

CALIFORNIA
EARTHQUAKE EARLY WARNING
ADVISORY BOARD

December 6, 2023
MEETING NOTICE



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



Table of Contents

Advisory Board Meeting Notice	3
Meeting Agenda	5
May 10 Meeting Minutes.....	8



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

December 6, 2023
1:00 PM – 4:00 PM

Meeting Location:

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

Zoom Video Conference Information

Participant Call-In Number: 1-669-444-9171
Meeting ID: 868 1707 0842 | Passcode: 56264174

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

<https://us02web.zoom.us/j/86817070842?pwd=V1hQd1Z3WDBlQU9WYkZ0ZXRWTFJaQT09>

Passcode: LbPN1Y%5

Or One tap mobile:

+16694449171,,86817070842#,,,,*56264174# US
+16699006833,,86817070842#,,,,*56264174# US (San Jose)

Dial (for higher quality, dial a number based on your current location):

+1 669 444 9171 US
+1 669 900 6833 US (San Jose)
+1 346 248 7799 US (Houston)
+1 719 359 4580 US
+1 253 205 0468 US
+1 253 215 8782 US (Tacoma)
+1 360 209 5623 US
+1 386 347 5053 US
+1 507 473 4847 US
+1 564 217 2000 US
+1 646 931 3860 US
+1 689 278 1000 US
+1 929 436 2866 US (New York)
+1 301 715 8592 US (Washington DC)
+1 305 224 1968 US



+1 309 205 3325 US
+1 312 626 6799 US (Chicago)
833 928 4608 US Toll Free
833 928 4609 US Toll Free
833 928 4610 US Toll Free
877 853 5247 US Toll Free
888 788 0099 US Toll Free
833 548 0276 US Toll Free
833 548 0282 US Toll Free

**CALIFORNIA EARTHQUAKE EARLY WARNING
ADVISORY BOARD MEETING**

December 6, 2023
1:00 PM – 4:00 PM

MEETING AGENDA

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

Executive Officer provides statistics on significant earthquakes that have occurred since the last board meeting, followed by a presentation on system performance and solutions to noted issues by USGS.

IV. SECTOR-BASED IMPLEMENTATION

A presentation by the Regatta Seaside Condominiums discusses steps taken to implement EEW and challenges encountered in implementing the system into their building.

V. RESEARCH AND DEVELOPMENT

University of California, Berkeley presents on the MyShake Desktop/Chromebook app that is currently under development.

VI. SYSTEM OPERATIONS

Cal OES updates the board on the EEW system build out, followed by a presentation from CGS on QuakeWatch and CSN.



VII. EDUCATION AND OUTREACH OVERVIEW

Cal OES presents on the partnership with the San Jose Earthquakes (MLS) and the 2023 Great California ShakeOut tour.

VIII. FINANCE

Cal OES reviews the EEW budget and a special report to the California Legislature.

IX. CLOSING STATEMENTS AND PUBLIC COMMENT

Cal OES Director provides closing comments, followed by public comment on any topic under the Advisory Board's jurisdiction which was not on the agenda.

X. 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:

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

May 10, 2023
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

May 10, 2023

Meeting Minutes

Members Present:

In-Person Attendees

- Nancy Ward, Director, Governor's Office of Emergency Services
- Christina Curry, Chief Deputy Director, Governor's Office of Emergency Services
- Julie Souliere, Assistant Secretary, Designee of the Secretary of the California Health and Human Services
- Jeff Toney, Director, County of San Diego Office of Emergency Services, Designee of the Senate Committee on Rules Appointee Representing County Government
- Lori Pepper, Deputy Secretary, Designee of the Secretary of the California State Transportation Agency

Remote Participants

- Bryan Cash, Assistant Secretary, Designee of the Secretary of Natural Resources Agency
- 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)
- 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

I. Call to Order / Introductions

- The meeting was called to order by the Advisory Board Executive Officer Derek Lambeth.
- Roll call was taken and a quorum was achieved.
- Cal OES Director Nancy Ward provided opening comments reiterating the goal of the Advisory Board, detailing the performance of the MyShake app during the Ferndale Earthquake, assuring California's preparedness for a catastrophic earthquake like the earthquake in Turkey (February 2023), and summarizing the discussion of a tabletop exercise on how a catastrophic disaster would impact other state agencies.
- Board Member Sanchez-Cornejo provided comments thanking everyone for their hard work through the many challenges since the previous Advisory Board meeting.

II. Review and Approve Meeting Minutes from November 3, 2022.

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

III. General Program Updates

- Executive Officer Lambeth provided updates on the 2023 Business Plan and a special report for the California Legislature discussing potential funding sources for the Earthquake Early Warning System, statistics on the Ferndale earthquake and the earthquakes in Tres Pinos and Cobb, California, and highlights of actions taken on recent Advisory Board member recommendations.

IV. Research and Development

- Research and Development Lead Megan Sullivan provided a summary of Phase 1 of Datacasting, an alert mechanism that borrows a fraction of the data flow of a digital TV station to send an alert to a special receiver, and the partnership with American Public Television Stations (APTS) as the holder of the Pilot License Agreement (PLA)
- California Public Television (CPT) Treasurer and KVIE President David Lowe presented on datacasting technology, including transmitters and receivers and the connection between USGS sensors and the public broadcast station spectrum, and potential uses for datacasting alerts.
- Megan Sullivan discussed Phase 2 of Datacasting, stating Cal OES will go through the PLA process with APTS and CPT to better understand the process.



- Director Ward asked what will happen after Phase 2. David Lowe stated that he believes if this technology is available, industries will respond, and Director Ward agreed.
- Deputy Director Nezhura asked for more information on the receivers and if they will always be necessary. David Lowe stated the receivers are necessary to receive the data for an alert, but the television is not necessary. John McCoskey, technical advisor to APTS, stated it will be standard for next-generation televisions to have the receiver technology built into their system.
- Director Ward asked about the cost to the industries for the receiver and if there is any reoccurring cost. John McCoskey stated a consumer receiver costs \$299. A commercial receiver that can be set up to communicate with automated systems is \$500. There are no ongoing service or monthly fees.
- Board Member Andersen asked if public television stations owned the towers and if they are designed for emergency communications? David Lowe responded that some PBS stations own the towers. These towers, hardened by FEMA, are some of the strongest towers in existence.
- Board Member Pepper asked if this is a redundant system. David Lowe answered this is a redundant system that can work alongside as a backup to current EEW technologies.
- Board Member Pepper stated a Master Services Agreement should be considered for purchasing receivers to resolve procurement difficulties.
- Board Member Toney asked if datacasting bypasses IPAWS and goes directly from the USGS sensors to the towers themselves. David Lowe stated that alerts do go directly to the stations from USGS sensors.
- Public Comment: Lonna Thompson, COO of APTS, stated she appreciates the work Cal OES has done with EEW and appreciates Cal OES working with the California stations.

V. Sector-Based Implementation

- Research and Development Lead Megan Sullivan provided updates on implementation of EEW in government facilities and the Request for Information (RFI) to gauge capabilities for EEW and automated actions in Cal OES facilities, and a pilot project to implement EEW in up to 35 fire stations.
- Board Member Pepper commented that automated actions within airports will be like the fire stations project and these projects will help build the core capabilities of EEW that will expand in the future.



- Megan Sullivan explained how Cal OES is coordinating with stakeholders to conduct a feasibility study to identify ways to implement EEW automated actions in airports and will focus on Los Angeles International Airport (LAX) and Palm Springs International Airport.
- Technical Advisor Derek Kantar explained the reasoning behind selecting LAX and Palm Springs airports.
- Chief Deputy Director Curry asked for examples of likely use for EEW within airports. Megan Sullivan stated EEW could stop elevators and/or escalators and Branch Chief Lara explained how EEW will protect air travelers with safe takeoffs and landings. Derek Kantar explained the study will look at ways of shutting down movement in elevated areas.
- Board Member Andersen stated CSU has a seismic review board with outside structural engineers. There is a document, Specular Ground Motion Coefficients, that is used to prioritize all 23 campuses.
- Board Member Cash asked if funding is available to help implement EEW within emergency response groups in the Natural Resources Agency. Branch Chief Lara stated Cal OES will work closely with Cal Fire. Deputy Director Nezhura added that there are grant funds to help with implementation; however, there may be reoccurring costs that would not be covered by the grant. Board Member Pepper reiterated the helpfulness of a statewide Master Services Agreement to help lower costs.

VI. Education and Outreach Overview

- Christopher Darbee, Director of Data and Outreach with United Way, presented on Inland SoCal 211, a health and human services line that connects people to resources during a disaster and serves as an information line for shelter locations, etc. He also spoke to their outreach program for the MyShake app.
- Director Ward asked if United Way experienced challenges getting people to sign up to receive notifications, due in part to giving notice that they have a medical need or disability. Christopher Darbee replied that initially, people will commit, but it can take several conversations to get people enrolled.
- Deputy Director Nezhura asked for advice to give other community-based partners on how to encourage people to download the MyShake app. Christopher Darbee replied that besides the conversation with people about what is needed to be prepared for an earthquake, there must be a draw to get them to engage, something to make it fun.



- Branch Chief Lara asked for more information on the population served with the events. Christopher Darbee responded United Way focuses on underserved communities and rural areas.
- Deputy Director Nezhura presented on a partnership with the MLS team San Jose Quakes, a one-year pilot program that will feature signage, PA radio ads, social media PSAs, and outreach opportunities.
- Deputy Director Nezhura discussed the Early Warning Quake Safe Cities campaign that will encourage city leaders to commit to making their cities earthquake prepared by downloading the MyShake app and exploring implementation in city buildings.
- Administrative Analyst Samantha Layne discussed recent outreach events that occur throughout the year at the board's suggestion, and how leveraging existing events in the community provides the opportunity to participate in an event by the community for the community.
- Board Member Pepper suggested engaging the League of California Cities for the Quake Safe Cities campaign. Deputy Director Nezhura stated conversations have occurred with the League of California Cities.

VII. System Operations Update

- USGS Coordinator for Communication, Education, Outreach and Technical Engagement Bob de Groot presented updates to ShakeAlert's license to operate process and the Technical Industry Engagement Strategy (TIES), which seeks to understand successful implementation in different sectors.
- Board Member Andersen asked, of the listed pilot programs, is there a program working with a major building contractor in terms of early warning while workers are on the job site. Bob de Groot replied that of the current pilot programs, he is not aware of any that are doing this.
- Branch Chief Lara asked how we are going to add more PLAs and streamline them into the LtO process. Bob de Groot stated that work has started TIES is working on this and Cal OES will have access to the developed plan.
- Deputy Director Nezhura asked if interested entities should attend TIES group meetings or work with USGS individually and how can the process be more streamlined? Bob de Groot replied that pathways of implementation can be discussed further and agreed there needs to be a pipeline that gets from idea to licensing. Executive Officer Lambeth stated Cal OES' contractor KP Affairs can be made available as they have worked on implementation. Deputy Director Nezhura suggested if more



vendors are going to be needed to create ShakeAlert powered products, Cal OES and USGS can explore ways to work together on solicitation.

- Executive Officer Lambeth provided updates on system operations, stating that while the system network of contributing stations is at 937 out of 1,115, the focus is moving to maintenance and upgrade of outdated stations and connecting to the State Microwave.

VIII. Finance

- Deputy Director Nezhura provided an overview of the financial budget and spending plan.

IX. Closing Comments

- Chief Deputy Director Curry provided closing comments, thanking presenters for their time, and sharing their work.

X. Adjournment

- The meeting was adjourned by Executive Officer Lambeth.