforts, which will include online or in-person presentations for several months after the workshop.



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Dr. Scawthorn concluded by presenting the project schedule, which spans one year. The requested funding for the project is \$90,000, which would be administered through the University of California at Berkeley.

Commissioner Kim-Lopez expressed gratitude for the presentation and raised two key points. First, she asked about the scope of the workshop, questioning whether it would be statewide and how the representation from different sectors, such as fire and water agencies, would be coordinated. Dr. Scawthorn confirmed the workshop would have broad invitations, and that he was open to many attendees. Second, Commissioner Kim-Lopez emphasized the importance of moving from awareness to action. She highlighted the need for regional coordination beyond the workshop, encouraging the development of templates for ongoing efforts that agencies can implement independently. Additionally, she suggested that regional collaboration should be focused on securing funding from federal and state sources, as many of the proposed mitigation measures would require financial support. She proposed that the group work together to advocate for policy changes that could make more projects eligible for Hazard Mitigation Grants. Dr. Scawthorn acknowledged her input, noting that a project advisory panel would be established to gather ongoing feedback. He agreed that while raising awareness is important, the goal should be to drive tangible action.

Commissioner Silva inquired about the similarities between water system destruction from wildfires, such as those seen in Santa Rosa, and the challenges posed by earthquakes. She asked whether the same mitigation strategies could be applied to both types of disasters, particularly since fires can disrupt infrastructure, delaying rebuilding. Dr. Scawthorn clarified that the issues are similar but not mutually exclusive. He emphasized that while wildfire destruction primarily involves wind and fire, earthquakes would introduce additional complexities, including multiple ignitions and widespread water main failures. In the case of the recent Lahaina fire, for instance, the water supply was knocked out, leaving firefighters without water to fight the blaze. He explained that mitigation measures, such as resilient water supply grids and access to large bodies of water, would help prevent such scenarios.

Commissioner Silva then asked whether Dr. Scawthorn's focus was on fire department-specific measures, like the tanker systems with long hoses, or if water districts and agencies were also considered. Dr. Scawthorn clarified that



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his focus was on ensuring water supply for firefighting, which includes not only tanker systems but also resilient water grids and earthquake-resistant infrastructure. His proposal would bring both groups together in a workshop to enhance coordination and preparedness.

Representative Nezhura asked for clarification on the budget for the project, noting a discrepancy between the materials which mentioned \$75,000 and Dr. Scawthorn's slide stating \$90,000. After confirming \$90,000 as the correct amount, Representative Nezhura raised two questions. First, she inquired whether the workshop and the report would help create industry standards for earthquake impacts on water infrastructure, potentially unlocking more federal and state funding for both post-disaster recovery and pre-disaster preparedness. Second, she asked whether the efforts could help reduce the time required for water restoration after a disaster, particularly for water delivery to homes and businesses. Dr. Scawthorn confirmed the budget request of \$90,000 and responded by emphasizing that the goal of the workshop is to help water agencies improve their systems to not only provide sufficient water for firefighting post-earthquake but also to make these systems more resilient overall. He noted that improving water infrastructure resilience will lead to faster recovery times and better access to disaster funding.

Commissioner Kim-Lopez expressed concerns about the approach to supporting water agencies, cautioning that the messaging should not focus on telling them what they "should" do. She emphasized the importance of providing support for water agencies, recognizing that the issue is primarily about resources, and that many agencies are limited by funding constraints. Instead, she advocated for a more collaborative, supportive approach that involves a range of stakeholders. She stressed the need for strategic political support to prioritize water infrastructure improvements across the state, acknowledging that water often ranks low on the political agenda. She concluded by underscoring the need for a careful, nuanced approach that fosters cooperation without creating burdensome liabilities for water agencies. Dr. Scawthorn agreed with Commissioner Kim-Lopez, emphasizing that the workshops and toolkits would allow water agencies to determine the best solutions for their unique needs, rather than imposing a one-size-fits-all approach.



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Vice-Chair Barnes raised concerns about rural communities, especially those with populations under 10,000. She emphasized the need for them to receive the same attention and resources as larger urban areas. She suggested adding sub-workshops or outreach to include these communities. Dr. Scawthorn acknowledged the concern, noting that the workshop will be recorded, and follow-up support meetings will be available for both attendees and those unable to participate.

Commissioner Silva expressed concern about the \$90,000 funding request, suggesting that the outcome—primarily a workshop—was not measurable or sufficient to justify the investment. She echoed Commissioner Kim-Lopez's point that the focus should be on securing resources and awareness for fire and water agencies, as they already understand the risks but lack the resources to address them. She proposed that a more effective approach might involve leadership from groups like the Association of California Water Agencies (ACWA) and fire leadership, rather than just a workshop. She indicated she would not be supporting the proposal at this time.

Chair Rabbitt expressed support for defining the problem and working together as a larger group to secure funding for resilience projects. He emphasized the need for clarity on the priorities and goals, particularly around water and fire resilience. He also noted the importance of focusing efforts on tangible solutions, like portable water arrangements and additional assets (e.g., pumper trucks), to improve readiness for disasters like earthquakes and wildfires. He advocated for a more refined coalition that could unite stakeholders with shared priorities to increase the chances of securing funding. Additionally, he highlighted the struggle of local water agencies, which face high local costs due to deferred maintenance, while also trying to plan for future resilience. He acknowledged the complexity of balancing these needs and expressed a desire for a more focused, strategic approach to funding and resource allocation.

Commissioner Silva expressed concerns about moving forward with the proposal, suggesting that it was not yet ready for that level of funding. She emphasized the need to involve ACWA in the process to make the initiative effective. She also noted that while research is valuable, the success of such a project hinges on the ability to build partnerships and coalitions.



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Dr. Scawthorn responded, acknowledging the concerns, and clarified that the goal was to bring both fire and water agencies together in a single workshop. He mentioned the creation of an advisory panel to help guide outreach efforts. He expressed openness to working with ACWA or any other appropriate group, noting that the project was intended to identify problems, raise awareness, and assess the status of various agencies, with the aim of bringing everyone together to discuss solutions.

Commissioner Kim-Lopez acknowledged the importance of starting the project but also emphasized the need for refinement. She suggested that the focus could be on refining the details, potentially with input from ACWA and other relevant stakeholders. She proposed that the Chair and Vice-Chair collaborate with staff to refine the proposal and involve ACWA and other key entities. She stressed the urgency of moving forward, given the current media attention and momentum. Commissioner de la Cruz echoed Commissioner Kim-Lopez's sentiments, highlighting the importance of prioritizing progress over perfection. Vice-Chair Garnes expressed uncertainty about the procedural approach to moving forward with the proposal. Chair Rabbitt suggested pursuing a parallel approach, involving the commission more actively in coalition-building and ensuring clarity in the process. He commended Dr. Scawthorn's efforts to expand collaboration beyond fire departments and acknowledged the specific work product and funding outlined in the agenda. Dr. Scawthorn expressed agreement with Chair Rabbitt's suggestions. He highlighted plans to establish a project advisory panel, noting that a representative from ACWA could join to facilitate better communication, coordination, and outreach for the project. He reiterated his willingness to incorporate these ideas to enhance the project's reach and effectiveness.

Executive Director Ewertsen proposed tabling the discussion and forming an ad-hoc committee to refine the proposal, with the option of revisiting it in April or scheduling an earlier meeting. She acknowledged the lack of consensus on the proposal in its current form and emphasized that an ad-hoc committee could help make the necessary adjustments.

Representative Nezhura made a motion to table the discussion and form an ad-hoc committee to collaborate with Dr. Scawthorn on refining the proposal. Commissioner Silva seconded the motion. A roll call vote was conducted, and the motion was approved.



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Commissioner	Yes	No	Abstained	Not Present
David Rabbitt, Chair	X			
Debra Garnes, Vice-Chair	X			
Stoyan Bumbalov	X			
Ida Clair	X			
Alegria De La Cruz	X			
Representative Lori Nezhura	X			
Joone Kim-Lopez	X			
Kevin McGowan				X
Dr. H. Kit Miyamoto				X
Assemblymember Rodriguez				X
Cindy Silva	X			
Vincent Wells				X
Total Votes:	8	0	0	4

10. Sponsorship of 19th World Conference on Seismic Isolation, Energy Dissipation, and Active Vibration Control of Structures (19WCSI), Berkeley

Executive Director Ewertsen explained the sponsorship opportunity for the conference, scheduled for September 15-19, 2025, in Berkeley, CA. The event is being co-organized by the Pacific Earthquake Engineering Research Center (PEER) and the Anti-Seismic Systems International Society (ASSISI). She noted that there is no financial commitment required from the Commission, but they are being asked to lend their logo for promotional purposes and help with event promotion and attendance.

Chair Rabbitt shared insight into seismic energy dissipation technologies, citing two Bay Area bridges as examples: the Golden Gate Bridge, which uses similar metals for seismic energy dissipation, and the new Bay Bridge, which employs viscous dampers. He emphasized the importance of continued research in these areas.



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Vice-Chair Garnes moved to approve the sponsorship of the 19th World Conference on Seismic Isolation (19WCSI), with Commissioner Bumbalov seconding the motion.

Commissioner Clair raised a concern about the use of the Commission's logo, asking if there are guidelines or policies in place to govern its usage. She expressed support for the sponsorship but emphasized the need for clarity on how the logo would be used. Executive Director Ewertsen explained that there is no specific policy currently, but in this case, the logo would be used on the conference's website and in their meeting materials. Commissioner Silva proposed an amendment to the motion, suggesting that staff be directed to develop a policy on logo usage consistent with state government standards. Chair Rabbitt clarified that the proposal was not an amendment to the motion but a request to direct staff to bring an agenda item for future discussion on logo usage. With this clarification, the original motion was put to a roll call vote and passed unanimously.

Commissioner	Yes	No	Abstained	Not Present
David Rabbitt, Chair	X			
Debra Garnes, Vice-Chair	X			
Stoyan Bumbalov	X			
Ida Clair	X			
Alegría De La Cruz	X			
Representative Lori Nezhura	X			
Joone Kim-Lopez	X			
Kevin McGowan				X
Dr. H. Kit Miyamoto				X
Assemblymember Rodriguez				X
Cindy Silva	X			
Vincent Wells				X
Total Votes:	8	0	0	4



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11. International Code Council Building Safety Month 2025 Proclamation

Executive Director Ewertsen explained that the International Code Council's Building Safety Month often coincides with periods when the Commission does not meet, making it difficult to approve and sign proclamations in time. To address this, staff is proposing granting the Executive Director the authority to sign such proclamations on behalf of the Commission.

Commissioner Silva noted that this is a common challenge at the local level and suggested including a provision requiring consultation with the Chair before the Executive Director signs a proclamation.

Commissioner Silva then moved to approve the 2025 International Code Council Building Safety Month Proclamation, granting authority for similar proclamations in perpetuity, contingent on consultation with the Chair. Vice-Chair Garnes seconded the motion, and it was approved unanimously through a roll call vote.

Commissioner	Yes	No	Abstained	Not Present
David Rabbitt, Chair	X			
Debra Garnes, Vice-Chair	X			
Stoyan Bumbalov	X			
Ida Clair	X			
Alegría De La Cruz	X			
Representative Lori Nezhura	X			
Joone Kim-Lopez	X			
Kevin McGowan				X
Dr. H. Kit Miyamoto				X
Assemblymember Rodriguez				X
Cindy Silva	X			
Vincent Wells				X
Total Votes:	8	0	0	4



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12. California Geological Survey (CGS) Update

- *Jeremy Lancaster, PG CEG State Geologist, Director, CGS*

Jeremy Lancaster provided an annual update to the Commission, focusing on the recent seismic activity in California, particularly the magnitude 7 earthquake that occurred on December 5, 2024. The earthquake struck approximately 100 km southwest of Ferndale at 10:44 a.m., generating strong ground shaking that was felt across Northern California and Southern Oregon, with the strongest effects near the epicenter. Over 16,000 individuals reported feeling the earthquake, which was followed by more than 5,000 aftershocks.

Mr. Lancaster shared that the earthquake's impact extended as far as Sacramento, causing noticeable swaying in the 19th-floor office of the California Geological Survey. He issued a public safety reminder to avoid evacuating buildings during shaking, as debris from falling structures can cause injuries or fatalities. Instead, he emphasized the importance of the "Drop, Cover, and Hold On" method as the safest response during an earthquake.

He highlighted the region's high seismic activity, noting that it has experienced 40 magnitude 6 earthquakes over the last century and six magnitude 7 earthquakes since the 1980s. He also presented a cumulative shaking intensity map for the northern half of the state, demonstrating the area's seismic vulnerability. A tsunami warning was issued shortly after the earthquake, spanning from southern Oregon to the Santa Cruz area.

Mr. Lancaster shifted focus to the CGS's response to the earthquake. He emphasized that CGS has a statutory mandate to respond to all natural hazard events, particularly earthquakes. A key responsibility is the operation of an earthquake clearinghouse, which is co-managed by CGS, Cal OES, and the Earthquake Engineering Research Institute (EERI). The goal of the California Earthquake Clearinghouse is to establish a physical location near the earthquake's epicenter where scientists, engineers, and emergency responders can gather daily.

CGS operates over 10,000 seismic sensors throughout the state. In the aftermath of an earthquake, CGS is required to report earthquake observations to Cal OES, including the seismic hazards program and the duty officer within the



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warning center. The priority is to relay seismic data to Cal OES as quickly as possible.

Mr. Lancaster shared that one of his goals as the state geologist is for the CGS to become the preeminent source of actionable geoscience information in the state. To achieve this, CGS focuses on improving communication of geoscience findings. This includes sharing field observations via social media. CGS also collaborated with media outlets and worked with the Cal OES Public Affairs to develop videos communicating geoscience information after the earthquake. As a result of these efforts, CGS was mentioned in 32 articles.

Vice-Chair Garnes thanked Mr. Lancaster for the presentation and shared three points. First, she mentioned experiencing the earthquake while in Eureka City Hall. She followed the proper safety procedures by getting under her desk, only to find that everyone else had already evacuated. Second, she found the videos shared in the presentation disturbing, recalling her drive back to Rio Dell and her unease as she passed each bridge. Finally, she humorously suggested that Humboldt County could take December off the calendar, acknowledging the region's active seismic activity in that month. While she was in Eureka, her neighbors in Rio Dell reported significant shaking. Her street, located at a peak, experienced stronger shaking than other areas, with her neighbors confirming the intensity. She noted the interesting variation in shaking intensity across regions. Mr. Lancaster recognized this variability in shaking as common, with topography and underlying geology often amplifying seismic waves in certain areas.

Commissioner Kim-Lopez asked about the possibility of modeling seismic events to predict landslides, both coastal and inland. She noted the risks these landslides pose to critical infrastructure and communities. She suggested that seismic modeling could be a valuable tool to help assess the risks of landslides in these regions and inform potential legislative measures or insurance solutions. Mr. Lancaster replied that there are existing models on their website that depict earthquake induced landslide zones, which can be useful after an event to assess if landslides occurred within those areas. He also explained that landslides can happen outside these zones, depending on ground shaking, topography, and rock conditions. He mentioned that a threshold of about 0.1g is generally where earthquake-triggered landslides are likely. He offered to discuss the matter further offline if needed.



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Commissioner de La Cruz thanked the presenter and informed the group of her early departure due to a work commitment. Chair Rabbitt acknowledged her departure and confirmed that Commissioner Kim-Lopez had returned at 11:35 a.m., establishing a quorum for the record.

Chair Rabbitt inquired about the criteria for issuing tsunami warnings. Mr. Lancaster explained that tsunami warnings are issued by the National Weather Service's National Tsunami Warning Center. For near-source coastal earthquakes with magnitudes between 7 and 7.6, a warning is automatically issued. The warning is updated once buoy data confirms wave heights. For earthquakes greater than 7.5–7.6 in magnitude, the likelihood of a tsunami increases significantly.

Chair Rabbitt asked for an explanation of the term “seismic gap.” Mr. Lancaster described it as a gap in seismic activity on an active fault where the seismic rate falls below the expected average, suggesting a lack of recent earthquakes. He clarified that seismic gaps could cover a 20 to 30-mile segment or up to 100 miles, as faults are often discontinuous, contrary to their appearance on large-scale maps.

With no further questions or comments, the discussion was concluded.

13. Project Updates

Ferndale & Türkiye Project:

Executive Director Ewertsen provided a comprehensive update on the Ferndale & Türkiye Project. The project's report has been finalized and is now accessible on the SSC website. In collaboration with the California Specialized Training Institute (CSTI) to SSC staff created an Individual Assistance (IA) and Public Assistance (PA) fact sheet. The fact sheet and course will be available on the Cal OES CSTI website.

The second component of the project, the Doublet/Triggered Scenario Study funded through the Pacific Earthquake Engineering Research Center (PEER). Volume 1 of the report was submitted to the ad-hoc committee early January, with their review expected to conclude by month's end. Plans are in place to



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present Volume 1 at the April meeting. Volume 2, addressing damages caused by the doublets, is also scheduled for presentation in April, following a February review by the ad-hoc committee. The project's contract is being renegotiated to extend the timeline, while monthly meetings with the project team continue to ensure consistent progress.

The project's third component, which involves work with the Interdependent Networked Community Resilience Modeling Environment (IN-CORE). The ad-hoc committee's review is anticipated in January, with the report expected within the next week. Findings are slated for presentation at the April meeting. This contract has also necessitated a timeline extension, with monthly progress meetings continuing.

Fire Station Inventory:

Survey was distributed to 3,200 fire stations, resulting in over 1,000 responses. As of December 9th, the first data extraction was completed, and validation has begun. Approximately 729 records require further validation, with staff actively reaching out to fire stations to verify the data. A total of 398 station names were provided to the Earthquake Early Warning (EEW) program for future funding opportunities.

An initial HAZUS run, and risk assessment report were completed, reviewed by Recovery staff, and returned with comments. Once these comments are addressed, the initial report will be sent to the ad-hoc committee for further review. The second part of the report will take longer, as it requires the completion and validation of all data before it can be finalized.

The team is also working with IT at Cal OES on the development of a GIS dashboard. The dashboard will provide a visual overview of the information submitted by fire stations.

Shake Table Project:

This project is partially funded by SSC and construction has begun on the building set to undergo testing. A video was shown, highlighting the process of lifting the fifth story of a building onto the Shake Table at UCSD. The video was



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captured by drones, another project component funded by the program, showcasing a practical application of the drone technology.

Mobile Home Building Code:

Project received \$450,000 in funding through FEMA's BRIC program, approved in July 2024. The team is currently working on the Request for Proposal and coordinating with the internal Cal OES budget team to ensure proper tracking of time and resources, making sure that the funding is appropriately allocated for income service purposes.

Earthquake & Climate Change Workshop:

The team is holding monthly meetings with USGS, CGS, and FEMA Region 9 to coordinate the event. The workshop is scheduled for March 4th and 5th, 2025. The topics and presenters have been identified, though there are more presenters than time available, prompting discussions about adding breakout rooms. The team is also working on the registration and event website.

Reducing Post-Earthquake Ignitions:

Executive Director Ewertsen explained that the Reducing Post-Earthquake Ignitions Project was approved in October 2024, with a kickoff meeting held in December. The Statement of Work (SOW) has been defined, and the team is currently working on the contract for the project.

SSC Website and Design:

The SSC website project is currently on hold as the team is waiting for contracts to finalize. Once the contracts are completed, the ad-hoc committee will collaborate to finalize the content that will be featured on the website.

Northridge Anniversary - Quake Heroes:

Executive Director Ewertsen wrapped up with an update on the Northridge Anniversary - Quake Heroes Project. The team continues to hold monthly check-in meetings and is currently focused on translating the film into both Spanish and Chinese. Deliverables have been delayed, prompting contract



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amendment negotiations. The team is hopeful to receive screening dates for the Quake Heroes film soon.

Commission Comments:

Commissioner Silva thanked staff for their support, mentioning a discussion during a meeting with State leaders about the challenges small, rural, and underserved communities face in securing emergency funding. Executive Director Ewertsen added that they are waiting for the completion of two reports, including recovery data, to send to the Office of Rural Advocate.

14. Miscellaneous Announcements

SSC Administrative Processes Manager, Tanya Black informed the SSC that they should have received an email from Fair Political Practices Commission (FPPC) regarding the 2025 annual filing. She plans to send a follow-up email with key details and deadlines. The filing deadline is April 1.

Executive Director Ewertsen noted that the operating budget update, usually provided at this meeting, was delayed due to awaiting information from Cal OES. The update will be presented in April, with no significant changes anticipated.

She also gave an update on the CRAF fund, referencing the detailed discussion earlier in the meeting and assuring that further information would be provided in the future.

She discussed ongoing efforts to translate the Homeowner's Guide (HOG) and Commercial Owner's Guide (COG) publications into Chinese, highlighting two parallel approaches. One is an application to the National Earthquake Hazards Reduction Program (NEHRP) grant program, and if that does not yield results, they will explore alternative funding, like the Spanish translation of the COG.

For the Executive Director recruitment, she reminded the SSC that applications close on January 15th. She also thanked the staff for their hard work and dedication, expressing her deep gratitude for the opportunity to serve as Executive Director and for the support she received throughout her tenure.



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Chair Rabbitt thanked Ms. Ewertsen for her leadership and service, noting that tomorrow marked the end of her long and impactful career. He praised her professionalism, dedication, and subject matter expertise, expressing how much he had enjoyed working with her. He also mentioned that a few guests were present who wished to share their remarks.

Kristen Ryder, Janiele Maffei, Chief Mitigation Officer, California Earthquake Authority (CEA), Representative Nezhura, Charlotte Fadipe, Chief Communications Director, CEA, Commissioner Bumbalov, Vice-Chair Garnes, Commissioner Kim-Lopez, Commissioner Silva, and Commissioner Clair all shared heartfelt remarks celebrating Executive Director Ewertsen's retirement and lasting impacts on the earthquake community. Chair Rabbitt noted that Chief Larry Collins of Cal OES Fire and Rescue had intended to share his remarks, but was called away to support ongoing fire response efforts.

Ms. Ewertsen expressed her gratitude for the opportunity to serve, noting how excited she had been to bring nine projects to the Commission in just two years. She acknowledged that while she was leaving a lot of work behind, she hoped the projects would eventually benefit California for many years.

Chair Rabbitt, reflecting on the bittersweet nature of retirement, offered warm wishes for Ms. Ewertsen's future. He emphasized the pride she should feel in the work she had done, pointing to the positive impact she had made, as evidenced by the heartfelt testimonials from colleagues.

15. CLOSED SESSION PURSUANT TO GOVERNMENT CODE § 11126(a)(1)

The Board convened in closed session and appointed Lori Nezhura as Acting Executive Director.

16. Public Comment: Items not on Agenda

No public comments were received on items not listed on the agenda.

17. Adjourn

The meeting was adjourned by Chair Rabbitt.