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OF EMERGENCY SERVICES



**ALFRED E. ALQUIST
SEISMIC SAFETY COMMISSION MEETING**

Zoom Teleconference Meeting
January 14, 2021

I. Call to Order

The meeting was called to order by Dr. H. Kit Miyamoto, Chairperson at 10:33am. Salina Valencia, Legislative & Communications Director, conducted the roll call.

Present:

Dr. H. Kit Miyamoto, Chair

Cindy Silva, Vice Chair

Ida Clair

Representative Diane Gould for Ida Clair

Ken Cooley (Arrived at 10:37am)

Michael Gardner

Representative Rachel Sierer Wooden for Mark Ghilarducci

Mia Marvelli

Jorge Meneses

Timothy Strack (Arrived at 10:41am)

Fuad Sweiss

Andrew Tran

Ivan Wong

Absent:

Mark Ghilarducci

David Rabbitt



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II. Approval of Seismic Safety Commission January 14th, 2021 Meeting Minutes

Discussion:

The Seismic Safety Commission (SSC) discussed the meeting minutes of January 14th, 2021. Motion to approve by Commissioner Gardner, seconded by Commissioner Strack. Motion passed unanimously.

III. Chairman's Remarks

Chairman Miyamoto shared that this year is the 50th anniversary of the 1971 San Fernando earthquake which caused \$500M in damage. He stated that major events will occur again, and he believes the SSC can make a big difference with the help of Cal OES.

IV. AB 100 Requirements

Speaker – Lisa Mangat, Chief Deputy Director of Policy & Administration, Cal OES

Richard McCarthy, Executive Director, SSC

Lisa Mangat explained that the AB100 is the legislation that transferred the SSC into Cal OES. One of the requirements of AB100 is that it will establish a new reporting process for findings, progress, and recommendations to achieve higher levels of seismic safety.

Executive Director McCarthy stated the various organizations that were identified in the legislation: The Department of Conservation California Geological Survey, California Earthquake Authority, Office of Statewide Health Planning and Development, Department of Transportation, Department of Water Resources, Division of Dam Safety, California Public Utilities Commission, State Energy Resources and Conservation and Development Commission, University of California, and the California State University System. Mr. McCarthy stated that SSC staff will put together a letter for the selected organizations describing the requirement that Mrs. Mangat previously discussed.

Discussion:

Vice Chair Silva inquired if the SSC would be interested in asking organizations about their budget expenditures and suggested putting not only the link to the organizations, but to possibly have them link back to SSC to increase traction.



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She then asked if there will be a template for consistency purposes and Mr. McCarthy confirmed that there will be one.

Chairman Miyamoto clarified that the intent of each report is to find out what each agency is doing for seismic research.

Commissioner Cooley compared the AB100 to "California at Risk" and suggested using this approach as a template for the questions.

Commissioner Gardner clarified that the reports should focus on being a summary of the programs and not a review.

V. Fire Following Earthquake Update New Technologies for Decision Making

Speaker – Chief Brian Marshall, Chief of State Fire and Rescue, Cal OES

Chief Larry Collins, Chief of Deputy Fire & Rescue/Special Ops & Haz Mat, Cal OES

Carlos Camarena, Chief Deputy Fire & Rescue Coordination Center, Cal OES

Chief Collins briefly reviewed situational awareness concerns regarding Fire Following Earthquake and began looking at ground options such as updated firetruck specifications that include larger fire pumps. They are also looking into super pumpers which are larger volume fire trucks that can be assigned anywhere in the state. He believes they are improving infrastructure hardening the water supply systems to guarantee enough water to fight the fire. They have also been looking at change detection technology including what NASA could provide, such as identifying where buildings have collapsed.

Chief Camarena is the Deputy Chief of the California Fire & Rescue Coordination Center (CFRCC) which coordinates the mobilization of resources for all significant events within California and provides intelligence. There are 6 regions and 65 operational areas throughout 58 counties. CFRCC mobilizes to pre-position resources and for large fires, Search and Rescue, hazardous materials, flooding and debris, earthquakes, tsunamis, tornados, civil unrest, and other disasters. The CFRCC also provides information to the California Fire Services, State Executive Staff, and Cal OES staff through live streams. Fire Integrated Real Time Intelligence System (FIRIS) provides live on-demand situational awareness to receive better response times, real-time fire perimeter



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mapping, SAR, fire spread modeling that can be updated based on new data, and share lessons with the statewide fire community. There are aircraft that can live stream to the command post and have sensors to detect fire, hazardous chemical leaks/spills, or a person in distress. He then showed examples of what the Intel plane can and has provided.

Discussion:

Mr. McCarthy mentioned a project the SSC approved in April of 2017 to get real-time information to the hands of first responders using Jet Propulsion Lab (JPL)/National Aeronautics and Space Administration (NASA) technology. The first part of the project being damage assessment of structures and the second part could detect methane leaks across the state. The SSC now has a chance to reevaluate this project with Cal OES. The executive office called together various entities that entered a MOU with JPL and NASA to monitor long-term climate change within the state. The Executive offices will then reconvene with these groups and then reengage with NASA and JPL.

Chief Collins added that they are looking for better options for gathering intelligence and using new technologies. He thanked the SSC for bringing this to their attention and he believes it is a great partnership.

VI. Draft Summary Report 2020 Seismic Safety Commission

Speaker – Salina Valencia, Legislative & Communications Director, SSC

Salina Valencia, Legislative & Communications Director stated that this report summarizes all the projects the SSC worked on in 2020 that were funded by the SSC's Research Program. Ms. Valencia stated this was a draft for Commissioners to review and submit feedback by March 29, 2021.

Vice Chair Silva directed that item #7 be taken out of order and heard after item #8.

VII. Update on Upgrade to UC San Diego Large High-Performance Shake Table and Upcoming Projects

Speaker – Tara Hutchinson, Professor of Engineering, UC San Diego

Joel Conte, Professor of Engineering, UC San Diego



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Executive Director McCarthy stated Professor Tara Hutchinson has been working with the SSC for many years and the SSC views the shake table as a national treasure and was pleased to help with the project.

The UC San Diego Large High-Performance Outdoor Shake Table (LHPOST) has served as a resource for shared use for more than a decade and there have been many large-scale earthquake shake tests conducted. The facility is now undergoing an upgrade that will improve our ability to study the response of structures. The strategy for understanding the response to earthquakes is to deploy a dense array of sensors onto the building. This method is limited however since sensors are sparse, societal needs take precedent, and earthquakes are random.

Under Network for Earthquake Engineering Simulation (NEES), LHPOST supported 34 other landmark large/full-scale shake table testing programs. Dr. Hutchinson discussed two previous projects, Building Nonstructural Components & Systems (BCHS) and Certified Financial Specialist-Housing Urban Development (CFS-HUD).

The BCNS project focused on investigating the response of a full-scale structure for the first time. The building was tested with using base isolation technology, a fixed foundation, and was subjected to multiple fire tests. The SSC was essential in helping lay out various scenarios for the Intensive Care Unit (ICU) and the Surgery Suite floor.

After the upgrade is completed in October of 2021, there will be three projects for this new facility. She stated that she hopes the SSC will be interested in the testing of a 10-story cold-formed steel building. This project will include fire-following earthquake tests, repair and re-tests, on-site training of search and rescue and firefighters, and remote sensing opportunities.

Commissioner Gardner comments on the importance of the facility and thanks the professor for the work done.

Commissioner Marvelli also tells the professor of her appreciation for the hard work done.

VIII. 10 Year Commemoration of the East Japan Great Earthquake and Tsunami, and Lessons Learned Speaker



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Speaker – Larry Collins, Chief Deputy of Fire & Rescue/Special Ops & Haz Mat, Cal OES

The LA County's fire team is known as USA-2 and had just returned from Japan when they were notified of the earthquake and sent back to Japan with USA-1. The Air Force convoyed resources into the base of operations at OFunato. The OFunato Fire and Rescue officials designated parts of the city for the fire teams to conduct research and assess the damage. Some areas that were once marked safe from the tsunami ended up being damaged, which teaches a lesson for future tsunamis in California. The On-Site Operations Coordination Center (OSOCC) operated by the United Nations aided local needs. The team was then assigned further north to Kamaishi which was also heavily impacted. They went through the same process of searching the debris while aftershocks and bad weather were still occurring. The Fukushima nuclear power plant also was damaged from the tsunami.

Chief Collins believes there is still work to be done in California. He suggested audible warning systems in more dense parts of California and to educate people tsunami response. Chief Collins appreciated the human interaction and respect for life that he saw between the different countries.

Discussion:

Vice Chair Silva asked Chief Collins to restate when they arrived in Japan, how many people participated, and how long they were there?

Chief Collins stated it was a heavy Urban Search and Rescue with 80 personnel and about two 60-ton containers of equipment. There are eight out of 28 task forces in California and 12 regional task forces which demonstrates the capability of California. He stated the team was assembled and deployed in about three hours and remained in Japan close to two weeks.

IX. Miscellaneous Announcements

Executive Director McCarthy mentioned in 2008, there was a meeting about legislation that required the California Public Utilities Commission (CPUC) to evaluate hazards at Diablo Canyon Nuclear Power station. The SSC was a part of a panel including the Energy Commission, State Lands Commission, Coastal Commission, SSC, the county of San Luis Obispo, and the CA Geological Survey



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that evaluated new information, looked for faults, and other hazards. This panel met in March 2021.

Commissioner Gardner suggested looking at what happened at San Onofre and use it for guidance for Diablo Canyon.

Commissioner Meneses stated that there will be three webinars devoted to base isolation, damping systems, and seismic soil structure interaction. The webinars will be on May 14th, May 21st, and May 28th. He requested that SSC put a logo in the announcements to show moral support for the webinars.

Executive Director McCarthy confirms that the SSC will show support and Vice Chair Silva requested Commissioner Meneses to send information to the staff.

Commissioner Meneses announced that the CA Geological Survey (CGS) released an inundation map of San Diego and other areas. The CGS is requesting feedback of an earthquake scenario from the community by May.

Executive Director McCarthy stated the next meeting will be May 13th and the November meeting needs to be moved to a later date.

Steve Bohlen announced that the CGS is releasing new updated tsunami inundation and hazard maps for the northern counties today in commemoration of the 10th anniversary of the Japanese 2011 tsunami.

Chief Collins commented on how important the maps are to help identify where to stage resources.

Commissioner Cooley asks if National Oceanic and Atmospheric Agency (NOAA) continues to maintain their tsunami Buoys System in the western pacific and if it feeds into the maps.

Mr. Bohlen responds that the Buoys are in operation and are in close communication with CGS.

X. Public Comment

No public comment.

XI. Adjourn

The meeting was adjourned at 12:36 pm by Cindy Silva, Vice Chair.