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# Welcome!



**E**arthquake  
**C**ountry  
**A**lliance

**ECA Bay Area**  
**Fall 2023 Workshop**

## **Ice-Breaker Discussion:**

What have you done to encourage preparedness in your neighborhood?

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## **ECA Bay Area Coordinating Committee Co-Chairs**

**Ray Bonilla**  
Elevance Health

**Dena Gunning**  
Central County Fire Department

**Jeff Airth** (*provisional*)  
San Francisco International Airport

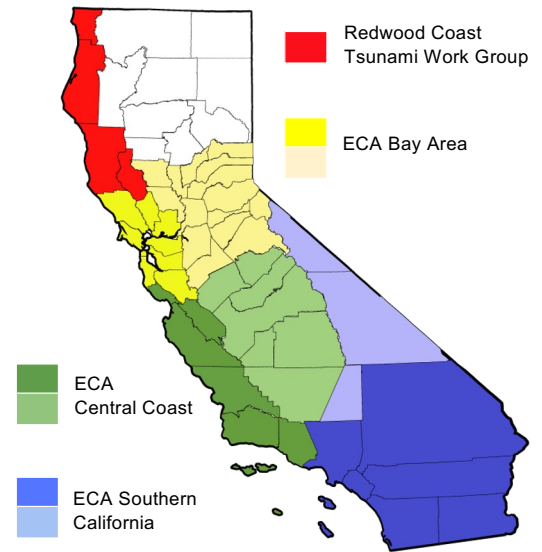
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# Earthquake Country Alliance

- 4000+ *Public-Private-Grassroots* leaders
- Subject matter expert *Committees* develop resources and programs
- *Regional Alliances* organize meetings and outreach activities
- California's Office of Emergency Services provides FEMA NEHRP funding for ECA earthquake mitigation activities
- USC's Southern California Earthquake Center (SCEC.org) administers ECA



Join: [EarthquakeCountry.org/join](https://EarthquakeCountry.org/join)



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## ECA Bay Area Coordinating Committee

- Coordinating Committee Chairs: **Ray Bonilla**, Elevance Health  
**Dena Gunning**, Central County Fire Dept. (San Mateo County)
  - Communications Coordinator: **Susan Garcia**, USGS
  - Events Bureau Coordinators: **Chief David Cosgrave**, San Mateo County  
**Kacey Treadway**, Santa Clara County
  - Media Bureau Coordinator: **Open Position**
  - Membership Coordinator: **Wendi Ellis**, US Department of Health and Human Services
  - Participation Bureau Coordinator: **Theresa Langdon**, Alameda County Office of Emergency Services
  - Regional Workshops Coordinator: **Jeff Airth**, SFO
- SCEC Liaison for ECA Bay Area: **Mark Benthien (ECA/SCEC)**  
[bayarea@earthquakecountry.org](mailto:bayarea@earthquakecountry.org)

*Each Coordinator welcomes additional members of their committee!*

[EarthquakeCountry.org/bayarea](https://EarthquakeCountry.org/bayarea)

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# Today's Agenda

Welcome & Self-Introductions

2023 ECA Bay Area Overview, including ShakeOut Debrief

MyShake App Overview/Update

FEMA Earthquake Mitigation Resources and Opportunities

Break

ECA Bay Area Mini Awards

Earthquake Anniversaries & Quake Heroes Events

Announcements by Participants & Open Discussion

Adjourn - optional lunch

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## Self Introductions

**Name**

**Organization or Community**

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# 2023 ECA Bay Area Overview, including ShakeOut Debrief

**Mark Benthien**  
*ECA Executive Director,*  
**Statewide California Earthquake Center**

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## Feb 16, 2023 Winter Workshop (Dublin)

**Welcome and Introductionns**

**ECA Statewide Leadership Opportunities,  
Key Resources and Mini Awards**  
Mark Benthien (SCEC/ECA)

**Quake Break: Bay Area Seismic Activity Since Last Workshop**  
Dr. Kathryn Materna (USGS)

**HayWired Scenario Exercise Toolkit and Exercise**  
Monika Stoeffl (California Resiliency Alliance) and Mark Benthien  
(SCEC/ECA)

**Open Discussion, Sharing, and Networking**

**Optional EOC Tour**

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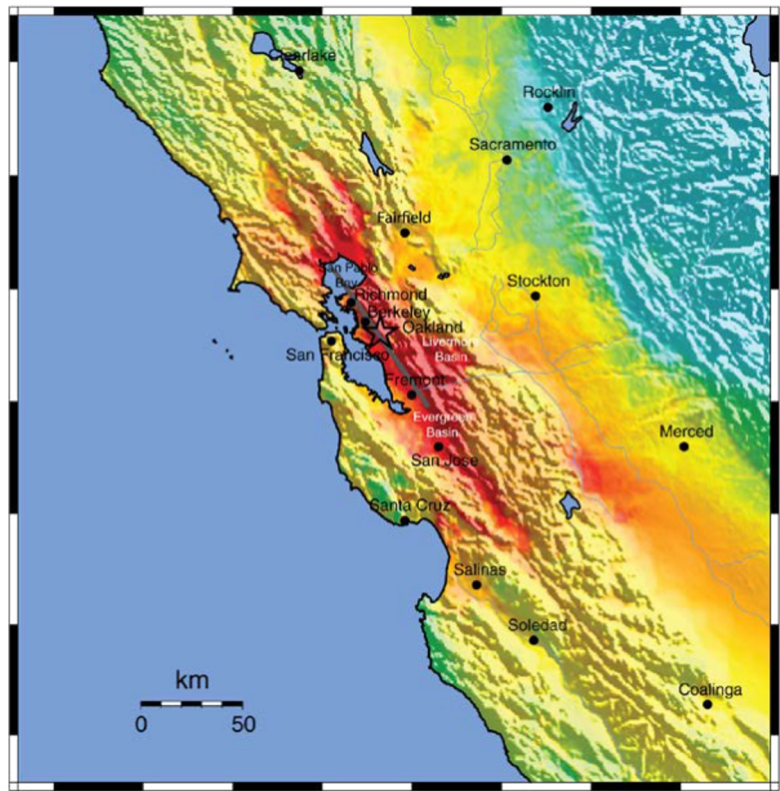


# HayWired Scenario EXERCISE TOOLKIT

A **guide** for creating discussion-based exercises using the HayWired **Earthquake** Scenario



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**USGS ShakeMap of the San Francisco Bay region showing estimated shaking intensities for the hypothetical magnitude-7.0 mainshock selected for the scenario.**

The earthquake begins under the City of Oakland (star) and ruptures the Hayward Fault along more than 83 kilometers (about 52 miles) of its length in both directions.

# Developing Your Exercise



- Guidance for developing a discussion-based exercise, with a corresponding planning worksheet
  - Basic questions to consider
  - How to select a theme/idea to exercise (with consideration for the different phases of emergency management)
  - Description of components needed:
    - Discussion objective
    - Key participants
    - Base scenario (specific for *your* exercise)
    - Discussion questions
    - Relevant data and visuals

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## Exercise Themes & Ideas

- The Toolkit identifies **30 Themes** addressed in the scenario, spanning **45 ideas** for discussion-based exercises, organized within each emergency management phase.
- Document symbols indicate **17 Facilitator Tools** based on the suggested ideas (3 new Tools in development now)

	Planning and Preparedness	Response	Recovery	Mitigation
Access to Data & Information		29		39
Accounting for Employees		29		
Aftershocks & Fault Afterslips			35	
Alternate Locations	23		36	
Building Content				39
Clean-up				39
Communications & Internet	23 & 24	29 & 30		
Customer Base			36	
Economic Impact			36	
Elevators		31		
Employee Commutes and Residences	24			
Employee Retention & Staffing Shortage		31	37	
Fires After the Earthquake				40
Fuel (Gasoline and Diesel)	24	31		
Generators	25			
Insurance			37	
Lifeline Infrastructure in Fault Zones				40
Mail   Package Delivery		32		
Mental Wellbeing			37	
Natural Gas	25	32		
Payroll	26			
Power (Electricity)	26	33	38	
ShakeAlert®	26			40
Shutting Off Utilities				41
Slow Return to Normal			38	
Structural & Non-Structural Building Damages				41
Supply Chain   Movement of Goods	27			41
Water	27	33 & 34		
Wastewater   Sewer	27	34		
Working Remotely	28			

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## Facilitator Tools

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- Each set of *Facilitator Tools* includes:
  - *Discussion Guide*
    - Suggested exercise objectives
    - Recommended participants
    - Discussion questions to select from
    - Locations of relevant data in the Reports
  - *Imagery Slideset*
    - Relevant maps, charts, and tables
- Facilitators can follow closely, or use as inspiration for their exercises



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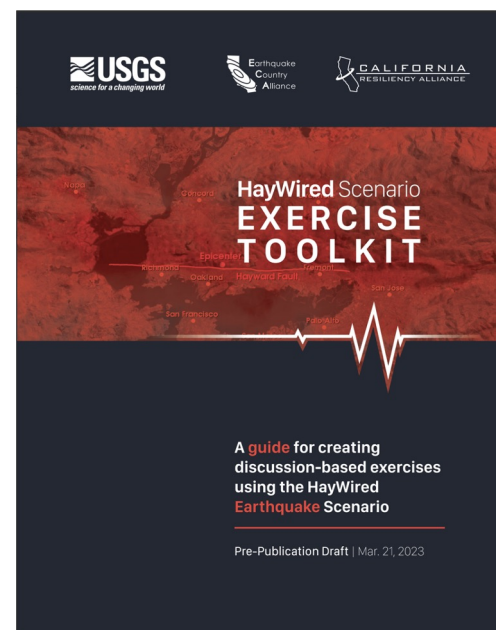
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## Now Available, and coming soon...

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- Download the Toolkit & Facilitator Tools at [EarthquakeCountry.org/haywired](https://EarthquakeCountry.org/haywired)
- **Several training workshops** will be held over the next year – for business groups, underserved communities, local government, etc.
- Video tutorial will be available soon



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# June 15, 2023 Spring Workshop (Belmont)

## Welcome and Introductions

### Thrive RISE: A Coalition of Community Organizations Active in Disaster (COAD)

Ana Miscolta (Thrive RISE)

### Overview of the Resilient Alice Griffith project (funded by Cal Volunteers)

Daniel Homsey (City and County of San Francisco)

### Overview of National CERT Conference and related Activities

Dena Gunning (Central County Fire Department)

### Quake Break

Max Schneider (USGS)

### ECA Updates and Opportunities

Mark Benthien (ECA Executive Director)

### Open Discussion, Sharing, and Networking

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## Great ShakeOut Earthquake Drills

- Annual opportunity for schools, organizations, and families to practice earthquake safety and other aspects of their emergency plans
- 2023 International ShakeOut Day: **October 19**
- **10.25 million** registered statewide
- **1.56 million** registered in the Bay Area

**Shake  
Out**<sup>TM</sup>

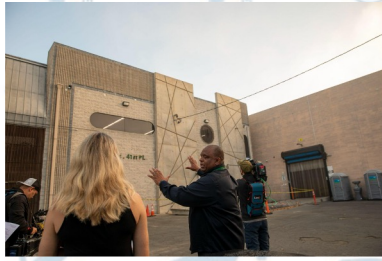


- Learn more and register: [\*\*ShakeOut.org\*\*](https://ShakeOut.org)

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**Shake  
Out**<sup>TM</sup>

# Q&A

To be notified of future events and recordings, join ECA (free!):  
[EarthquakeCountry.org/join](https://EarthquakeCountry.org/join)

Questions? [info@earthquakecountry.org](mailto:info@earthquakecountry.org)

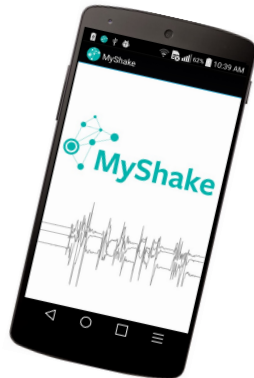


# MyShake

## Earthquake Early Warning

Richard Allen

Berkeley  
Seismology Lab



I felt like a prophet!

★★★★★

Sun  
jodiesq

I downloaded this app after the last earthquake in my area. 20 min ago I got a very clear alert with graphics "EARTHQUAKE WARNING: DROP! COVER! HOLD!" Had time to read it, hesitate (thinking "these don't actually work, do they?"), then get out of bed and yell across the house to my kids BEFORE the chandelier started to SWING from the quake. The epicenter was a 5.5 and we are 60 miles away but I actually hesitated before reacting and still had that much time. Getting everyone in my family on this app and I will NOT hesitate to react next time!

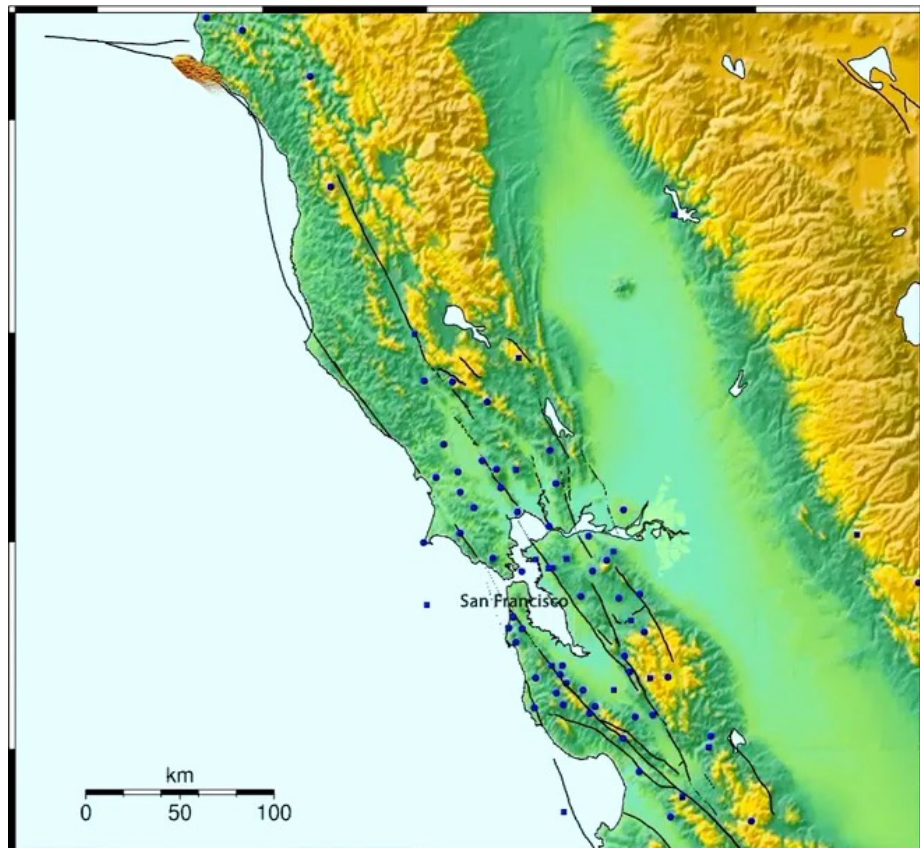


EARTHQUAKE  
WARNING  
CALIFORNIA

1

What is  
earthquake  
early  
warning?

Magnitude 8  
on the San Andreas



2

Why do we need  
earthquake early warning?

Mexico City  
M7.1 – September 19, 2017



3

Who could use  
earthquake early warning?

## Reducing Falling hazards



Loma Prieta >50% injuries  
were linked to falls



## Northridge

>50% injuries were  
non-structural (falling)  
hazards

if everyone received a few seconds warning

if everyone dropped, took cover, and held on

then early warning could reduce injuries by 50%

Cost of injuries in Northridge: \$2-3 billion

Shoaf et al, 1998; Porter et al, 2006

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**Who could use**  
earthquake early warning?

Big-box store



Photo Eduardo Miranda / Michael Rowe  
M6.3 Christchurch, NZ - Feb 22, 2011

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**Who could use**  
earthquake early warning?

Santiago airport terminal



Photo Eduardo Miranda  
M8.8 Maule, Chile - Feb 27, 2010

6



## Who could use earthquake early warning?



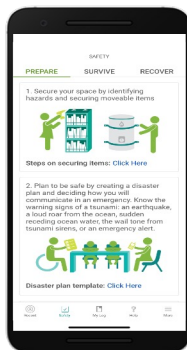
Kawasaki Concert Hall



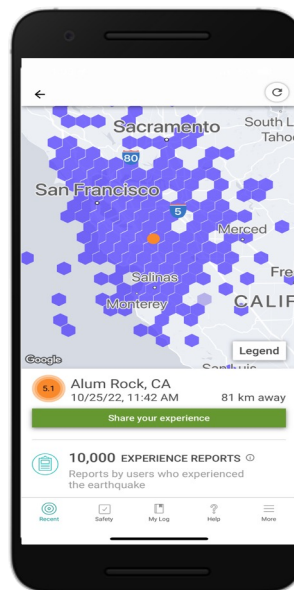
Photo Eduardo Miranda  
M9.0 Tohoku, Japan – Mar 11, 2011

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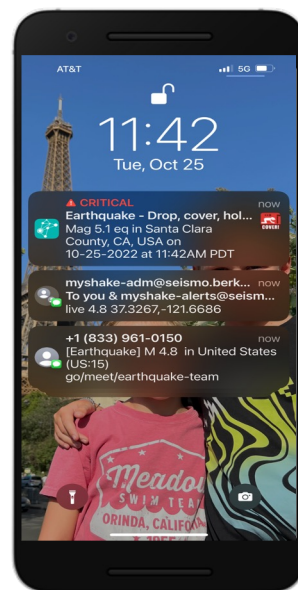
## How do I get alerts?



Safety information and  
global earthquakes



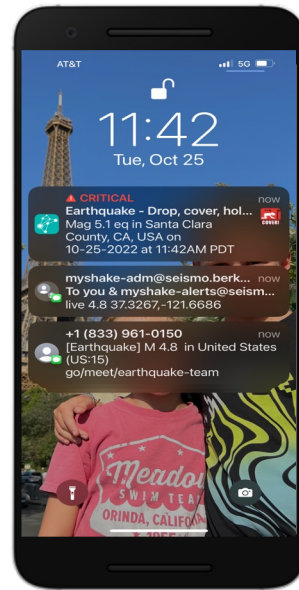
Detailed damage  
information reported  
by users



Early warning delivery  
ShakeAlert: CA+OR+WA

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## How do I get alerts?

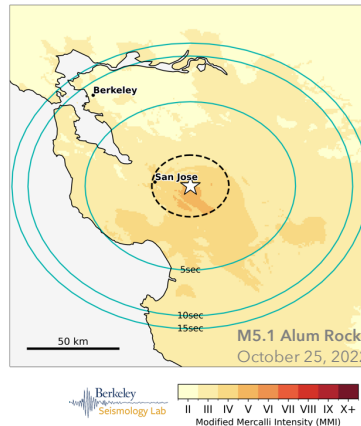


## When does MyShake alert?

Magnitude 4.5+  
Shaking intensity 3+

Goal:  
alert **most**  
people who  
**feel shaking**

but it will  
never be perfect!

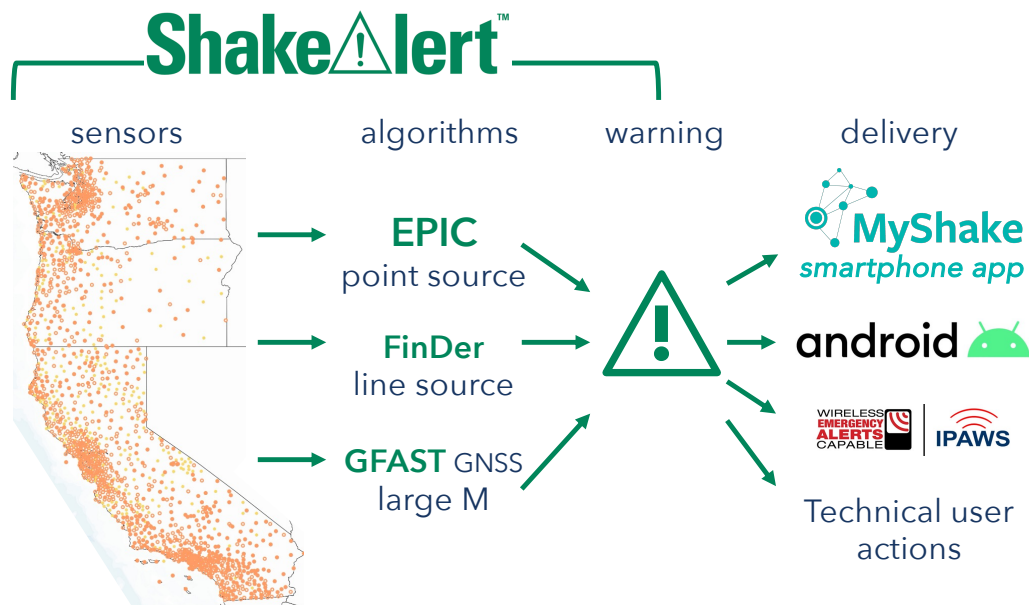


Early warning delivery  
ShakeAlert: CA+OR+WA

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## Where do the alerts come from?

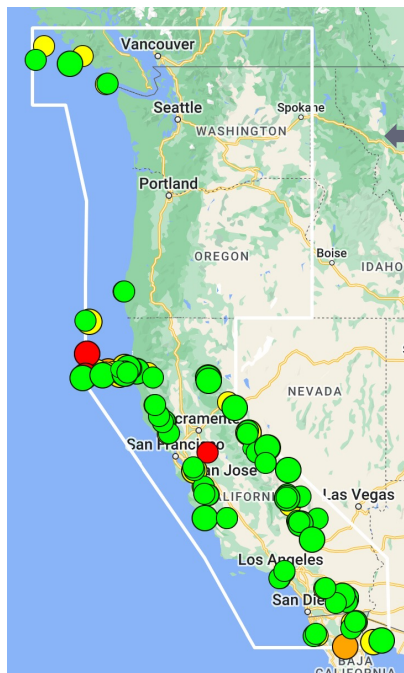
### Sensors to people



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How good is the system?

# ShakeAlert™ Performance

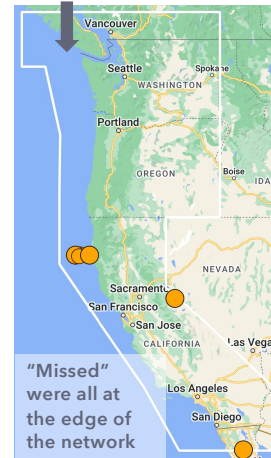
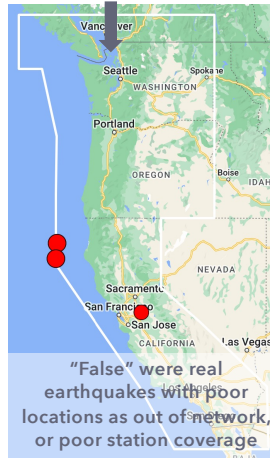


~3.5 years of operation:  
Public alerts: Magnitude 4.5 and greater  
from 10/19/19 to 5/24/23

89 True alerts

3 False

8 Missed

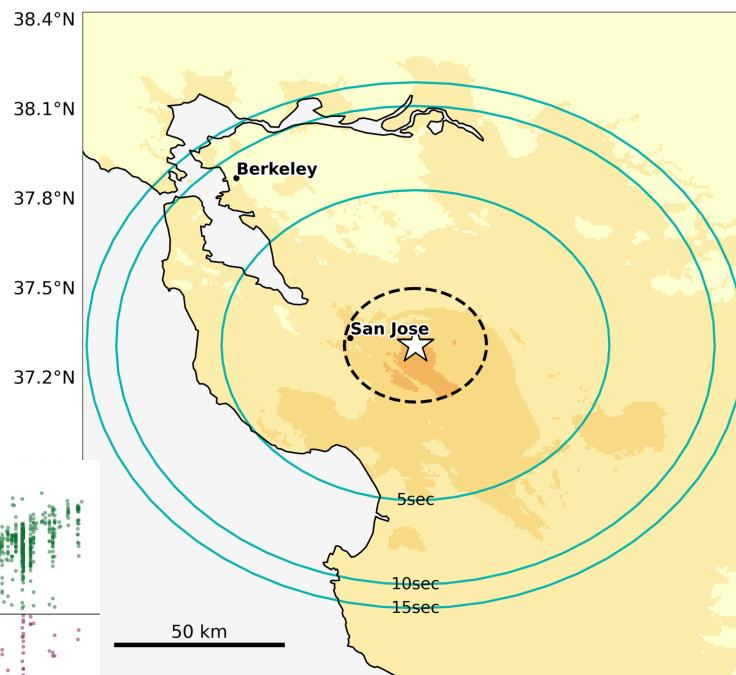
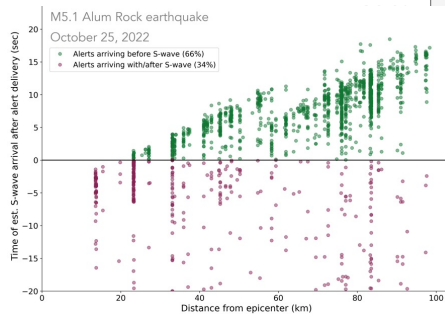


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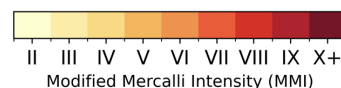
## MyShake Warning times

M5.1 Alum Rock  
October 25, 2022

Felt zone (MMI 3+)  
up to 15 sec  
warning



Berkeley  
Seismology Lab



Savas Marcou

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**MyShake**  
Warning times

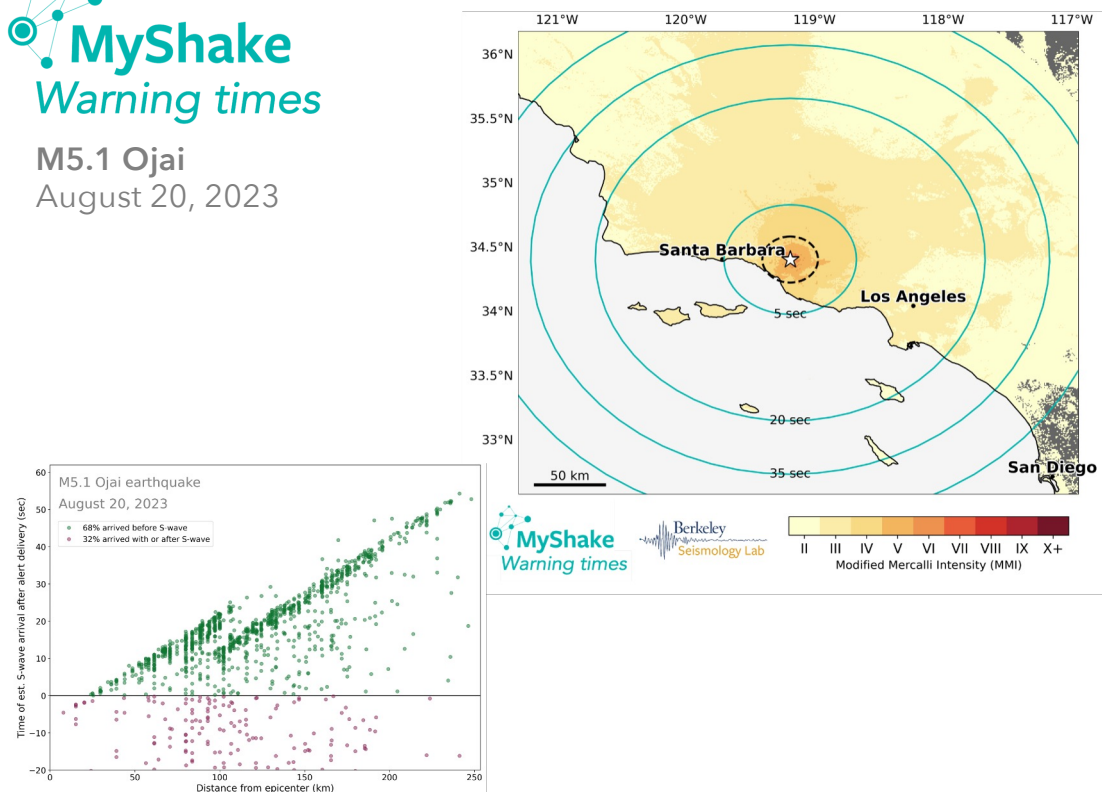
M5.1 Alum Rock  
October 25, 2022



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**MyShake**  
Warning times

M5.1 Ojai  
August 20, 2023



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# MyShake - Ojai Event

I felt like a prophet!  
★★★★★

Sun  
jodiesq

I downloaded this app after the last earthquake in my area. 20 min ago I got a very clear alert with graphics "EARTHQUAKE WARNING: DROP! COVER! HOLD!" Had time to read it, hesitate (thinking "these don't actually work, do they?"), then get out of bed and yell across the house to my kids BEFORE the chandelier started to SWING from the quake. The epicenter was a 5.5 and we are 60 miles away but I actually hesitated before reacting and still had that much time. Getting everyone in my family on this app and I will NOT hesitate to react next time!

Slow but happy to have it.  
★★★★☆

Sun  
Sbmargo

I just got the alert for the first time after feeling what felt like a 4(+-). It came after the shaking stopped, so I debated whether I should get under the table or not. What would really be good is if they could make it work on the Apple Watch. If I were away from my phone, I wouldn't get an alert at all.

Worked as expected  
★★★★★

Sun  
Seal Beach Teacher

This app worked as expected today for a quake in Ojai California. A warning was received prior to shaking.

Thank you!  
★★★★★

Sun  
mrs.alicat

This just loudly announced a 6.0 earthquake is about to occur, take cover and prepare. Seconds later it did. Amazing app, we have kids.

Great! Improved!  
★★★★★

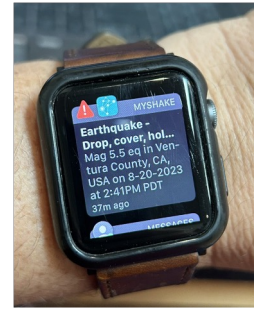
Sun  
Eirajel

I'm so happy that they can prove this and updated it it can really save lives. Just got a warning about the earthquake in Ventura, California is about an hour drive from here but still I felt a little bit here where I'm living in Huntington Beach!! and just the morning was So amazing! So necessary if you live in California especially! thank you thank you thank you!! Please keep up the good work!

Works!!  
★★★★★

Sun  
BooksMcGee

We were in bed watching a movie when the app sounded the alarm to drop and cover due to an earthquake in Venice, Ca. We felt nothing and I thought it was an error when two seconds later we feel the shaking. Of all my friends' apps, this was the only one that warned ahead of the quake.



Worked 15-20sec before news alert  
★★★★★

Sun  
Jimmy D.

So today in Los Angeles we had our 1st hurricane (or less) in a century. So I expected so see a weather alert... nope, it was a alert that & actually spoke that said something to the effect of "earthquake detected, seek shelter." So I did, but felt nothing. About 20 seconds as I was watching the news, they interrupted their story & said [more](#)

Worked as promised  
★★★★★

Sun  
Jermiration

It worked as promised and gave me a few seconds to prepare for an earthquake.

Failed Me!  
☆☆☆☆☆

Sun  
Maui Lvr

I have had the MyShake app since it first came out. Today's earthquake in Ojai the app failed to warn me and I am very close to the epicenter. I have all of the setting set up correctly. Very disappointing!!

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# MyShake - Ojai Event

Great early warning earthquake app!  
★★★★★

Mon  
Ichibanjo

I received a MyShake alert on 8/20, 30 seconds before I felt the Ventura earthquake in the Los Angeles area.

Worked perfectly yesterday!  
★★★★★

Mon  
Highdobb

I recently downloaded this app when prepping an earthquake kit. Yesterday was tropical storm Hilary in SoCal and this app notified me a good 10 seconds before the earthquake hit and gave me enough time to get to safety and text a friend before I felt it. I received the "amber alert" on my phone from the city basically as the earthquake hit. This app gave me valuable time, and much sooner than the city/state was able to.

Early alert works!  
★★★★★

Sun  
\_Jerry\_

Today I was hanging out with the family watching movies as hurricane Hilary was passing by OC with heavy rain and winds, when all of a sudden I got an alert in my apple watch from an app I've never heard/seen before, so it caught my attention right away and it was something like "brace yourself, earthquake with Ventura epicenter" [more](#)

It works  
★★★★★

Sun  
Wilkyway1979

Today we got a warning. We literally had one minute to collect ourselves, pick a safe place in the house, and brace ourselves. We didn't feel it but my mom did and called us freaking out. So this app is the difference between being able to get through it calmly or being surprised with an earthquake. Great job guys!

Alert Received For Ojai EQ 8/20  
★★★★★

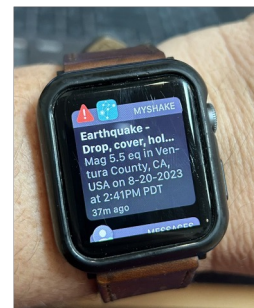
Sun  
VampyrGoyl

8/20/23 was the first non-test alert I ever received on this app for the earthquake in Ojai. The alarm activated and stated "shaking expected" a few moments before I felt it. So it works! Which is a nice non-destructive way to see it work in real time!

Lovely, easy interface — and it worked for my friend!  
★★★★☆

Sun  
SobaCat

We just had an earthquake here in California (on top of our first Hurricane Alert since 1930's) and your app enabled my friend a few second's notice. My Shake Alert LA app sent me a text several seconds AFTER the fact and it took minutes to refresh and show me the epicenter. Needless to say, I've added your App to all our phones



Alerts Work  
★★★★★

Sun  
meticore

The app alerted me several seconds before the Ojai, CA quake today.

Just gave an early warning  
★★★★★

Sun  
Aptapathy

Haven't had the chance to properly review this because there haven't been any earthquakes, but we just had one and this went off with an audible alert several seconds before we felt the shaking. Truly amazing!

Worked as intended today!  
★★★★★

Sun  
disgruntled but not white

Most of the time I'll just get alerts for earthquakes around the world. Other times about earthquakes nearby with a unique sound. But today I got an alert I have never heard before followed by the words "earthquake, earthquake". Then maybe like 3 seconds later we got hit from an earthquake in Ojai which is about 40 miles away. I can see how this would come in handy during the big one.

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## Over-alert

M4.2 Isleton

October 18, 2023

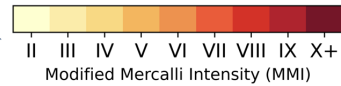
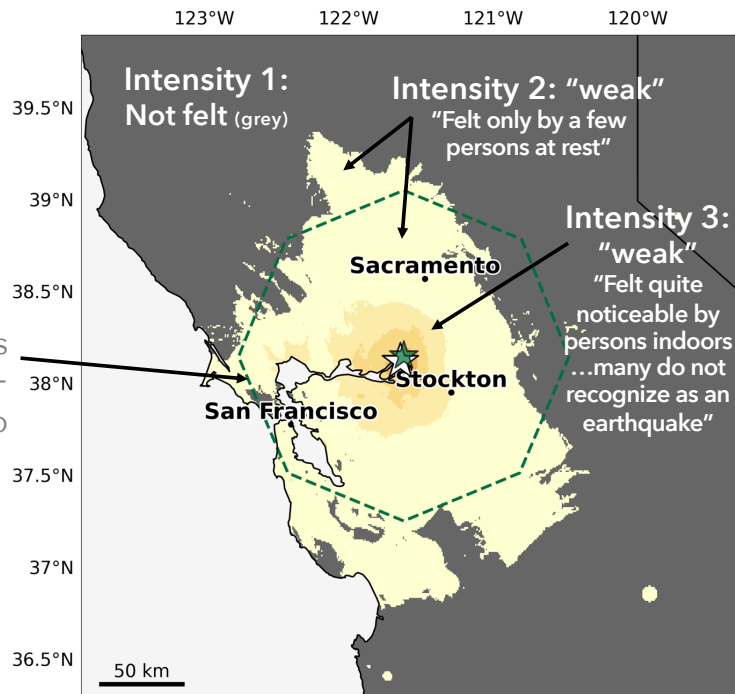
### ShakeAlert

Initial M5.7, final M4.4

Alert across  
Bay Area +  
Sacramento

*How did you feel  
about getting this  
alert?*

M4.24 Isleton Earthquake, October 18, 2023  
Max Contour Received from ShakeAlert and USGS ShakeMap



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## No-alert

M3.7 "SFO" earthquake

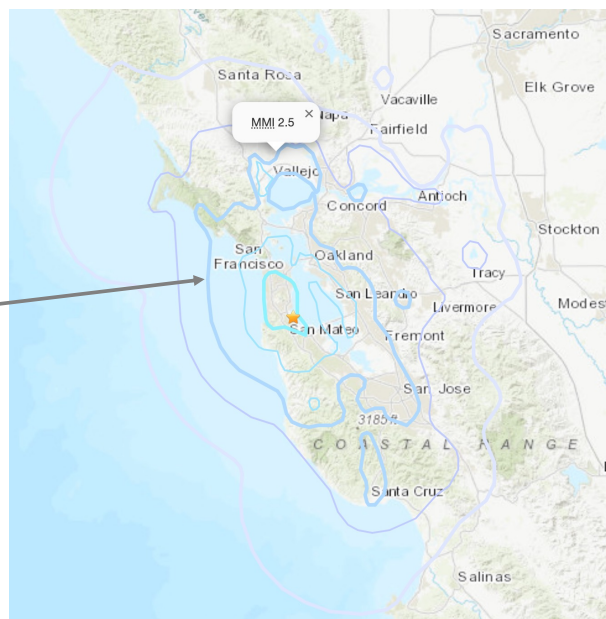
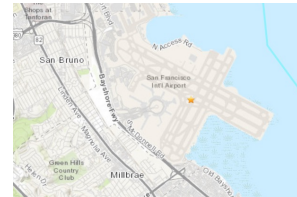
October 28, 2023

**ShakeAlert:** M3.7

...but felt  
across much of  
the Bay Area

Intensity 3:  
target alert region  
for M>4.5 events

*How did you feel  
about not getting  
this alert?*



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## ShakeOut-alert

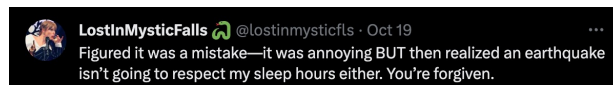
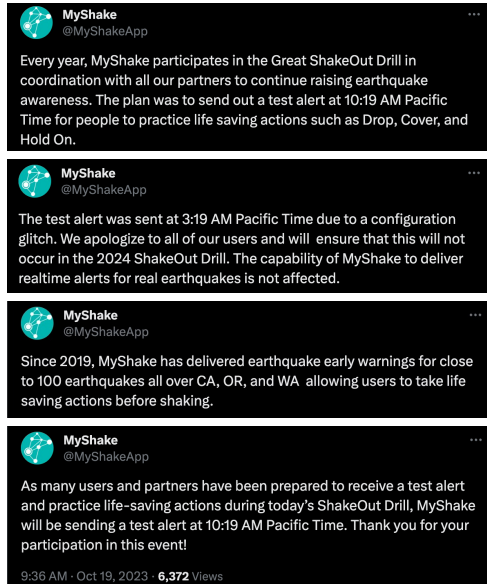
October 19, 2023

10:19am ...and 3:19am!

Very unfortunate manual error  
Processes have been updated to  
prevent the same mistake again

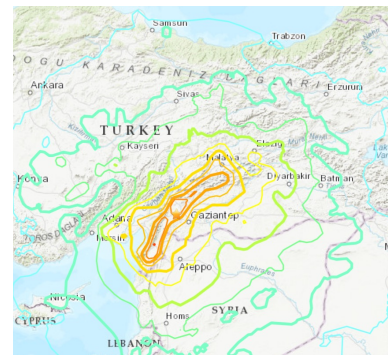
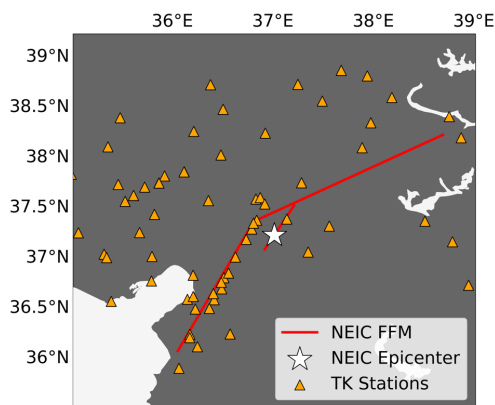
Also, updated alert notification  
to be not a man's voice

### Reactions?



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## EPIC + MyShake in M7.8 Türkiye replay



### EPIC

1<sup>st</sup> alert: **M6.1** at **5.0 sec** after origin time  
max alert: **M6.4** at **9.0 sec**

AFAD  
seismic  
waveforms



EPIC  
algorithm  
(no modifications)



MyShake  
delivery

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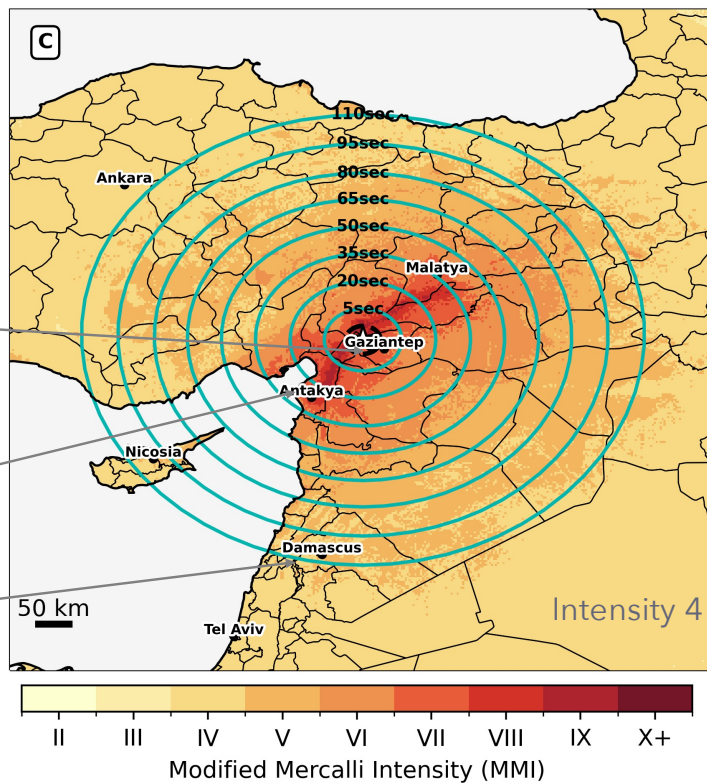


M7.8 Türkiye  
February 6, 2023

No warning before  
the 1<sup>st</sup> S-wave  
(25 km radius;  
MMI 8+)

Antakya MMI 9  
**20 sec warning**

Max warning, MMI 4  
**110 sec**



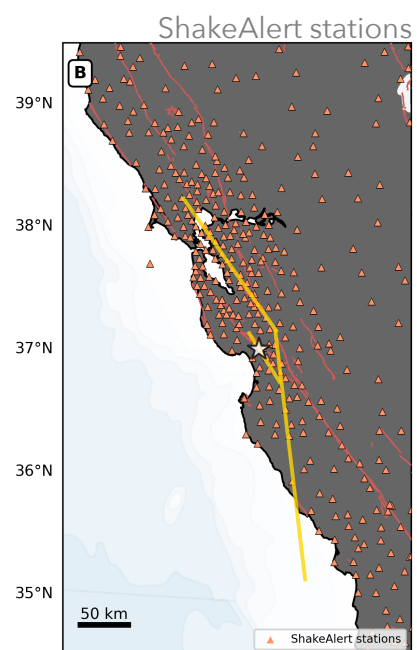
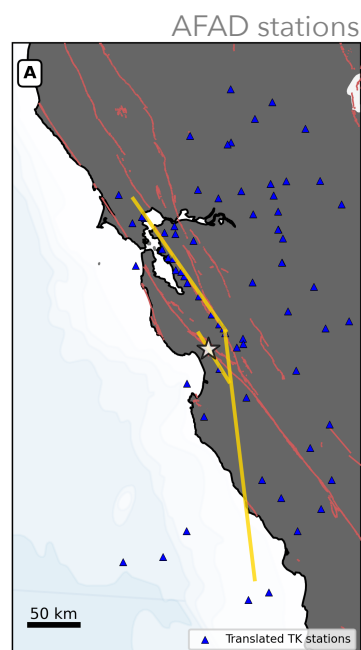
Marcou et al., in review

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## M7.8 Türkiye in California

Translate  
Eastern Anatolian  
faults and stations  
to California

Epicenter on  
San Andreas  
rupturing onto  
Calaveras and  
Hayward  
Faults



Marcou et al., in review

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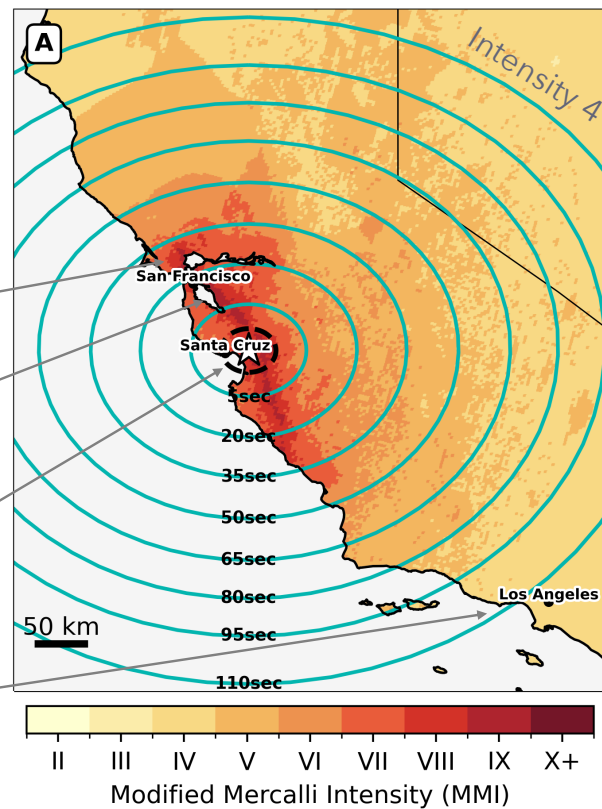
## M7.8 Türkiye in California

North Bay MMI 8-9  
**20-30 sec warning**

South Bay MMI 8-9  
**10-20 sec warning**

No warning  
before the 1<sup>st</sup> S-wave  
(25 km radius; MMI 8+  
**Santa Cruz**)

Max warning, MMI 4  
**110 sec Los Angeles**

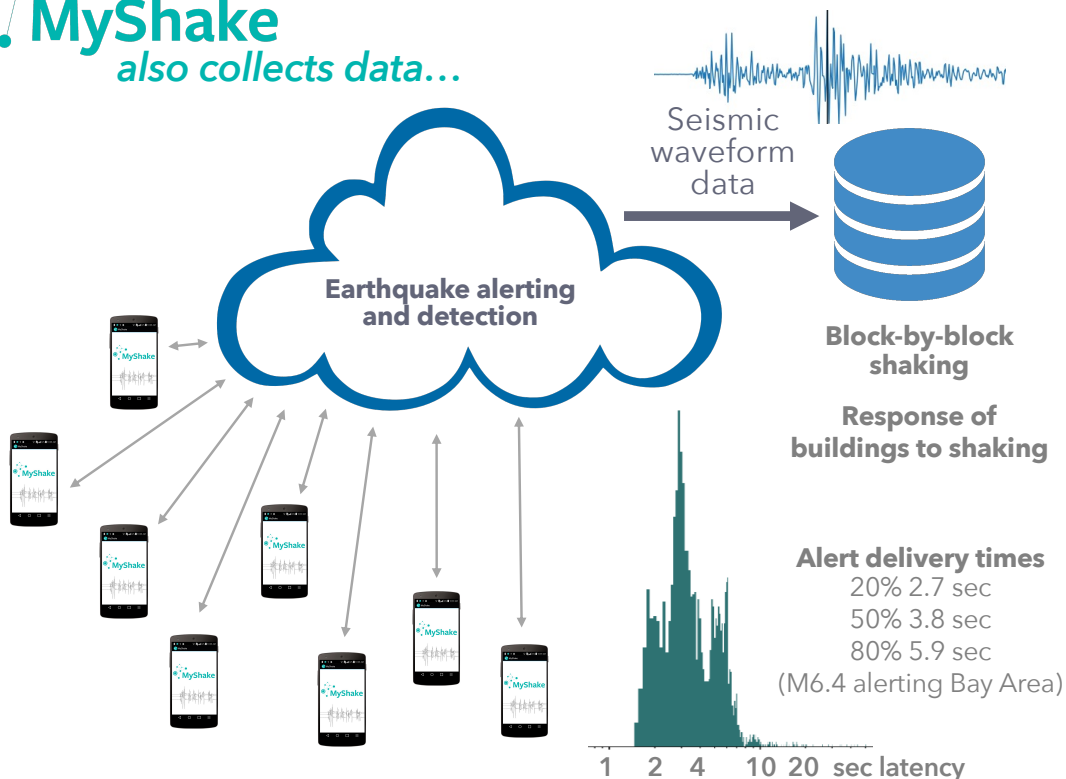


Marcou et al., in review

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**MyShake**  
also collects data...



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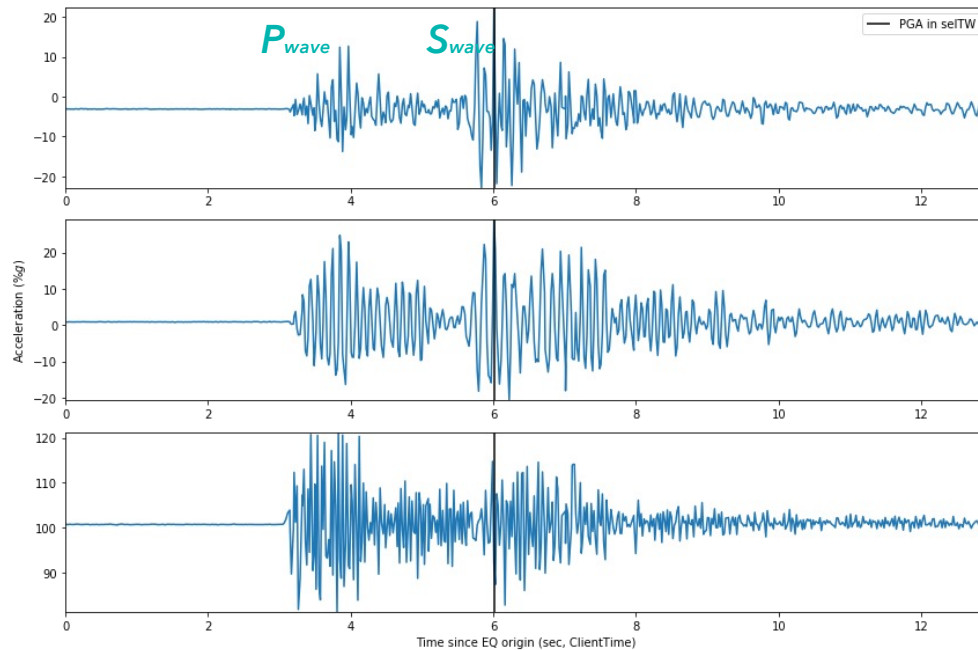


**MyShake**

also collects waveforms...

M4.5 Los Angeles

3.4 km epicentral distance



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**MyShake**  
engaging the public

A virtuous circle?

societal  
engagement

**Scientific  
discovery**

shaking amplification  
earthquake rupture physics  
building response

**Citizen  
science**

**Hazard  
reduction**

earthquake  
awareness,  
education and  
preparedness

**User  
application**

earthquake early  
warning

...that continues to grow

*Please help up expand the use of MyShake*

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# FEMA Earthquake Mitigation Resources and Opportunities

***Anne Rosinski***

*Earthquake Program Manager, FEMA Region 9*

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## Q&A

To be notified of future events and recordings, join ECA (free!):  
[EarthquakeCountry.org/join](https://EarthquakeCountry.org/join)

Questions? [info@earthquakecountry.org](mailto:info@earthquakecountry.org)

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# ECA Bay Area Mini Awards

## *Reports from 2023 Recipients & Update about 2024 Program*

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## ECA Mini Awards

- **Purpose:** provide materials for ECA member projects that improve earthquake resilience by promoting mitigation, awareness, and preparedness, and multiply impact of programs
- **Purchases:** \$500 to \$1000 each
- **Eligibility:** Proposals for earthquake mitigation and education activities
- **Pre-defined packages:** Sets of materials will be available, however you can also customize them or propose other items

  
THE DISASTER SUPPLY PROFESSIONALS

**Secure WORKPLACE \$500 Package**

ITEM #	ITEM NAME	IMAGE	QUANTITY
4160-64	Furniture Strap		15
4740	File Cabinet Strap		15
5040	Bookcase Strap		15
4173	Home Electronics Safety Strap, Black		30
4338	A-Maze-ing Picture Hook, 4 Pack		10
4250	Kitchen & Cabinet Door Latch, 4 Pack		10
88111	QuakeHOLD! Museum Putty		10

- **2024 Awards:** Apply in mid-January @ [EarthquakeCountry.org/miniawards](https://EarthquakeCountry.org/miniawards)

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## ***ECA Bay Area Mini 2023 Recipients***

San Francisco Community College Police Department  
Thrive Alliance of Nonprofits for San Mateo County  
Highlands CERT  
Japantown Community Benefit District  
Los Altos Block Action Team 33  
Hearst-and-Short Neighborhood Group (Berkeley)

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San Francisco Community College Police Department



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# EARTHQUAKE SAFETY

If you feel shaking or get an alert

## IF POSSIBLE...

**DROP** down onto your hands and knees.  
**COVER** your head with one arm and hand.

- Sturdy table or desk nearby: crawl under for shelter.
- Or crawl next to an interior wall.
- If you use a cane, keep it with you to help get back up.

**HOLD ON!** until shaking stops.

- Under shelter: be ready to move if shelter shifts.
- No shelter: cover head with both arms & hands.

If not possible to drop down:

- Sit and bend over, then cover your head with both arms & hands.
- If you use a wheelchair or walker, **LOCK** the wheels or set the brake.
- **COVER** your face with your arms or a nearby object.
- **HOLD ON!** until shaking stops.

## IN A LECTURE HALL

**DROP** down in front of your seat or lean over as much as possible, **COVER** your head with your arms, and **HOLD ON!** until shaking stops.

## IN A LABORATORY

**IF POSSIBLE** shut off open flames or gas valves. If you're close to dangerous chemicals or other substances, carefully move to a safe distance, then **DROP**, **COVER**, and **HOLD ON**.

## IN A MULTI-STORY BUILDING

**DROP**, **COVER**, and **HOLD ON**. Avoid windows and other hazards. Do not use elevators or stairs during shaking.

## OUTDOORS

Move to a nearby open space if you can safely do so; avoid power lines, trees, signs, buildings, vehicles, and other hazards. Then **DROP**, **COVER**, and **HOLD ON**.

## DON'T MOVE DURING SHAKING

Do not run outside or to other rooms during shaking. Once it stops, walk out slowly, watching for anything that could fall during aftershocks.

## REPORTING EMERGENCIES

Call Campus Police at (415) 239-3200 for ALL EMERGENCIES using campus telephones or cellphones. Look for campus emergency telephones located in buildings around campus. 911 can also be used to report an emergency.

# DURANTE UN TERREMOTO

Si siente un sismo o recibe una alerta



## SI ES POSIBLE

**AGÁCHASE**  
**CÚBRASE**

**SUJÉTASE**

Si no puede agacharse:

en el piso, sobre sus manos y rodillas.  
la cabeza con un brazo y una mano.

- Mesa o escritorio cerca: gátee debajo para protegerse.
- O arástrese hacia una pared interior.
- Si usa bastón, manténgalo cerca para poder levantarse.

hasta que deje de temblar.

- Con **refugio**: prepárese para moverse junto con su refugio.
- Sin **refugio**: cúbrase su cabeza con ambos brazos y manos.

## EN UN AUDITORIO

**AGÁCHASE** delante de su asiento, o inclínese lo más que pueda. **CÚBRASE** la cabeza con los brazos, y **SUJÉTASE** hasta que deje de temblar.

## EN UN LABORATORIO

**SI ES POSIBLE** apague cualquier flama o cierre las válvulas de gas. Si está cerca de químicos peligrosos u otras substancias, aléjese con precaución a una distancia segura, y luego **AGÁCHASE, CÚBRASE, y SUJÉTASE**.

## EN UN EDIFICIO ALTO

**AGÁCHASE, CÚBRASE, y SUJÉTASE**. Evite ventanas y otros peligros. No utilice elevadores ni escaleras durante el sismo.

## EXTERIORES

Muévase a un espacio abierto con cuidado; evite cables eléctricos, árboles, edificios, vehículos, y otros riesgos. Luego, **AGÁCHASE, CÚBRASE, y SUJÉTASE**.

## NO SE MUEVA EN EL SISMO

No salga corriendo, ni vaya a otros cuartos durante el sismo. Yo que pare, me quede tranquilo, cuidándose cosas que puedan caer en una réplica.

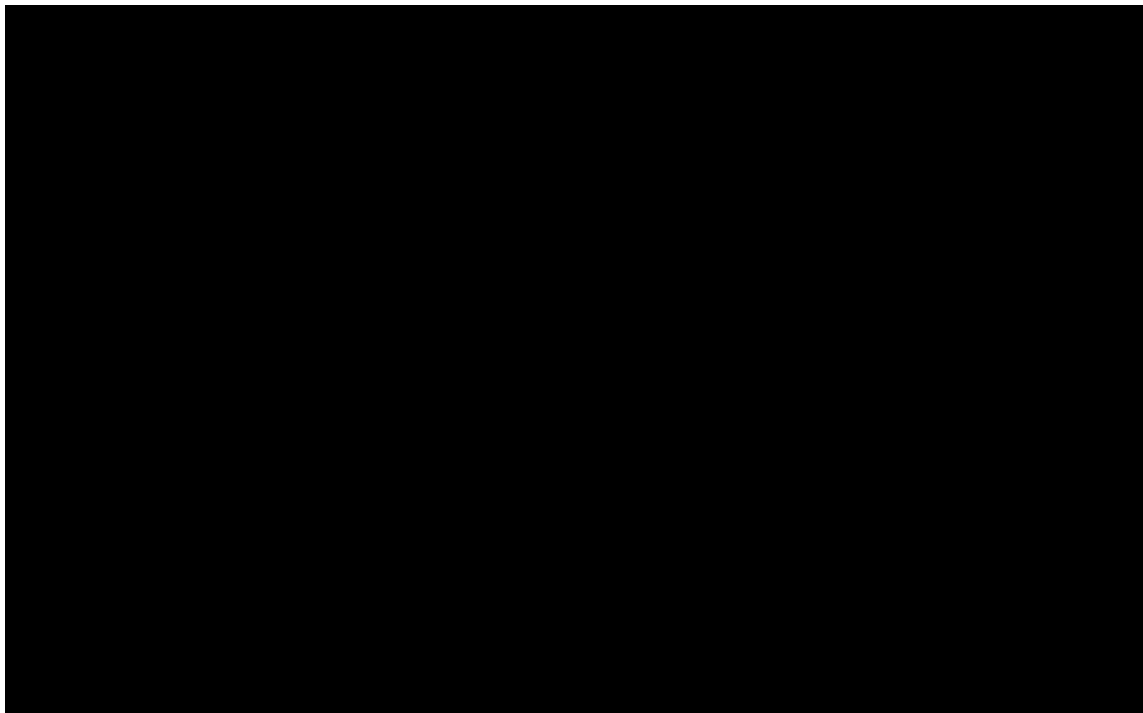


## REPORTE DE EMERGENCIAS

Lláme a la Policía del Campus al (415) 239-3200 para CUALQUIER EMERGENCIA, usando los teléfonos del campus o celulares. Burque los teléfonos de emergencia ubicados en los edificios alrededor del campus. El 911 también puede usarse para reportar una emergencia.




# Thrive Alliance of Nonprofits for San Mateo County



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# Japantown Community Benefit District

***Brandon Quan***  
*Deputy Director*

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## Share the Gift of Earthquake Safety

Have you “secured your space” for earthquakes? Have your family, friends, and colleagues? It’s the season of giving, and helping those you care about be safer before, during and after earthquakes is a great way to show you care.

*Will be announced SOON:* Visit **EarthquakeCountry.org/giftofsafety** to receive 25% discounts on earthquake safety fasteners for furniture, TVs, and other items, plus other emergency supplies!

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# Q&A

To be notified of future events and recordings, join ECA (free!):  
[EarthquakeCountry.org/join](https://EarthquakeCountry.org/join)

Questions? [info@earthquakecountry.org](mailto:info@earthquakecountry.org)

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## Earthquake Anniversaries (San Simeon 20th, Northridge 30th, Loma Prieta 35th) plus Quake Heroes Events

***Mark Benthien***  
ECA Executive Director

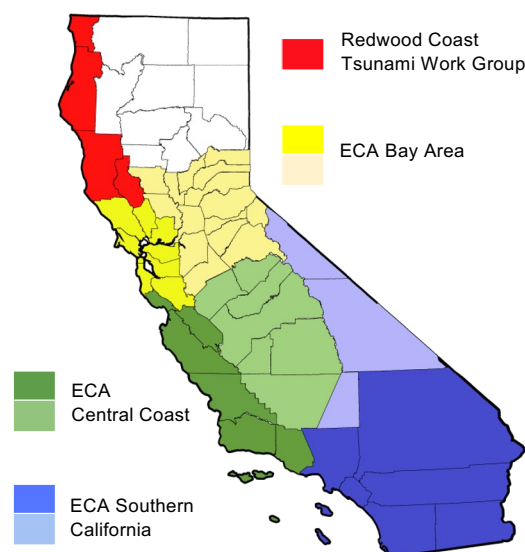
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# Earthquake Country Alliance

- First meeting: June 16, 2003 @ USC
  - SCEC invited key regional partners that provide earthquake and preparedness information
  - Planned for the 10th Anniversary of Northridge
  - Launched first version of EarthquakeCountry.org
  - Became statewide in 2009, along with ShakeOut
- 4000+ *Public-Private-Grassroots* leaders
- *Regional Alliances* organize meetings and outreach activities
- California's Office of Emergency Services provides FEMA NEHRP funding for ECA earthquake mitigation activities
- USC's Southern California Earthquake Center (SCEC.org) administers ECA



Join: [EarthquakeCountry.org/join](https://EarthquakeCountry.org/join)



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## ECA Statewide Activities

Develop Messaging and Resources:

[EarthquakeCountry.org](https://EarthquakeCountry.org)  
[EarthquakeCountry.org/resources](https://EarthquakeCountry.org/resources)  
[Terremotos.org](https://Terremotos.org)



Support Tsunami Preparedness Week:

[TsunamiZone.org/california](https://TsunamiZone.org/california)



**March  
27-31,  
2023**

Created and Coordinate  
The Great California ShakeOut:

[ShakeOut.org/california](https://ShakeOut.org/california)



**Oct. 19  
in 2023**

Webinars & other events

[EarthquakeCountry.org/calendar](https://EarthquakeCountry.org/calendar)

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# Seven Steps To Earthquake Safety

BEFORE

1. Secure Your Space



2. Plan To Be Safe



3. Organize Supplies



4. Minimize Financial Hardship



DURING

5. Drop, Cover, and Hold On



6. Improve Safety



AFTER

7. Reconnect and Restore



EarthquakeCountry.org/sevensteps

Terremotos.org/sietepasos

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## Updated Materials in 16 Languages



EarthquakeCountry.org/languages

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# San Simeon Earthquake 20<sup>th</sup> Anniversary

To commemorate the 20<sup>th</sup> Anniversary of the December 22, 2003 M6.6 San Simeon earthquake, ECA Central Coast is hosting a special webinar about the science of what happened, the immediate response, major impacts, and how the region recovered.

December 19, 1-2pm PT

Registration open later today:

**[EarthquakeCountry.org/sansimeon20](https://EarthquakeCountry.org/sansimeon20)**

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## Northridge 30th Anniversary Campaign

- SCEC/ECA is leading the development of a year-long educational campaign to commemorate the 30th anniversary of the Jan. 17, 1994, Northridge earthquake
- Purpose: increase awareness about earthquake hazards, encourage preparedness and mitigation, and inform about self-protective actions and response skills.
- Grant funding and sponsorships, including:
  - Cal OES
    - California Seismic Safety Commission
    - Earthquake Program via FEMA NEHRP Funding (1/20 CSUN Quake Heroes event)
    - California Earthquake Authority
  - Optimum Seismic
  - Other public/private partners.
- Cornerstone will be large “Quake Heroes Expo” events.



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- Stories of people who experienced the 1994 Northridge earthquake in Los Angeles, and how they helped others
- Key moments tied to the *Seven Steps to Earthquake Safety*
- Scientists and engineers share how they informed the public about what happened, and learned key lessons for reducing future losses (tuck-under parking buildings are featured)
- Encourages viewers to become trained (CERT, CPR, etc.) so they are prepared to help others
- A model for communicating risk and motivating whole community preparedness and mitigation
- Production sponsored by FEMA, NSF, USGS, Structural Engineers Association of Southern California, Simpson Strong-Tie, Hero in You Foundation, Safe-T-Proof, and others



**RETROSPECTIVE  
INTERVIEWS**



**ARCHIVAL NEWS  
FOOTAGE**



**CINEMATIC  
RE-ENACTMENTS**

## THE REAL-LIFE HEROES OF OUR FILM



**MIKE**  
Photographer

A photographer who risks his life to rescue several trapped neighbors, one of whom he ends up marrying. He becomes an overnight celebrity, praised for his heroics, and meets the president.



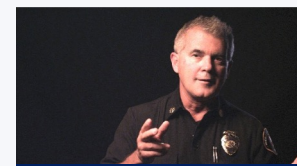
**ANA**  
Nurse

An off-duty nurse who is trapped in an apartment with her daughter until a neighbor kicks down their door. She then leaves to help evacuate the patients of a badly damaged hospital.



**JOE**  
Reporter

The only reporter in LA to go live on-air within seconds of the shaking. His first time ever anchoring, Joe sets a TV ratings record, then goes into the field to report on major incidents.



**LARRY**  
Fire Battalion  
Chief

The Los Angeles County Fire Battalion Chief who acts as his department's eyes-in-the-sky from a helicopter: surveying damage, directing search teams and updating command center.



**BUFFY**  
Art  
Therapist

A young newlywed who has trouble finding clothes after the quake jolts her awake. She helps free several trapped neighbors, comforts the grieving, and is featured on *World News Tonight*.



**REY**  
Firefighter  
EMT

An EMT who crawls into a collapsed parking structure to care for a man who is pinned under concrete. The eight-hour rescue is broadcast on live TV and is complicated by aftershocks.



**JACKIE**  
Reverend

The director of outreach for one of the largest churches in LA. She leads a major long-term recovery effort for those affected by the quake within the Inglewood/South Central community.



**KEN**  
Geoscientist

A young scientist who experiments with GPS technology to map earthquakes. He is able to use this new science to model the fault rupture faster than seismic data, for the first time ever.

## 2023 Quake Heroes Events

- International Association of Emergency Managers (Region IX) Conference (Garden Grove, March)
- Featured (by invitation) at FEMA's 25th Annual Emergency Management Higher Education Symposium (Maryland, June)
- Shared at the International Association of Emergency Managers conference (Long Beach, November)
- **YMCA Westchester Quake Heroes Expo (December 1)**

QUAKE HEROES

★ WESTCHESTER FILM PREMIERE & EXPO ★

FRIDAY, DECEMBER 1  
6PM - 9PM

Westchester Family YMCA Annex  
8020 Alverstone Ave  
Los Angeles, CA 90045

Scan the QR Code to Register!

Watch an inspiring film based on true stories! Ride an earthquake simulator!  
Discounts on earthquake preparedness supplies! Sign up for safety trainings!

the Y | SC/E/C | Watch the Trailer | ROMASCORE

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## Quake Heroes Expos

- Screenings for large groups
- May include panel discussion before the film with local leaders, scientists, engineers, etc.
- After viewing the film, attendees can immediately take actions at a *Seven Steps to Earthquake Safety* resource and information fair where they can:
  - register for CERT and other trainings
  - Receive free or low-cost disaster supplies and earthquake safety fasteners
  - learn about earthquake insurance and retrofitting
  - sign up for alerts
  - experience an earthquake simulator
- Learn more and schedule a discussion at [QuakeHeroes.org](https://QuakeHeroes.org)!



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# NR30: Key Components

- **Quake Heroes Expos** (many events across SoCal and statewide, planned with diverse and vulnerable communities (seniors, low-income neighborhoods, in multiple languages) as well as for businesses, faith-based organizations, community centers, government agencies, etc. Each event will feature our motivational film and a preparedness fair with booths for each of the *Seven Steps to Earthquake Safety* (including sign-ups for free trainings and free or low-cost supplies). Interested? Visit [QuakeHeroes.org](https://QuakeHeroes.org).
  - **Additional Quake Heroes Film Screenings** (smaller venues with essential resources for preparedness - LA County libraries, etc.
  - **Structural Engineers Association planning Symposium at Caltech on January 17**
  - **Northridge 30th Anniversary Commemoration on January 17, 2024** (Major public and media event, possibly at CSUN with surrounding communities)
  - **"Seven Steps" Presentations** (to community groups, houses of worship, small business associations, etc., in multiple languages, covering earthquake preparedness, mitigation, and response).
  - **Social Media Toolkit** (Development of a multi-lingual comprehensive social media toolkit for partner organizations to promote campaign messaging).
  - **News Media Outreach and Coverage** (Press releases about Campaign activities and earthquake-related topics and to generate additional public awareness).
  - **Presentations/Booths** at sector-based conferences and other venues
  - **Evaluation of key activities**
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## Loma Prieta Earthquake 35<sup>th</sup> Anniversary

October 17, 2024

(2024 International ShakeOut Day!)

What is being planned?

What could be planned - before?

What could be planned - on Oct. 17?

What could be planned - after? How long?

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# How to Collaborate within the ECA

## 1. Join the ECA (free!)

[EarthquakeCountry.org/join](https://EarthquakeCountry.org/join)

## 2. Participate with an ECA Regional Alliance

Attend quarterly workshops (or host one!) [EarthquakeCountry.org/calendar](https://EarthquakeCountry.org/calendar)

Serve on your region's Coordinating Committee

Plan local events, recruit members, organize ShakeOut activities, etc.

Learn more: [EarthquakeCountry.org/alliance](https://EarthquakeCountry.org/alliance)

## 3. Serve on an ECA Sector-Based Committee

Public Sector

Healthcare

Business

Higher Education

Accessibility

PreK-12 Education

Non-Profit & Faith-Based

Learn more: [EarthquakeCountry.org/committees](https://EarthquakeCountry.org/committees)

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# How to Collaborate within the ECA

## 4. Collaborate via an ECA Outreach Bureau

*News and Social Media Bureau-* coordinate local and statewide earthquake news & events

*Participation Bureau-* recruit and support your area's ShakeOut and Tsunami Week registrants

*Events Bureau-* train and arrange speakers and staffing for preparedness fairs, conference booths, etc.

Request a presenter or information table: [EarthquakeCountry.org/events](https://EarthquakeCountry.org/events)

Email [info@earthquakecountry.org](mailto:info@earthquakecountry.org) to learn more.

## 5. Use, share, and help promote our resources and activities (link from your site, etc.)

Seven Steps to Earthquake Safety- [EarthquakeCountry.org/sevensteps](https://EarthquakeCountry.org/sevensteps)

Guidance in Multiple Languages- [EarthquakeCountry.org/languages](https://EarthquakeCountry.org/languages)

Workshops, webinars, & other events- [EarthquakeCountry.org/calendar](https://EarthquakeCountry.org/calendar)

ECA Mini Awards- [EarthquakeCountry.org/miniawards](https://EarthquakeCountry.org/miniawards)

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# Q&A

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Questions? [info@earthquakecountry.org](mailto:info@earthquakecountry.org)

## Short Announcements from Attendees

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## Participant Take-Aways

**What is something that you:**  
learned  
will do  
will use  
will tell others

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**Open Discussion  
& Networking**

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# Connect with ECA Bay Area

- [EarthquakeCountry.org/bayarea](https://EarthquakeCountry.org/bayarea)
- [bayarea@earthquakecountry.org](mailto:bayarea@earthquakecountry.org)
- [Terremotos.org](https://Terremotos.org)
- [Twitter.com/eca](https://Twitter.com/eca)
- [info@earthquakecountry.org](mailto:info@earthquakecountry.org)

