



Cal OES
GOVERNOR'S OFFICE
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 9:05am. Tanya Black, Administrative Processes Manager, conducted the roll call.

Present:

Dr. H. Kit Miyamoto, Chair

Cindy Silva, Vice Chair

Ida Clair

Ken Cooley

Michael Gardner

Representative Rachel Sierer Wooden for Mark Ghilarducci

Representative Diane Gould

Mia Marvelli

Jorge Meneses

David Rabbitt

Timothy Strack

Fuad Sweiss

Andrew Tran

Ivan Wong

Absent:

Mark Ghilarducci



Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES



II. Approval of Seismic Safety Commission January 14th, 2020 Meeting Minutes

Discussion:

The Seismic Safety Commission (SSC) discussed the meeting minutes of January 14th, 2020. Motion to approve by Commissioner Gardner, seconded by Commissioner Strack. Motion passed unanimously.

Commissioner Clair abstained.

III. Chairman's Remarks

Chairman Miyamoto shared that he is looking forward to SSC joining Governor's Office of Emergency Services (Cal OES) and believes it will provide added safety for the people of California, as the Commission and Cal OES' missions align with one another.

Executive Director McCarthy advised that there was a change in the agenda as there was a schedule conflict for The High-Performance Shake Table Presentation and they have rescheduled to March 11th.

IV. Fire Following Earthquake Progress Report

Speaker – Larry Collins- Deputy Chief, Cal OES

Chief Collins spoke of how he has an appreciation for the long partnerships with the SSC and even going back to the 1970's, the support and partnership, which led to the development of Heavy Rescue Training in the Fire Service. He also mentioned how the partnership helped develop the Shake-Out, Earthquake Scenario Development, Haywire and many other valuable projects.

Chief Collins said that his goal was to provide an update on the Fire Following Earthquake Development. He also wanted to explain how the Fire Service is trying to integrate their technology more fully with what is currently available. He said that the dovetail to the Fire Service are Urban Search and Rescue, Emergency Medical Services, other emergency services, including Law Enforcement and Seismologists. As discussed at the last meeting, after the Ridgecrest earthquake Cal OES quickly activated the California Highway Patrol (CHP) who were instrumental in taking Seismologists up in the air to identify



Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES



which fault was involved in the ground surface rupture.

Chief Collins stated the Fire Service in CA during large scale incident will work quickly to identify the worst hit areas, conduct damage surveys, and begin emergency operations. Recently, there has been an emphasis on the Fire Following Earthquake scenario more and more. A lot of work is there to do as is evident in the Shake Out technology. Recognizing that a 7.8 quake on the San Andreas causes 1600 simultaneous emissions. The potential of simultaneous fires coupled with extreme winds and reduction of available water are definite issues that could occur in a large earthquake and how the Fire Service could be overwhelmed. Chief Collins spoke of the Butte Fire and how there was a need to conduct human remain searches. There are difficult choices regarding the need to save lives versus fighting fires and the need for continued discussions regarding these choices

Chief Collins spoke of how currently Fire Service, EMTs, and Paramedics are currently working in hospitals to assist with the COVID pandemic through the Fire Rescue Mutual Aid system. Also, fire fighters and paramedics are beginning to assist with vaccination delivery. The system is being battle tested in the process.

Chief Collins spoke of the concept of Earthquake Box Alarm System while they correlate ground shaking, building stops, population densities, where we develop a planned response based on a variety of factors. In addition, looking at the Wildland Fire System, identifying hazards and address them. There are about 700 cameras around the state to help us identify fires as they develop, so better preparation for identifying a fire and how fast it's developing. Fire Integrated Real-Time Intelligence System (FIRIS) is aircraft that can get to the fire and deliver real-time imaging to commanders on the ground so they can see the fire, the direction it is going and able to respond to it. It started in Orange County and Cal OES helped expand it to Northern CA.

Another JPL capability is methane gas leak detection. That technology was used in the Alisa Canyon methane gas leak that occurred a few years ago. Fire Service started every battalion identify where they have other sources of water that they don't typically use and started mapping them out. Many weren't accessible by a fire truck but we worked with water companies and had them put a fire hydrant so we could access that water.



Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES



Cal OES is looking towards partnering with the Fire Service to develop a fleet of Hose Tenders and Super Pumps to help us move water. It has been expanded to Northern CA. A new unit, which was initially named The Mobilization Intelligence Unit, but has been renamed The California Fire and Rescue Coordination Center at Cal OES Headquarters. This unit is looking at all kinds of different, new, and leveraging of intelligence.

Discussion:

Commissioner Cooley asked if there are any areas that are more timber rich that provide challenges that aren't included in the uniformity of our typical responses?

Chief Collins stated that they are trying to utilize resources and send equipment to areas where it would be beneficial.

Commissioner Strack spoke of how money is tight and the State is going to have to get local governments mitigated to be reimbursed and hopefully the Federal Government, under the new administration, will step up when the state doesn't have the resources.

Commissioner Meneses asked what kind of work Cal OES has done with utility companies to install auto shut-off valves to prevent fires in an earthquake?

Chief Collins answered that the utility companies are making progress on replacing older valves and that the Public Safety Shut-Off System is progressing. It has been successfully utilized in the last two years.

V. Upgrade and Upcoming Opportunities for Collaboration at UC San Diego's Large High-Performance Outdoor Shake Table

Speaker – Tara Hutchinson, UC San Diego

This item was not presented and moved to the March meeting.



Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES



VI. New Approaches to Earthquake Response and Infrastructure Return to Service

Speaker – Steve Bohlen, Acting State Geologist

Mr. Bohlen mentioned it takes about 20 years for a concept to mature and receive funding. The work that has been done does a good job of instructing people how to prepare and how to respond to an earthquake. There are new tools that have the promise to allow for remote and nearly instantaneous reporting on how structures responded to an earthquake and where damage occurred. In the future there will be a much greater understanding of surface ground rupture. This will help with understanding where, and where not, buildings should be built in the State.

Mr. Bohlen mentioned that geologists can gain more rapid information on the health of a building after an earthquake. Inter-story drift and rotations of the building can be measured with low powered eye-safe lasers on every floor that use an array of electronics to detect the information needed. This is part of the Smart Building Concept.

Work is being done to develop denser sensors to improve seismic engineering to understand the harmonic motions in a building. To date much of the essential information needed for recovery is gained by in-person assessments and observations, which require geologists, seismologists and seismic and structural engineers to visit sites, conduct surveys, or visit and inspect potentially damaged buildings, bridges and other structures one by one.

Advances in seismic modeling of ground motions and ground-rupture probability along with advances in new technologies such as Micro Electrical Mechanical Sensors accelerometers and laser systems could provide better remotely sensed situational awareness following an earthquake.

Discussion:

Commissioner Cooley asked is the sophisticated probabilistic methodology the successor that has largely displaced the former UBC reliance on mapping California as was launched under the 1949 UBC? Our State Capitol's 1952 Annex was built under a Sacramento Tier 2 classification for example -- an assessment that was moved to Tier 3 by the late 70's early 80's.



Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES



Chairman Miyamoto explained the unique aspects of the Sacramento area and building standards.

Executive Director McCarthy asked if the public have access to the data on the motion sensors?

Mr. Bohlen replied that within a few moments after a quake, you can go to the Earthquake Strong Motion Recording site and see where the shaking occurred. That information is available to the public.

VII. Miscellaneous Announcements

Speaker – Richard McCarthy, Executive Director

Discussion:

Discussion took place about the SSC's upcoming meeting schedule. It was decided to continue with the current meeting schedule of every other month.

Tanya Black stated that SSC staff has been working with Cal OES budgets department to organize expenditure reports for the SSC. She is hopefully that SSC Commissioners will be able to receive an expenditure report showing expenses at the March meeting. She also mentioned that SSC has been advertising for the vacant Senior Structural Engineer position.

VIII. Public Comment

No public comment.

VIII. Adjourn

The meeting was adjourned at 11:16 am by Kit Miyamoto, Chairperson.