

CALIFORNIA
EARTHQUAKE EARLY WARNING
ADVISORY BOARD

JUNE 25, 2025
MEETING NOTICE



***Cal* OES**
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES



Table of Contents

Advisory Board Meeting Notice	3
Meeting Agenda	4
September 11 Meeting Minutes	7



**CALIFORNIA EARTHQUAKE EARLY WARNING
ADVISORY BOARD MEETING
NOTICE AND AGENDA**

June 25, 2025
1:00 PM – 4:00 PM

In-Person Location:

California Governor's Office of Emergency Services
3650 Schriever Avenue, Building A, MPR 1 & 2
Mather, CA 95655

Zoom Video Conference Information:

Participant Call-In Number: 16699006833
Meeting ID: 862 1845 5103
Passcode: 13736697

Or, please click the link below to join the webinar

<https://us02web.zoom.us/j/86218455103?pwd=c8c1iYZEILaOM5jkUDrI4pvt9qa2e3.1>
Passcode: V\$G3Fr8a

Or One tap mobile:

+16699006833,,86218455103#,,,,*13736697# US (San Jose)
+16694449171,,86218455103#,,,,*13736697# US

For information on Earthquake Early Warning (EEW) warning and alerts,
earthquake preparedness, and more:

<https://earthquake.ca.gov>



CALIFORNIA EARTHQUAKE EARLY WARNING ADVISORY BOARD MEETING

June 25, 2025
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 Director of Cal OES 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. RECENT EVENTS

Earthquake Early Warning (EEW) Program Manager provides information on recent real-world tests of the California Earthquake Early Warning System.

IV. RESEARCH AND DEVELOPMENT/IMPLEMENTATION

Partner presentation on new technologies and projects that support the EEW System.

V. SYSTEM OPERATIONS

Cal OES updates the Board on the CEEW system build out, followed by partner presentations on operation and maintenance projects.

VI. EDUCATION AND OUTREACH OVERVIEW

Cal OES presents on community outreach opportunities and events.

VII. CLOSING STATEMENTS AND PUBLIC COMMENT

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



VIII. ADJOURNMENT

Meetings of the California Earthquake Early Warning Advisory Board are open to the public except when specifically noticed otherwise in accordance with the Bagley-Keene Open Meeting Act. The Board may act on any item listed on the agenda. Agenda items may be taken out of order to facilitate the effective transaction of business.

Statements from the Public:

Members of the public will be given an opportunity to comment before action is taken on any agenda item and during the scheduled Public Comment section of the agenda. Comments should be addressed to the Board and should be limited to 3 minutes or less. Although not required, speakers are requested to identify themselves by stating their name and city of residence for the official record. All remarks shall be addressed to the Board as a body. Speakers should be brief and are to limit their comments to the subject of discussion.

Access to Meeting and/or For More Information:

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:

Raul Garcia, Earthquake Early Warning
3650 Schriever Avenue, Mather, CA 95655
916-364-4662 / raul.garcia@caloes.ca.gov

**TDD users may contact the California Relay Service TDD line at 1-800-735-2929
or Voice Line at 1-800-735-2922.**

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**

MEETING MINUTES
September 11, 2024



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

September 11, 2024

Meeting Minutes

Members Present:

In-Person Attendees

- Lori Nezhura, Deputy Director, Planning, Preparedness, Prevention, Governor's Office of Emergency Services
- Bryan Cash, Assistant Secretary, Designee of the Secretary of Natural Resources Agency
- Julie Souliere, Assistant Secretary, Designee of the Secretary of California Health and Human Services
- Giles Giovinazzi, Senior Advisor, Designee of the Secretary of the California State Transportation Agency
- Melinda Grant, Undersecretary, Designee of the Secretary of the California Business, Consumer Services, and Housing Agency
- Lupita Sanchez-Cornejo, Corporate External Affairs for AT&T, Appointee of the Speaker of the Assembly Representing the Interests of Private Businesses
- David Briggs, Director of Operations and Maintenance for East Bay Municipal Utilities District, Appointee of the Governor 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

I. Call to Order / Introductions

- The meeting was called to order by Advisory Board Executive Officer Derek Lambeth.
- Roll call was taken, and a quorum was achieved.

- On behalf of Cal OES Director Nancy Ward, Deputy Director Lori Nezhura opened the meeting by welcoming new board members and continued by recounting the numerous challenges and significant anniversaries for California in 2024. She emphasized the importance of earthquake preparedness and stated that board members and partners play a key role in the success of EEW. Deputy Director Nezhura concluded with an overview of the meeting and encouraged board members to stay engaged and think of ways Earthquake Early Warning (EEW) can be implemented into their sectors and organizations.

II. Review and Approve Meeting Minutes from December 6, 2023.

The motion to approve was led by Board Member Sanchez-Cornejo. The motion was seconded by Board Member Cash. Motion passed unanimously.

III. Recent Events

- Program Manager Phillip Labra reviewed two (2) earthquakes that occurred in August 2024, discussing the subsequent number of MyShake downloads and the scope of media coverage, including the EEW Program's Rapid Response efforts and messaging.
- Deputy Director Nezhura stated that Cal OES post-event messaging prioritizes public safety. For events that do not have reported injuries or fatalities, messaging pivots to emphasize the importance of preparedness and Earthquake Early Warning. Cal OES partners also participate in messaging, with USGS and CGS conducting interviews on the science of earthquakes, while UC Berkeley does interviews, speaking as the creators of the MyShake app. However, board members are encouraged to also help Cal OES amplify messages.
- Program Manager Yvette LaDuke discussed her experience receiving alerts for both events and reported positive conversations she had with friends and colleagues who received an alert for the first time.
- Board Member Sanchez-Cornejo stated she also received an alert but asked how to tell the difference between a MyShake alert and a Wireless Emergency Alert (WEA). Deputy Director Nezhura stated there are different looks to the alerts and they are triggered at different magnitudes.
- Board Member Sanchez-Cornejo followed up by asking why there was a discrepancy between the two (2) events in the number of devices alerted

and how much advance warning was received. Deputy Director Nezhura discussed the nature of geo-positioning of alert recipients, while Executive Officer Lambeth discussed additional factors that can cause delays in alerting, such as proximity to the epicenter and the depth of the earthquake.

- Board Member Toney stated that EEW technology has been embedded into Alert San Diego and 134 devices were alerted via this system of the recent earthquakes. He did an interview for the Public Broadcast System in San Diego and further discussed the importance of leveraging the events for the benefit of public education.
- PG&E's VP of Emergency Preparedness and Response Gibson stated 28,000 PG&E employees had the MyShake app downloaded onto their work phones and received alerts for the events.
- Board Member Sanchez-Cornejo asked for clarification on whether devices will still receive a WEA without the MyShake app. Deputy Director Nezhura stated devices can receive both notifications and discussed the difference in threshold at which point the alerts are triggered.

IV. Sector-Based Implementation

- Research and Development Lead Coordinator Megan Sullivan discussed current projects, including two (2) projects related to datacasting, a pilot project with three (3) county fire departments to implement EEW automated actions into fire stations, and a feasibility study using Los Angeles International Airport and Palm Springs Airport to explore EEW implementation in airports.
- Deputy Director Nezhura clarified that with the completion of phase 1 of datacasting, public television stations will be equipped to distribute EEW alerts but with the lack of receivers, the alerts cannot be received. She asked for clarification if public television stations distributed alerts and Sullivan confirmed that for the two (2) most recent events, alerts were distributed.
- Board Member Briggs asked for an explanation of how the signal works. Technical Expert John McCoskey explained that the signal uses digital transmitters to send a digital version of a ShakeAlert message to a receiver, not to the television, itself. Board Member Briggs asked how he would receive the alert and Deputy Director Nezhura stated he would need a receiver. However, the hope is that in the near future every television will be manufactured with the technology included so that a

separate receiver is not needed.

- Board Member Cash inquired how a business or individual would be able to get a receiver. Technical Expert McCoskey stated that a commercial partner, Clover Alert, is manufacturing the receivers and they can be purchased online. Executive Officer Lambeth reiterated the phases of the datacasting project:
 - Implement the technology in California Public Television stations.
 - Boost existing capabilities.
 - Distribute receivers.
- Board Member Souliere asked if there are any pilot projects focused on hospitals. Executive Officer Lambeth stated plans to work within a specific sector are dependent on funding; however, healthcare is a priority sector. There has been engagement with hospital associations.

V. Research and Development

- The Operations Manager with the Berkeley Seismology Lab (BSL), Julien Marty, discussed several ways the network performance is determined and how feedback has allowed the team to make improvements. He continued by describing a new program that will anticipate system performance utilizing a set of maps to provide a real-time diagnostic of the network. This program will not only provide a better understanding of the overall system performance, but it will also help prioritize station maintenance projects, support station troubleshooting, and identify gaps in coverage throughout the network.
- Deputy Director Nezhura asked if this program has led to any recommendations on stations Cal OES should consider for an upgrade. Marty stated that stations in the Bay Area were identified and fixed and the benefits were seen immediately.
- PG&E's VP of Emergency Preparedness and Response Gibson stated PG&E is working with Marty and BSL to install stations at various locations and they are happy to sponsor more stations and facilities.
- Board Member Toney asked the anticipated completion date of the network. Marty stated the goal for all partners is to get the network completed by 2025, and it is expected that goal will be met.
- Board Member Toney followed up by asking how a station transmits data. Marty discussed the connection between satellites, Starlink, and the PSC microwave network.
- Board Member Briggs inquired if there are common problems or failures in

the system and if there is a threshold for how many stations need to be running at one time. Marty stated, as many of the stations are new, they tend to function well; however, telecommunications is the most common issue. He also noted that the priority of network performance is how many stations are functioning in a given area. Marty shared BSL and partners are working to determine an acceptable threshold; however, it is believed about 90 percent of stations need to be working at all times.

- Member of Public asked if the time to distribute the alert is inclusive of the time to detect or process an alert. Marty clarified that it is inclusive and not in addition to the prior time estimates.
- Member of the Public asked if the network performance program is available to the public. Marty stated that currently the information is only shared in real-time with Cal OES.

VI. System Operations

- Program Manager Labra provided updates on the system build-out.
- United States Geological Survey Coordinator for Communication, Education, Outreach, and Technical Engagement Bob de Groot provided an update on the number of ShakeAlert licensed operators (LtOs), including two (2) new LtOs, and discussed the Technical Industry Engagement Strategy Project. De Groot also discussed how GPS technology is being combined with seismic sensors to help overwhelmed seismometers. De Groot concluded by sharing that ShakeAlert is now available in Canada.
- Director of Berkeley Seismology Lab, Dr. Richard Allen, presented a video highlighting work done to update a station on the Farallon Islands and discussed why it is important to have this station, as it ensures a station is on both sides of the San Andres Fault.
- Executive Officer Lambeth acknowledged Google's recent announcement regarding the integration of nationwide EEW Android Alerts into their operating system.
- Deputy Director Nezhura asked if the Farallon Island station helps detect earthquakes happening offshore. Director Allen stated that detection of earthquakes offshore is a challenge. There are some underwater seismometers; however, they are a challenge to install and maintain. Another option is Distributed Acoustic Sensing (DAS), which turns regular telecommunication fibers into seismometers. The BSL has worked with PG&E to identify telecommunication fibers that can be used for DAS.

- Board Member Briggs asked about false positives and if there is more of a bias towards the event being more or less intense than the original data suggests. Marty clarified that most often, the technology assumes the earthquake is far away and, therefore, has a higher magnitude, overestimating the size of the earthquake.
- Supervisory Geophysicist with USGS Marcos Alvarez added that there are EEW stations in Southern California on the Channel Islands; however, they require updating.

VII. Education and Outreach

- Program Manager LaDuke discussed the metrics of the 2023 Great California ShakeOut Tour and provided information on the upcoming 2024 tour, including locations and event activities.
- Deputy Director Nezhura encouraged board members who would be in any cities included in the tour to participate.
- Education and Outreach Lead Coordinator Jon Gudel briefed on the outcomes of the community outreach grant with United Way, including notable events and opportunities for community engagement.
- Program Specialist Suu Va Tai introduced a new community outreach grant that has been awarded to Listos California through the EEW program, which will utilize an earthquake focused peer-to-peer approach to reach target populations in areas of high seismic risks.

VIII. Finance

- Education and Outreach Coordinator Brandon Howland provided an overview of the financial budget and spending plan. He also discussed the publication of the 2024 EEW Business Plan and the upcoming 2025 Business Plan.

IX. Closing Comments

- Deputy Director Nezhura thanked presenters and board members for attending and encouraged board members to provide input or suggestions.

X. Adjournment

- The meeting was adjourned by Executive Officer Lambeth.