

CALIFORNIA
EARTHQUAKE EARLY WARNING
ADVISORY BOARD

May 10, 2023
MEETING NOTICE





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CALIFORNIA EARTHQUAKE EARLY WARNING ADVISORY BOARD MEETING

May 10, 2023
1:00 PM – 4:00 PM

In-Person Location:

3650 Schriever Avenue, MPR 1 & 2
Mather, California 95655

**** Attendees will need to arrive 30 minutes before the meeting time to take a COVID-19 Rapid test.
These are self-tests and are administered in the lobby.

Zoom Video Conference Information

Participant Call-In Number: 1-669-900-6833
Meeting ID: 828 2153 7535 | Passcode: 50413378

Or, please click the link below to join the webinar:

<https://us02web.zoom.us/j/82821537535?pwd=dmR2WWZyNHVoS2lQeTZ5YWNDcUowdz09>

Passcode: QiRie?4a

Or One tap mobile:

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CALIFORNIA EARTHQUAKE EARLY WARNING ADVISORY BOARD MEETING

May 10, 2023
1:00 PM – 4:00 PM

MEETING AGENDA

There will be an opportunity for public comment following each agenda item.

I. CALL TO ORDER / INTRODUCTIONS

The Cal OES Director provides opening remarks, followed by roll call.

II. REVIEW AND APPROVE MEETING MINUTES

After review, board members vote to approve the previous Advisory Board Meeting minutes.

**III. GENERAL PROGRAM UPDATES AND ACTION ITEMS FROM PREVIOUS
ADVISORY BOARD MEETING**

Executive Officer provides EEW updates to board members, including performance metrics on recent earthquakes, and reviews status of action items from previous Advisory Board Meeting.

IV. RESEARCH AND DEVELOPMENT

Cal OES and California Public Television Treasurer present on the second phase of Datacasting.

V. SECTOR-BASED IMPLEMENTATION

Cal OES reviews progress of EEW implementation projects in government facilities, fire stations, and airports.

VI. EDUCATION AND OUTREACH OVERVIEW

Cal OES and United Way introduce new partnerships and initiatives that bolster EEW awareness and review recent EEW outreach events.



VII. SYSTEM OPERATIONS

USGS updates board members on the USGS License to Operate process and Cal OES provides statistics of the EEW system build out.

VIII. FINANCE

Cal OES reviews the EEW budget which now is approved on a multi-year cycle.

IX. CLOSING STATEMENTS AND PUBLIC COMMENT

Cal OES Director provides closing comments, followed by final opportunity for public comment.

X. ADJOURNMENT



Individuals who require special accommodations, or to receive meeting materials, contact the individual below at least seven (7) days prior to the scheduled meeting date:

Samantha Layne, Earthquake Early Warning
3650 Schriever Avenue,
Mather, CA 95655
916-396-2700 / samantha.layne@CalOES.ca.gov

This meeting notice is made available online, please visit the Cal OES California Earthquake Early Warning Program, Advisory Board [webpage](#).

CALIFORNIA
EARTHQUAKE EARLY WARNING
ADVISORY BOARD

November 3, 2022
MEETING MINUTES





**PREVIOUS MEETING
MINUTES**

California Earthquake Early Warning Advisory Board

California Governor's Office of Emergency Services
3650 Schriever Avenue, Mather, 95655 California
and via Zoom

November 3, 2022

Meeting Minutes

Members Present:

In-Person Attendees

- Mark Ghilarducci, Director, Governor's Office of Emergency Services
- Christina Curry, Chief Deputy Director, Governor's Office of Emergency Services
- Lori Pepper, Deputy Secretary, Designee of the Secretary of the California State Transportation Agency
- Lupita Sanchez-Cornejo, Corporate External Affairs for AT&T, Appointee of the Speaker of the Assembly Representing the Interests of Private Businesses
- Melinda Grant, Undersecretary, Designee of the Secretary of the California Business, Consumer Services, and Housing Agency

Remote Participants

- Bryan Cash, Assistant Secretary, Designee of the Secretary of Natural Resources Agency
- Julie Souliere, Assistant Secretary, Designee of the Secretary of the California Health and Human Services
- Angie Gibson, Executive Vice President of Operations and Chief Operating Officer of Pacific Gas & Electric, Designee of the Governor's Appointee Representing the Utilities Industry
- Jeff Toney, Director, County of San Diego Office of Emergency Services, Designee of the Senate Committee on Rules Appointee Representing County Government
- Jack Andersen, Director of Architecture and System-wide Chief Building Official, Designee of the Chancellor of the California State University (CSU)
- Amina Assefa, Program Manager of Emergency Management and



Business Continuity, Designee of the President of the University of California (UC)

I. Call to Order / Introductions

- The meeting was called to order by the Chief of Earthquake Early Warning, Advisory Board Executive Officer Derek Lambeth, who welcomed members and provided instructions for virtual attendees. He reminded the audience the meeting will be recorded and announced public comment will be open after updates for System Operations and Research and Development.
- Roll call was taken, and a quorum was achieved.
- Director Ghilarducci provided opening remarks and stated there has been positive feedback from Governor Newsom, other elected officials, and the public regarding the California Earthquake Early Warning System (CEEWS) and the recent earthquakes in Santa Rosa and San Jose. Though CEEWS has been successful, there is a need to rapidly leverage partnerships and relationships to expand into the business community and industry more broadly and automate the system into their capabilities. As CEEWS grows and amplifies the issue of preparedness and mitigation, it will become necessary to address educating the public on what to do when a warning is received and how to identify preparedness grants for local governments and other non-profit entities.
- Board Member Anderson stated that following the recent San Jose Earthquake, at a CSU campus 12 miles west of the incident, MyShake allowed for the review of the situation in real-time in terms of assessing damage. First responders and the CSU system knew the appropriate course of action within minutes and were able to effectively communicate with the campus.

II. Review and Approve – Meeting Minutes from October 27, 2021

- Executive Officer Lambeth asked board members to review the previous meeting minutes (from the June 29, 2022, and October 21, 2021, meetings) and provide any comments, questions, and/or changes.
- The motion to approve was led by Board Member Sanchez-Comejo. The motion was seconded by Board Member Pepper. Motion passed unanimously.

III. General Program Update



- Seismic Hazards Branch Chief Jose Lara reported that a review of the California Earthquake Early Warning system during recent seismic events found the system performed well. MyShake has distributed hundreds of thousands of alerts and millions of people have received early warnings with android alerts before shaking starts. Some people were able to receive up to 19 seconds of early warning.
- For the Santa Rosa earthquake (September 2022), 400,00 people received an alert up to 18 seconds before shaking started. For the San Jose earthquake (October 2022), approximately 2.2 million people were alerted.
- Branch Chief Lara discussed Earned Media Strategy, or the steps taken post-event to inform the public about the importance of the California Earthquake Early Warning System and the MyShake app. The overall earned media strategy following the Santa Rosa earthquake netted an ad equivalency value of over \$100,000. The Cal OES Earthquake Early Warning (EEW) Program deployed a successful paid media campaign which led to over 10,000 clicks to the earthquake.ca.gov website and delivered over 800,000 impressions. The MyShake app was downloaded over 25,000 times following the event.
 - Comment: Board Member Sanchez-Cornejo asked a clarifying question regarding the term “devices,” and Branch Chief Lara clarified it primarily refers to phones, though it can refer to other electronic devices that have downloaded the MyShake app. The app is already incorporated into the operating system of Android phones. The hope is that the app would come on all devices, including Apple phones, in the future.
- There was massive media interest following the events in Santa Rosa and San Jose and EEW is building a partnership with broadcasters. Deputy Director Nezhura clarified that media interest is not only gauged by Cal OES, but partner interviews.
- Following the San Jose earthquake, more than 180 articles were published and there were more than 165,000 MyShake downloads over a three-day period. The paid media campaign led to 15,000 clicks to earthquake.ca.gov and 2.25 million impressions. The total ad equivalency of the San Jose earthquake was more than \$877,000.
- An example of the system providing advanced warning and allowing time for enacting automated actions was BART. Fifty-seven (57) trains were in service during the event in San Jose and were placed on hold for five minutes while the situation was assessed.
- There is an active partnership with Apple to integrate EEW technology into their operating system.



- Comment: Board Member Toney asked about the differences between Apple and Android and if an analysis can be done on the differences in the systems. Question deferred to Bob deGroot with USGS.
- Comment: Board Member Assefa asked if there are challenges with Apple integrating EEW technology because the hundreds of thousands of phones issued by the UC are iPhones.
 - Deputy Director Nezhura stated Apple has a different business model than Google and is actively researching the issue. Question deferred to Bob deGroot with USGS.
 - Director Ghilarducci stated Apple is looking at system credibility and capability and the point has been amplified with messaging through the Governor's Office of how many Android users receive alerts. Encouraging the downloadable application is an interim solution, but ongoing negotiations highlight the benefit of EEW integrating technology into the operating system.
- Comment: Board Member complimented the program's people-centered approach to how users share information. These interactions should continue as the focus is not only devices and data.

IV. System Operations

- Kevin Holst and Micah Berman from Google who represent the social impact crisis response portfolio that hosts EEW and other disaster alerts and analysis technologies and products, presented on Android integrated EEW Alerts; EEW being a cornerstone project of the team.
 - Google has built a supplemental system that is able to add value for Android users by distributing earthquake alerts. This is not a substitute for an official alerting system but is in addition to those systems. The service is built into the operating system (Google Play Services) and is active by default, though a master location toggle must be on to allow alerts to be sent. Users can opt out of the service in the Safety and Emergency tab.
 - Input to the system comes from USGS ShakeAlert and API uploaded into the server and data is evaluated against set criteria. Alerts are sent out accordingly. Google has built out a dedicated alerting channel to ensure alerts can be delivered to a high number of phones.
 - Google worked with experts from USGS, Cal OES, and UC Berkeley to determine the types of alerts to send and the levels of intensity at which to send the alerts. The system has two types of alerts that



only trigger for an earthquake with a magnitude 4.5 or higher. The system looks at MMI and the intensity of shaking that is expected to send out:

- Be Aware Alerts- the most common alert provides basic information and builds trust in the system.
- Take Action Alert- warns users that moderate to extreme shaking is expected and could cause damage. This alert will ignore silence settings and display in full screen, directing users to drop, cover, and hold on.
- If the estimate for the magnitude of an earthquake is too low, alerts can be updated. Both alerts link users to an earthquake safety information page containing critical next steps, earthquake specific information, and more safety tips.
- A demo alert can be triggered at any time. Google would like to see this integrated into events like the Great ShakeOut and there have been initial conversations on this topic.
- Comment: Partner from UC Berkeley submitted a question asking how large is the Android earthquake alert team? Berman responded there are two (2) engineers who work on delivery of ShakeAlert but there are many other engineers who work on supporting Google systems.
- Bob deGroot, USGS Coordinator for Communication, Education, Outreach, and Technical Engagement (CEO & TE) and the Chair for the USGS ShakeAlert Joint Committee for CEO & TE presented on the process to become a ShakeAlert Licensed Operator.
 - There are over thirty (30) ongoing projects to ensure alerting is available to everyone and addressing issues of accessibility.
 - Licensed partners (LtOs) are permitted to distribute or sell ShakeAlert powered products and services. USGS is looking to expand the number of LtOs, which is currently at twelve (12).
 - One option is to work with an existing LtO. There are documented customers who have chosen this path because they do not have the means or the time to focus on the development, which can take several years. The other option is to become an LtO.
 - The twelve (12) licensed operators are available on shakealert.org. The Pacific Northwest Seismic Network website also lists the LtOs and provides information on what services and products these partners offer.
 - USGS has worked with Cal OES to streamline the process to become an LtO and in 2020, determined that only one agreement with a partner that can be reused and updated will be executed. Many provisions are developed by partners who want to protect their intellectual property and position.
 - USGS is hiring a contractor to help develop a long-term strategic



- plan, focusing on technical engagement.
- Comment: Board Member Pepper asked if USGS has considered a partnership with an automaker or vehicle fleet? deGroot stated that USGS is open to all possibilities and emphasized that though the focus has been on wireless devices, there are many things to explore in automated actions.
 - Chief Deputy Director Tina Curry stated there is more information on the LtO process in the packet provided to board members and suggested board members consider how their sectors can move into the next phase of EEW with automated actions. Partners should determine if it is more beneficial to use an existing LtO or be a self-engineer.
 - Deputy Director Nezhura clarified that all technical partners start with a pilot licensing agreement (PLA) and upon completion of a one-year pilot, they can go onto license, continue the pilot, or stop. She then asked how many PLAs were working with USGS and if there are certain industry sectors to focus on. de Groot stated there are 25 PLAs working to be LtOs. There are opportunities for increasing utilities and healthcare sectors.
 - Branch Chief Lara provided an update on system operations, stating the network of seismic stations is nearing completion with all 1,115 stations 100% funded and 907 (81%) stations completed. Fifteen (15) stations have been added since the last meeting.
 - During the San Jose earthquake, it was determined that none of the microwave stations were utilized to deliver an alert due to the location of the earthquake.
 - Challenges to the system build-out include COVID-19, obtaining new and renewal land-use permits/leases, equipment delivery delays, and inflation. Lara thanked the board for their continued assistance in addressing challenges as they arise.
 - Comment: Board Member Pepper asked about the expected timeline for competition and Lara stated all stations should be complete by 2025.
 - Chief Deputy Director Curry encouraged the board to consider challenges and look for creative solutions to meet the deadline.
 - Deputy Director Nezhura stated the remaining stations are the hardest stations and that weather will now become a challenge.
 - Comment: Board Member Gibson asked if contingency locations have been identified if the primary location is not useable and if there are, can a list be provided as her permitting team may be able to assist.
 - Branch Chief Lara stated there are alternate locations



identified as a matter of protocol and Deputy Director Nezhura stated there have already been several instances when an alternate location was used, and Cal OES would connect with PG&E and the permitting team.

- Board Member Pepper stated there have been efforts to streamline the permitting process in different areas and wants to ensure Cal OES is involved in the statewide process led by GovOps. Branch Chief Lara stated Cal OES's Dana Ferry has gathered a work group with all partners to drive discussion of common issues. This collaboration and coordination helps partners work through issues such as permitting. Chief Deputy Director Curry suggested connecting Board Member Pepper with the working group to share information on the permitting process.

V. Research and Development

- Executive Officer Lambeth provided an update on datacasting. In 2017 America's Public Television Stations received a grant to create a pilot project that explores use of PBS broadcast airways to distribute earthquake early warnings. Five (5) PBS stations received equipment to transmit ShakeAlerts that can send alerts and trigger automated actions. Phase 1 is complete and there is the potential for a Phase 2, expanding the project into five (5) additional California stations and one (1) in Reno, Nevada.
- Julien Marty, Operation Manager, Berkeley Seismology Lab, presented on Distributed Acoustic Sensing (DAS) and how DAS can improve the performance of the EEW system.
 - Though the system is not complete, it has been delivering alerts for three (3) years. The lab seeks to analyze when the system is not performing as expected. One situation is when an alert is issued when there was no earthquake. The other situation is when there was an earthquake, but no alert was issued. Three (3) false alerts have been issued due to the earthquake being inaccurately located by the system. When an earthquake is missed, it occurred on the edge of the network. The lab has worked to address this issue but there is still an area off the shore of Northern California where there is a high number of false and missed alerts; the Mendocino Triple Junction, which is a very seismically active area.
 - Offshore, where there is no land mass to install seismic stations, there is more uncertainty estimating activity. Because the event is offshore, it will take time before the signal reaches the coast so there is an increased latency.
 - Using past information about the earthquake area, researchers are



better able to identify the location of the earthquake in real time. This does not address the time it takes for the signal to reach the coast. A measurement system is needed offshore to detect seismic waves faster. Deploying ocean bottom seismometers has usually been done for short-term experiments and is not applicable in real time. The equipment is expensive and evaluating technology issues is time consuming and costly. The better option is DAS which uses fiber optics to collect information about the environment through laser pulse. It is more cost efficient, but the challenge is accessing offshore cables.

- To test DAS, the Lab developed a partnership with the Monterey Bay Aquarium Research Institute who operates sensors 52 kilometers into the Bay. They do not use all the fiber optic cables and allowed the lab to use a cable to collect data. This has helped stream data in real-time. More than thirty (30) earthquakes have been detected using this cable.
- The focus for research and development is assessing the detection capability of the cable and the ability to process the received data with data from onshore stations to faster locate an earthquake.
 - Comment: Deputy Director Nezhura clarified that for every one station that is built, a fiber optic cable provides the capacity of 10,000 stations. Nezhura inquired about the storage capacity for the data and Marty stated not all the data is used; only data from certain points is used to optimize capability. Nezhura reiterated this, and Cal Tech's similar project are being funded through the CEEWs program. Cal OES can connect any board members who represent entities that have dark fiber optics that could be used for a similar project with other partners.
- Comment: Chief Deputy Director Curry asked if this project has potential in the Cascadia Subduction Zone and if so, are there discussions with Oregon and Washington about that potential. Marty stated these states run their own experiments but there have been discussions as they face the same challenges getting access to cables. Because this is a more cost-efficient system, it may be a better idea for partners to deploy their own fiber optic system.
- Comment: Board Member Gibson asked if DAS is more sensitive than current instrumentation and if it can sense P-waves sooner, giving more time for EEW alerts. She also stated Cal Poly completed a similar experiment and there is potential for coordination. Marty responded that it is dependent on the type of instrumentation. The cable will likely not detect the P-wave faster than on-land instrumentation. The lab worked with Cal Poly on the experiment



and helped install four (4) broadband seismometers along the cable.

- Public Comment: Executive Officer Lambeth opened the floor for public comment to participants attending the meeting in-person and virtually.
 - Public Comments: None

VI. Finance

- Deputy Director Nezhura provided an overview of finance updates for the current and budget year allocations. For the 2022-23 budget, the program received \$17.1 million ongoing General Fund that provides ongoing resources for core EEW functions (staffing, system operations, education and outreach, and research and development), and contracts with partners. This funding will also be used towards telemetry projects of connecting stations to the State microwave network and any projects that can potentially improve the reliability and resiliency of the system.
- Public Comment: Executive Officer Lambeth opened the floor for public comment to participants attending the meeting in-person and virtually.
 - Public Comments: None

VII. Sector-Based Implementation

- Cal OES EEW Research and Development lead Phillip Labra presented the goals for EEW sector-based implementation. Cal OES is looking to work with board members, partners, and stakeholders to build on the successes of existing sector implementation, focusing on expansion into the private sector, government entities, and critical infrastructure providers. Pilot projects will be developed in partnership with other entities, which will provide defined phases, timelines, processes, and technical assistance. The phased implementation will first focus on key sectors of first responders, transportation, and education.
- Labra posed the question: What challenges constrain or delay EEW implementation?
 - Comment: Board Member Pepper discussed the need to streamline the procurement process. She stated that California has around 700 transit agencies, all independently run. To bring them different services, the Department of Transportation has utilized master service agreements and created a statewide method where transit agencies can purchase services because procurement is a challenge. The Department of Transportation has worked with partners at AT&T and First Net to create a statewide package off which any sector can purchase. This eliminates the need for individual procurement and contracting efforts.



- Comment: Board Member Gibson addressed the ability to include automatic shut offs on utilities. In the Napa earthquake, the electric grid had Supervisory Control and Data Acquisition (SCADA) devices that performed well and automatically de-energized the circuits. With the gas system, agencies must be cautious of false positives and too much sensitivity because once gas valves close, re-pressurizing the system and relighting pilots requires entering homes and performing a safety check of all appliances, which takes approximately twenty (20) minutes per home. PG&E has installed telemetric devices on the gas system to monitor for changes in pressure and disruption.
 - Deputy Director Nezhura asked if there are alternatives, such as shutting off the system at the individual home level. Board Member Gibson responded that whether the shut-off is of the larger distribution system or at the home, the impact is the same. Accelerometers can be added to the smart meter system but an over-active system that creates false positives lessens trust in the system.
- Comment: Chief Deputy Director Curry reiterated that implementation for each sector is going to be different and board members should consider what is safest for users versus what is causing the most problems for the system. Identify knowledge gaps and research technology capabilities.
- Comment: Board Member Grant stated that from a housing perspective, it is important to consider how information is being distributed to low-income residents. Education and outreach are key to this demographic
 - Branch Chief Lara responded that Cal OES would use the unique position of the California Business, Consumer Services and Housing Agency to distribute information and Deputy Director Nezhura stated there are EEW vendors who have radio products that can be provided to low-income residents and datacasting will soon be available in all televisions.
- Labra posed the question: Are there other sectors or sequencing that may lead to better adoption of EEW technology? Deputy Director Nezhura asked if there were other sectors not included or if a particular sector should be a priority.
 - Comment: Board Member Pepper suggested expanding the board to include GovOps, which includes Department of General Services (DGS), and moving government facilities to Phase 1. Deputy Director Nezhura stated there have been initial conversations with DGS and Chief Deputy Director Curry agreed government facilities should be moved to Phase 1. Nezhura further clarified that government buildings are not limited to state buildings. There have



been conversations with emergency managers regarding implementing EEW into all Emergency Operation Centers and Public Safety Answering Points.

- Branch Chief Lara encouraged the board to look for forced multipliers where agencies can provide support or connections.
- Comment: Board Member Sanchez-Cornejo stated it is difficult to adopt a program if there is no awareness of the program. There is a lot of attention garnered during the Great ShakeOut in October but there should be a focus year around. Deputy Director Nezhura suggested if board members have department or association meetings that discuss public safety, they should connect with Cal OES to discuss outreach possibilities.
- Labra posed the question: What does implementation look like on your industry? What automated actions could be modified or employed to improve safety and earthquake resilience?
 - Comment: Board Member Gibson suggested rather than a full shut-off of gas valves, there could be a targeted approach in areas of significant liquefaction. This can be discussed with PG&E's geoscience team and other partners. Shifting PG&E headquarters has caused delays in pilot projects but there are plans to implement PA system announcements and elevator pre-staging in the new Oakland headquarters. PG&E is also looking to connect EEW to the company radio transmission system to allow notifications to be sent to field crews. As PG&E continues with undergrounding projects, there is opportunity to install dark fiber.
 - Comment: Board Member Grant asked what is displayed on the phone after an alert is received on a wireless device. Branch Chief Lara stated that alerts warn users to take protective action. Individuals receive directions to drop, cover, and hold on. This is an awareness and action alert with consistent messaging.
 - Deputy Director Nezhura stated there have been focus groups to determine the best methods of messaging and what will lead people to act.
 - Cal OES's Yvonne Dorantes stated children are often more knowledgeable of what to do as they are trained to take appropriate action.
- Public Comment: Executive Officer Lambeth opened the floor for public comment to participants attending the meeting in-person and virtually.
 - Public Comment: Allen Husker, professor at Cal Tech and manager of the Southern California Seismic Network, asked to be connected directly with PG&E to get feedback on gas shut-off possibilities.
 - Public Comment: Cal OES received a question if the program has plans to move forward with Phase 2 of datacasting. Deputy Director



Nezhura stated Cal OES is considering funding Phase 2 of datacasting.

VIII. Education and Outreach Overview

- Cal OES EEW Education and Outreach lead Yvonne Dorantes, provided an overview of the Great California ShakeOut Tour. Education and outreach are a major component of EEW in terms of making connections and is how Californians are informed about EEW capabilities.
- The Great California ShakeOut Tour led up to the October 20th Great California Shakeout, a statewide drill where Californians simultaneously drop, cover, and hold on, promoting the best safety practice. The tour stopped at six (6) locations considered high traffic areas and attracted various media outlets. This provided an opportunity to reach underserved communities. Through local and major media outlets, the program was able to reach ethnic communities. All the major Spanish speaking outlets were present for each stop of the tour.
- The earthquake simulator provided the opportunity for people to experience the intense shaking of an earthquake and the simulator emphasized the need for protective action.
 - Comment: Board Member Sanchez-Cornejo attended the Los Angeles stop of the tour and complemented the program team for their work in getting the message of EEW out to all people. These events reinforce earthquake safety, particularly since it has been man years since there was an earthquake in the Los Angeles Area.
 - Branch Chief Lara commented our tours are critical as they draw media, which allows for program messaging and audience engagement. Cal OES has been pleased with the strategy surrounding message distribution and reaching a wide audience.
 - Deputy Director Nezhura stated partners implementing EEW have the same effect in drawing media attention and messaging. When the media covers a major company implementing EEW, it gets the attention of other companies in that sector.
 - Branch Chief Lara stated the tour offered the opportunity to connect with large companies such as Dignity Health in Southern California and NBC Universal.
 - Comment: Board Member Assefa commented there are factors beyond control (i.e., people receiving a warning but not acting). She is wondering what adoption of EEW will look like within the different sectors, being mindful of personal preparedness. It is important to lead by example but EEW is not implemented in Cal OES buildings. Finally, she appreciates the toolkits but would like to



see more visuals of what could be done that can be shown to partners.

- Deputy Director Nezhura responded that integrating EEW into the State Operation Center has been considered but it is not in a seismically active area. Cal OES is working with EOCs throughout the state, especially a new EOC in Southern California. Adoption of EEW will depend on the location and need of the building. The program has worked to create visual success stories posted on YouTube, featuring companies that have implemented EEW. Branch Chief Lara stated success stories have been done for transportation (Metrolink), education (LAUSD), and Menlo Park Fire District. There are plans to highlight efforts by Northridge Hospital and the Regatta Seaside Condominiums. Both Nezhura and Lara emphasized the toolkits are available and Cal OES will work with the different sectors to discuss implementation.
- Board Member Assefa stated the UC system has the Berkeley stadium that is built on the Hayward Fault. EEW implementation needs to address personal preparedness and mitigating impacts to critical infrastructure which directly influences recovery from an event. She asked how this can be adopted into a space such as a stadium. There needs to be a visual clearly demonstrating how EEW would be implemented and function in this scenario. Deputy Director Nezhura stated Cal OES will contact Board Member Assefa to ensure her vision is realized.
- Comment: Board Member Anderson seconded the idea of clearly visualizing how EEW would work within the CSU system where there are hundreds of thousands of buildings. The CSU has mapped all campuses and ground motion coefficients and developed a triage of campuses likely to experience seismic activity. Board Member Anderson offered to put partners in contact with people within the CSU system who can assist with outreach. The CSU hosted a drill on two (2) campuses in June 2022.
- Public Comment: Executive Officer Lambeth opened the floor for public comment to participants attending the meeting in-person and virtually.
 - Public Comments: None

IX. Closing Statements and Public Comment

- Deputy Director Nezhura provided closing comments and thanked everyone for their participation in the meeting. She acknowledged the new Executive Director of the Seismic Safety Commission, Andee Ewertsen, and the California Geological Survey for their continued partnership. Nezhura also thanked presenters, other partners present



- for the meeting, and all the members of the board.
- Executive Officer Lambeth announced that public comment is open for participants attending the meeting in-person and virtually.
 - Public Comments: None

X. Adjournment

- The meeting was adjourned by Executive Officer Lambeth.