

The Great California ShakeOut:

How to Drop, Cover and Hold On (or other recommended actions)
in a Major Rossmore Earthquake

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Southern California Earthquake Center (SCEC.org)

Federally-funded (NSF/USGS/DOE/FEMA/NASA) geoscience research center based at the **Univ. of Southern California** involving 1000+ scientists and students at more than 90 institutions worldwide

SCEC's *Communication, Education, and Outreach* Program manages:

- **Great ShakeOut Earthquake Drills** (ShakeOut.org) (15th Anniversary)
- **Earthquake Country Alliance** (20th Anniversary) (EarthquakeCountry.org; California statewide public-private-grassroots partnership)
- **TsunamiZone.org** (regional tsunami exercises)
- **Geoscience Internships & career development programs**



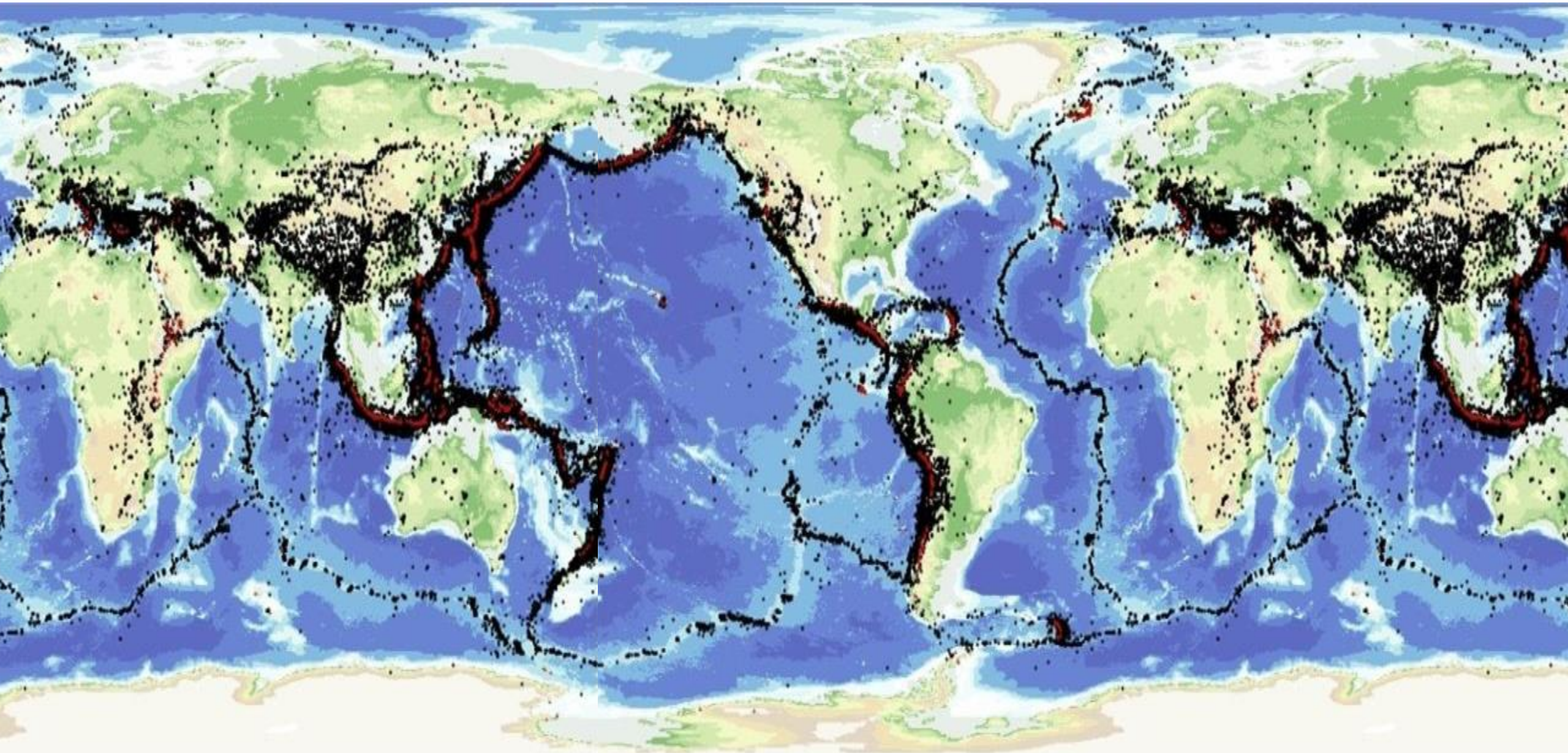
Earthquake
Country
Alliance



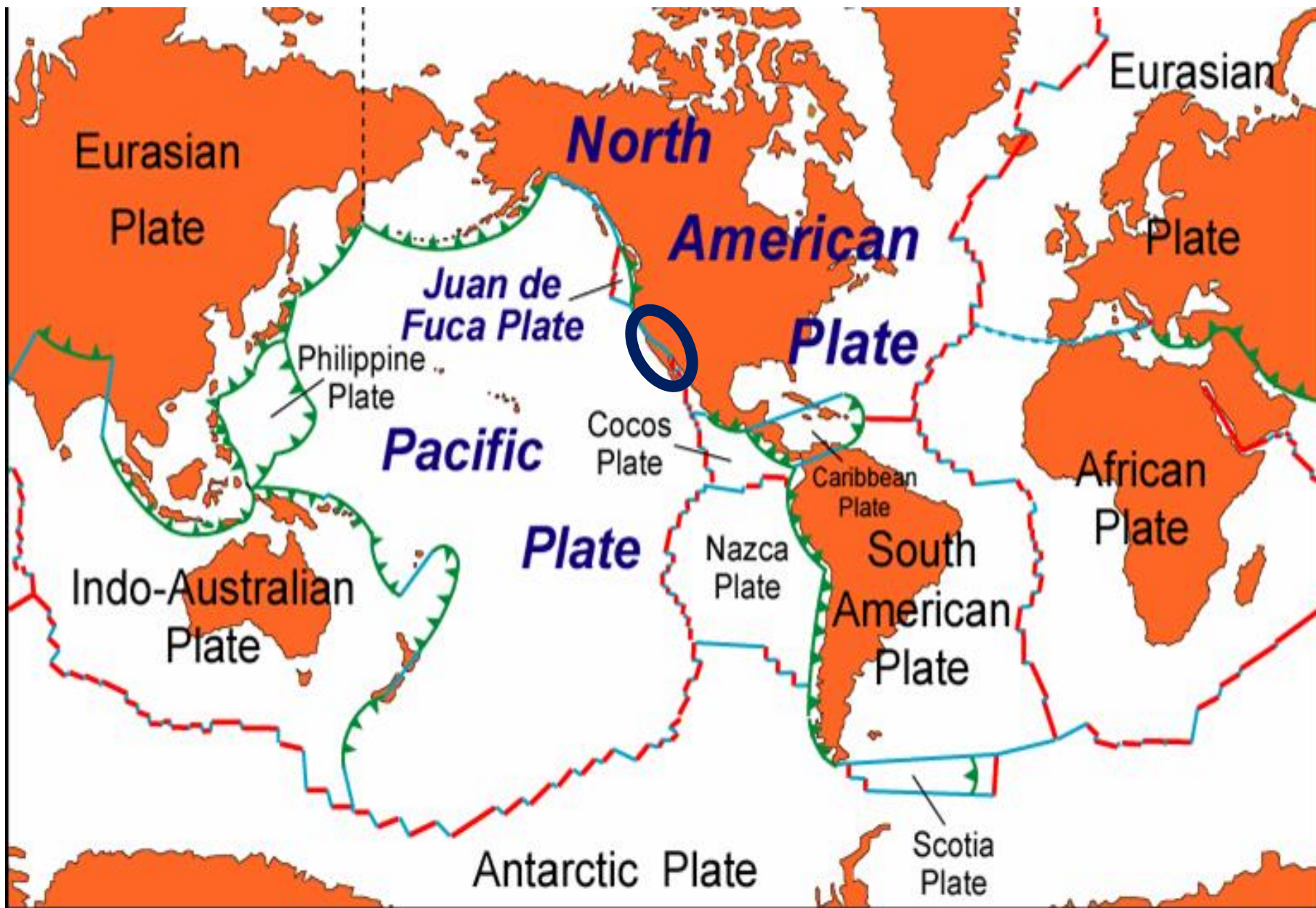
Tsunami
Zone

Shake
OutTM

Global Earthquakes

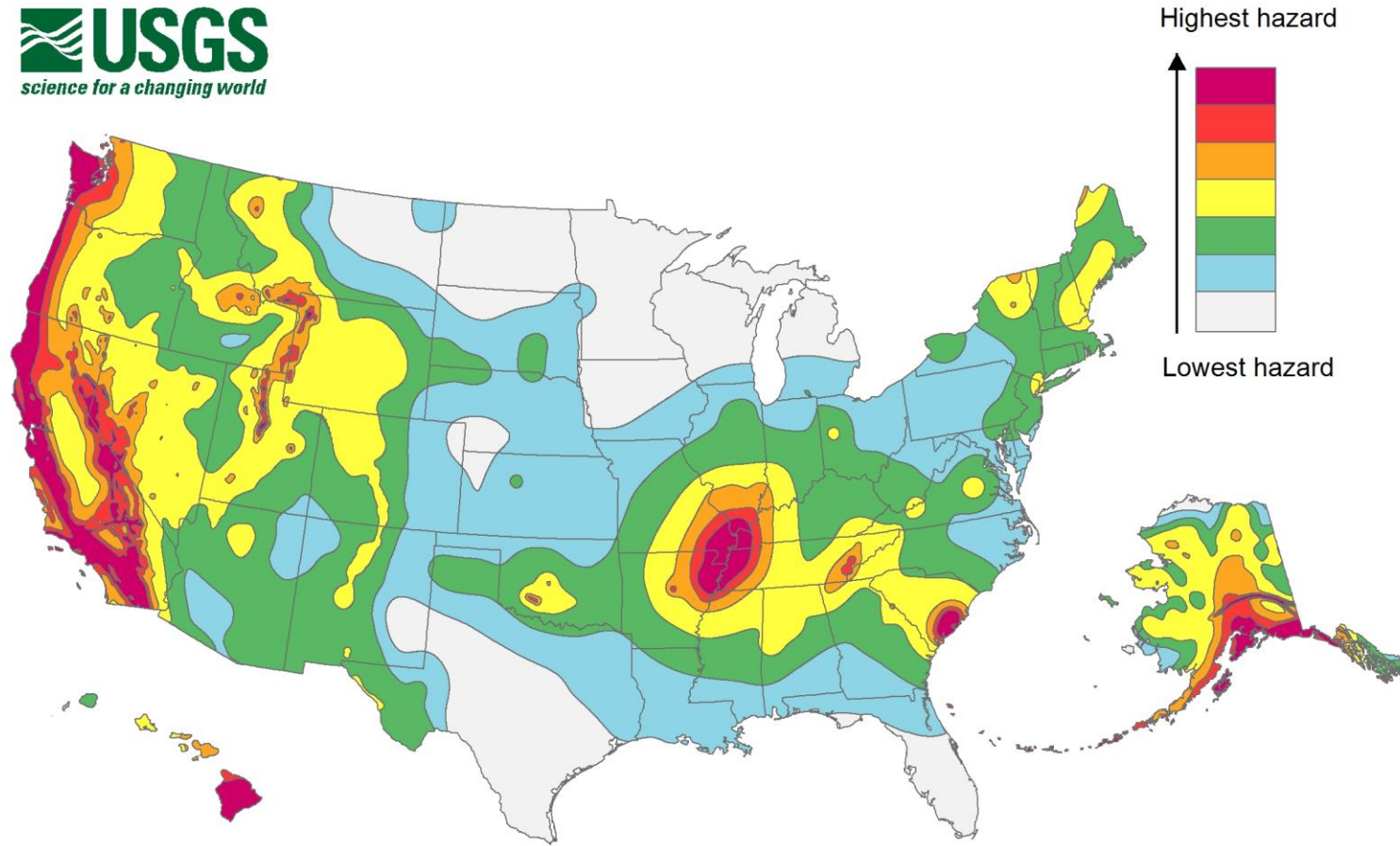


We Live on the Edge...





National Seismic Hazard Maps



usgs.gov/programs/earthquake-hazards/hazards

Science of Earthquake Forecasts

UCERF Ingredients

by Kevin Milner & Ned Field
using SCEC-VDO



Improved Understanding of Major Faults

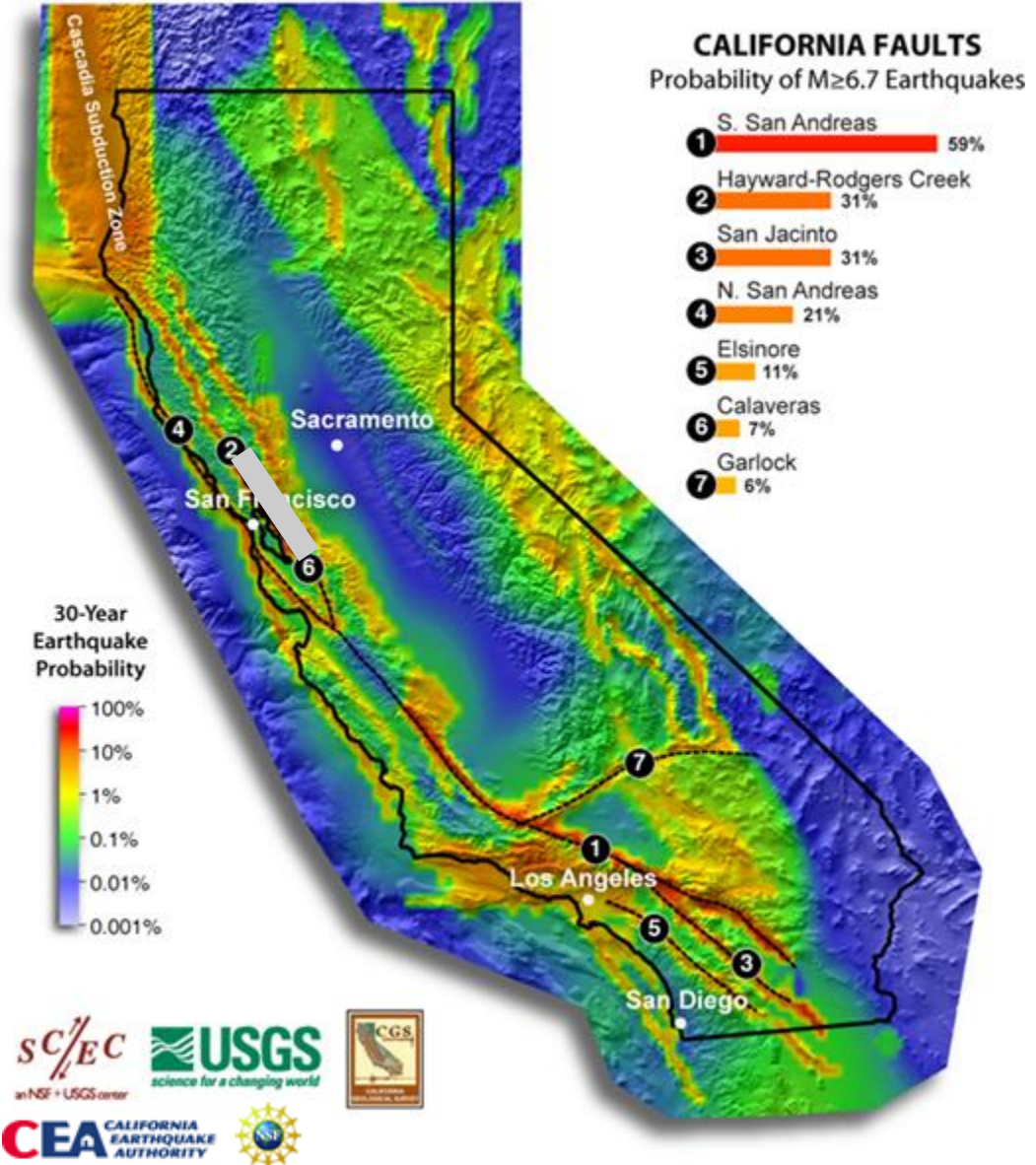
**UCERF3: A New Earthquake Forecast
for California's Complex Fault System**

www.WGCEP.org/UCERF3



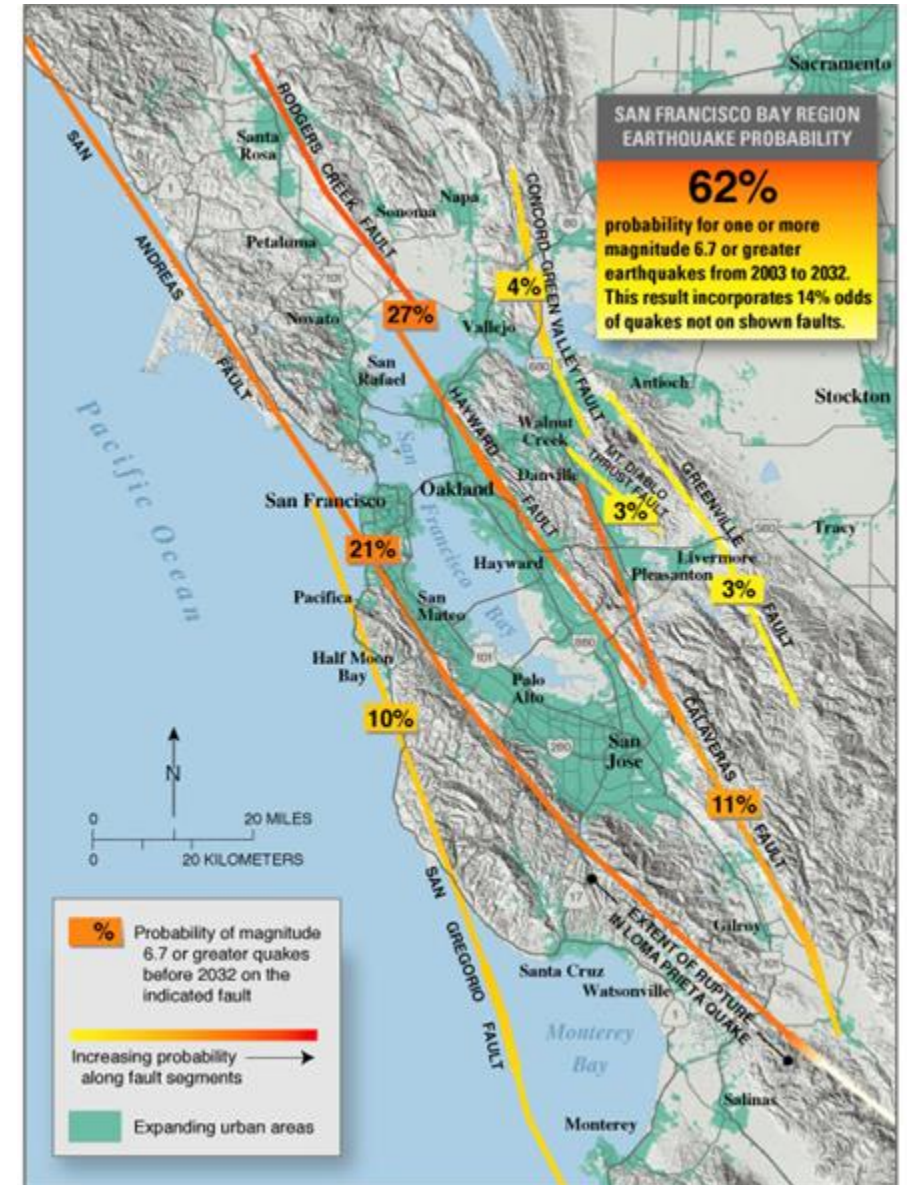
Uniform California Earthquake Rupture Forecast

scec.org/ucerf



Bay Area Major Faults

- Several faults capable of magnitude 7 or larger earthquakes
- Many smaller faults can also cause damaging shaking
- 21% chance of an earthquake larger than M6.7 on the San Andreas within 30 years
- 27% chance of $>M6.7$ on Hayward fault in same timeframe



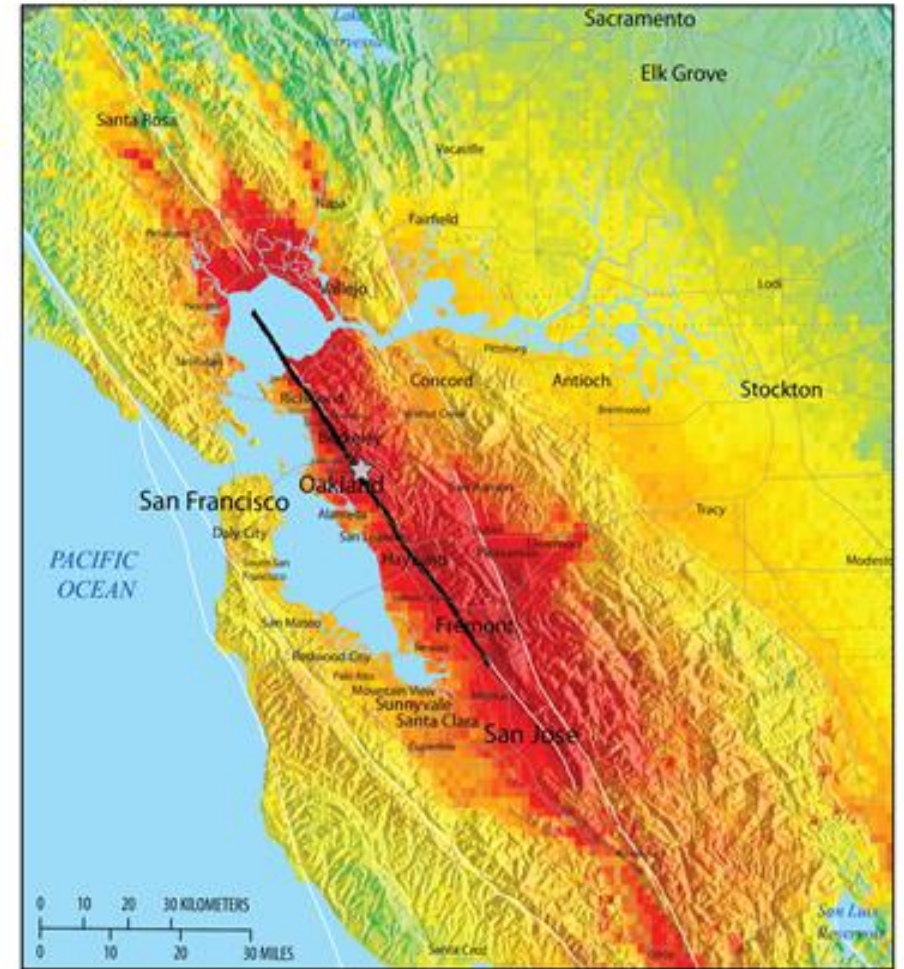
USGS HayWired Scenario

- Comprehensive assessment of what would happen if Magnitude 7 earthquake on Hayward fault
- Emphasizes impacts from modern society's lifeline interdependencies and reliance on the Internet
- Last similar earthquake was in 1868, when there were far fewer buildings, infrastructure, and people
- Search for “USGS HayWired” to read the scenario and related information



Together, we can #OutsmartDisaster

OUTSMART
DISASTER



HayWired Scenario Exercise Toolkit

- Includes **highlights** of the three-volume Hayward Scenario Report.
- Provides guidance for **selecting** an exercise idea, **developing** and **facilitating** a discussion-based exercise based on that idea, and **implementing** lessons learned.
- **Links** to data in the HayWired Scenario for use in exercises, however the Toolkit can also be used as a structure for exercises based on other scenarios.
- The Toolkit identifies **30 Themes** addressed in the scenario, spanning **45 ideas** for exercises, grouped within each phase of emergency management.
- 17 **Facilitator Tools** have been created based on selected ideas (each with discussion guides & imagery slidesets)
- [EarthquakeCountry.org/haywired](https://www.earthquakecountry.org/haywired)



Why Prepare?



Utilities may not work

Why Prepare?



Roads may be
impassible



Transportation
may be
unavailable

Why Prepare?



Grocery stores, pharmacies,
banks, etc. may be closed



Getting accurate information
will be difficult

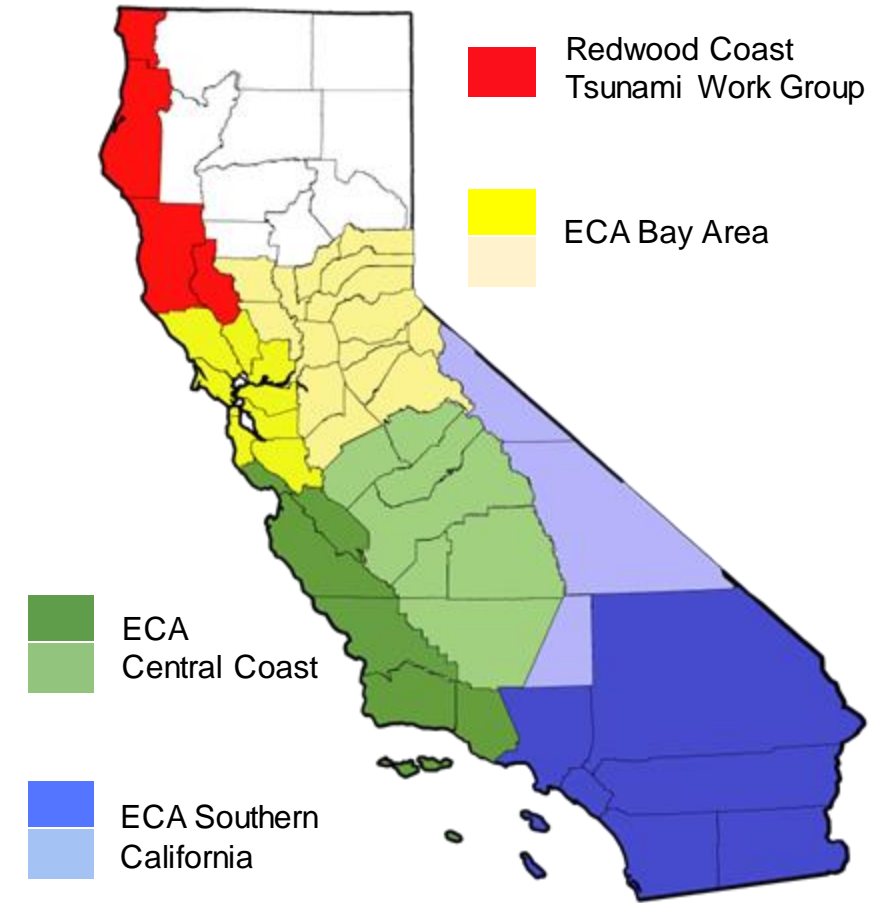
More Can and Must Be Done...

- ...at every level
- ...before, during, and after
- ...by each and all of us



Earthquake Country Alliance

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



Join: EarthquakeCountry.org/join





National Earthquake Hazards Reduction Program (NEHRP)

- Cal OES applies to FEMA for NEHRP funding, which is then subawarded to USC for SCEC to administer ECA's earthquake education, outreach, and mitigation activities.
- NEHRP is a partnership of four federal agencies that provide resources to mitigate and reduce losses caused by earthquakes in the U.S., including support for:
 - Research on the causes and effects of earthquakes
 - Building design recommendations to reduce earthquake damage and disruption
 - Activities that advocate earthquake risk reduction awareness and practices
- ECA also receives funding from NSF and USGS via their support of SCEC.



FEMA

NIST
National Institute of
Standards and Technology



USGS
science for a changing world

ECA Statewide Activities

Develop Messaging and Resources:

EarthquakeCountry.org

EarthquakeCountry.org/resources

Terremotos.org



Support Tsunami Preparedness Week:

TsunamiZone.org/california

Created and Coordinate
The Great California ShakeOut:

ShakeOut.org/california

Webinars & other events

EarthquakeCountry.org/calendar



**March
27-31,
2023**



**Oct. 19
in 2023**

ECA Sector-Based Outreach Committees

- Public Sector
- Businesses
- Accessibility
- Non-Profit & Faith-Based Organizations
- Healthcare
- Higher Education
- PreK-12 Education

EarthquakeCountry.org/committees

ECA Outreach Bureaus (Regional & Statewide)

- **Events Bureau**

- Speakers for online/in-person events
- Booths and tables at events
- Request presenter or information table:

EarthquakeCountry.org/events



- **Media Bureau**

- Statewide and local coordination
- Media event planning
- Year-round messaging / news releases
- Post-earthquake shared messaging



- **Participation Bureau**

- ShakeOut and Tsunami Week recruitment and communications
- County/City Partners for local engagement



Seven Steps To Earthquake Safety

1. Secure Your Space



2. Plan To Be Safe



3. Organize Supplies



4. Minimize Financial Hardship



5. Drop, Cover, and Hold On



6. Improve Safety



AFTER

7. Reconnect and Restore



BEFORE

DURING

Safety Guidance in 16 Languages

If You Feel Shaking or Get an Alert:

If Possible



DROP! COVER! HOLD ON!

Usin Can

اگر لرزش زلزله ای را حس کردید یا هشدار دریافت کردید:



در صورت امکان

Usin Walkers



Si Siente Un Temblor o Recibe Una Alerta:


Si Es Posible



¡AGÁCHESE! ¡CÚBRASE! ¡SUJÉTENSE!


Si Usa Bastón

Եթե զննում եք զգում կամ ահազանք եք ստանում:




ԿՈՎՆԵՆՔ ԾԵՔԵՐԿՈՒՄ ԲՈՒԿՆԵՆՔ

Si Usa Andadera



ԿՈՎՆԵՆՔ ԾԵՔԵՐԿՈՒՄ ԲՈՒԿՆԵՆՔ

Si Usa Silla de Ruedas



ԿՈՎՆԵՆՔ ԾԵՔԵՐԿՈՒՄ ԲՈՒԿՆԵՆՔ

EarthquakeCountry.org/step5

Kế Hoạch Hành Động

Bảy Bước Giữ An Toàn



EarthquakeCountry.org/step5

Cov Niam Tswv Yim Pab Thaum Muaj Av Qeeg

Thaum Koj Muog Muaj Av Qeeg Co Ca los yog tav ib Qho Xov Xwm. Tiv Thav Koj Tus Kheej Kom Cov Khoom Poob Thabx Los Rog

Yog Tav Ua Tav

KHOOV! NPOG! XAVU!

EarthquakeCountry.org/step5

Pitong Hakbang sa Paghahanda sa Lindol

Maghanda

Hakbang 1: Fatbayin ang iyong lugar sa pangangailala ng mga mapanganib na bagay at itali ang mga gumaglaw na bagay.

Hakbang 2: Mag-plano sa kaliglaan sa pamamagitan ng paggawa ng plano sa emerhensya at magpasya kung paano makikipag-panayam o ugnayan.

Hakbang 3: Ayusin ang mga kagamitang pang-emerhensya sa mga lugar na maluwag.

Hakbang 4: Kawalan ang kahapang pamamahala sa mga kagamitang pang-emerhensya.



大加州 ShakeOut

準備好#ShakeOut!

如何參與

如果您感到地震或收到警報



EarthquakeCountry.org/step5

Recommended Earthquake Safety Actions

Shake Out

Federal, State, and local emergency management experts and other official preparedness organizations agree that the actions described below will reduce injury and death during earthquakes.

In most situations, if you feel shaking or get an alert, immediately:

DROP where you are, onto your hands and knees. This position protects you from being knocked down and allows you to stay low and crawl to shelter if nearby.

COVER your head and neck with one arm and hand.

HOLD ON until the shaking stops.



상점 내 지진 안전 조치

가게에 들어실 때마다, 언제고 주위를 돌아보세요

지진 발생 시 줄을 걸어 다니려다가 떨어지는 물체에 떨어뜨거나 유리조각 또는 다른 날카로운 것을 걸어 다치는 수가 있습니다.

진동을 느끼거나 지진경보를 받으면

추져주세요 계산 곳 어디에선 - 진동으로 당신이 쓰러지기 전에.

가게요양병을 찾아달라 머리과 목을 보호하여, 자신의 몸이 떨어지거나 나르는 물체로부터 비교적 작은 표적이도록 움직이세요

스릴 카드가 어느 정도 할까 할 수 있습니다.

우물이 받침대 안으로 치하는 것이 어둠에 방해가 될 수 있습니다

높은 선반에는 물품처럼 (일인 매장) 있는 것 같은, 맨 밑바닥 선반에 숨는 것이 어떠한 방해가 될 수 있습니다.

불잡고 지명하세요 흔한 것들.



EarthquakeCountry.org/step5

Step 1: Secure Your Space

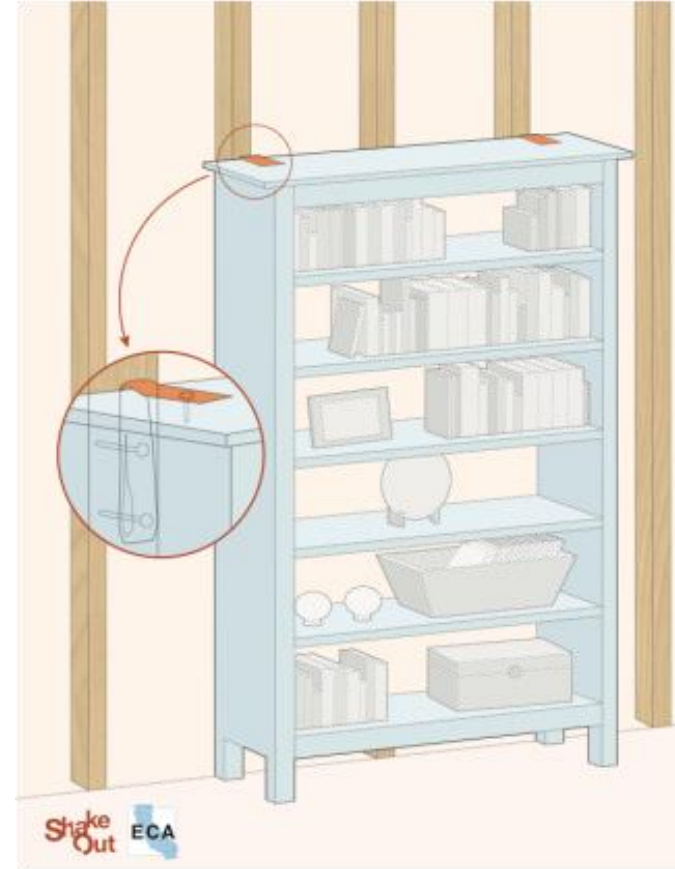
BEFORE

- Identify hazards
- Secure moveable items
- Reduce Injuries and damage



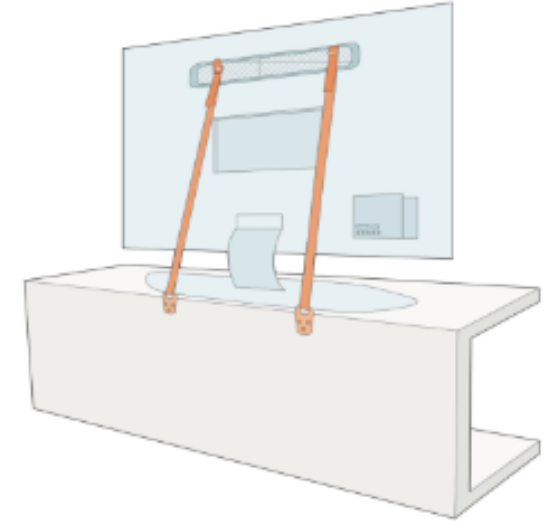
EarthquakeCountry.org/step1

Top-Heavy Furniture

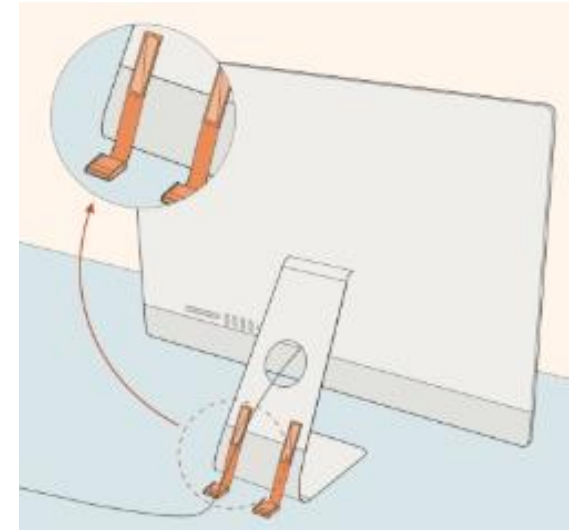


Use flexible nylon straps (buckles or velcro)

TVs and Electronics



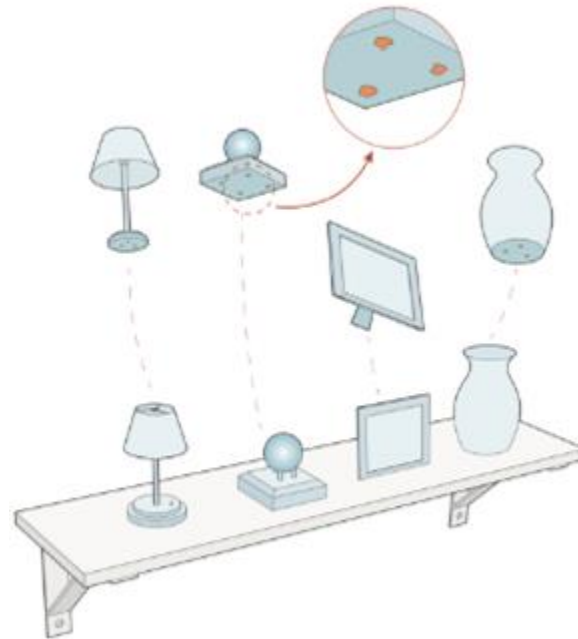
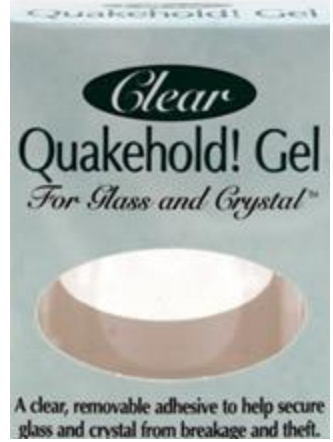
Straps and buckles secured with adhesive and bolted to anchor points



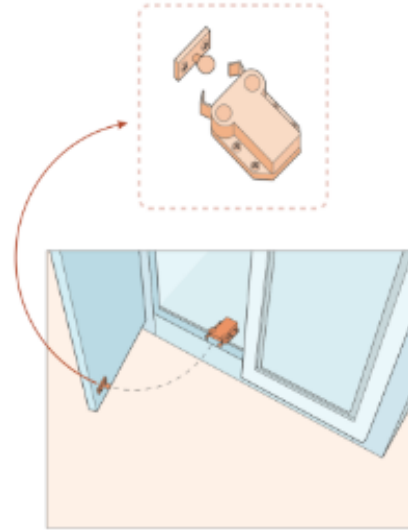
Smaller Items



- Earthquake Putty
- Microcrystalline Museum Wax

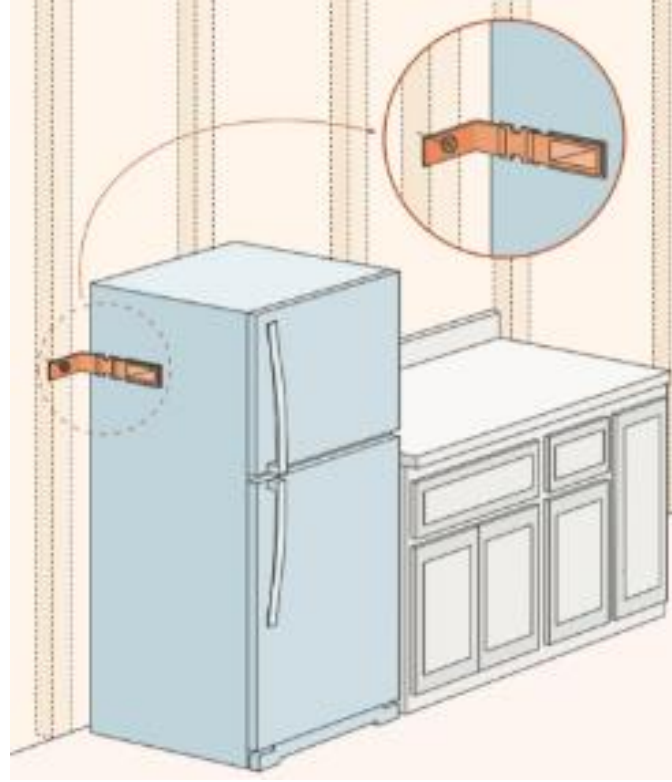
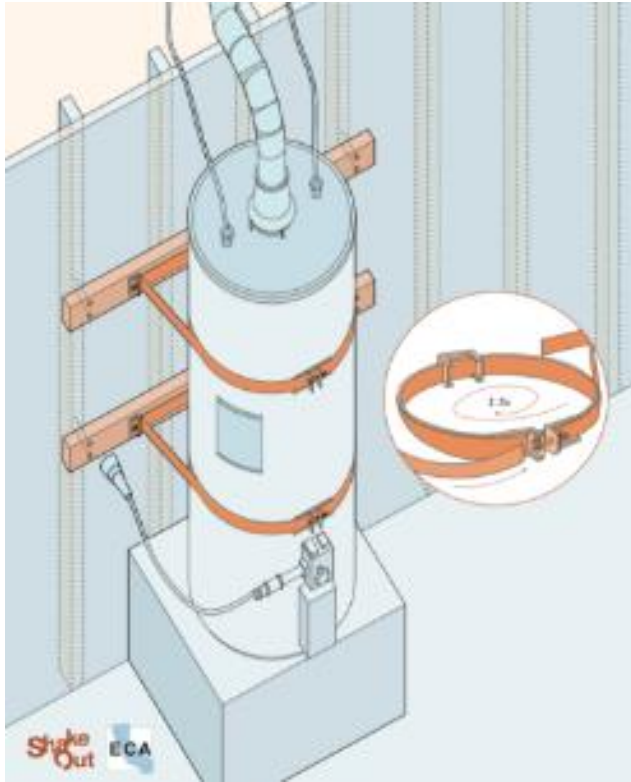


Kitchen Cabinets



Many options are available at hardware stores and online

Water Heaters and Large Appliances



- Use flexible stainless-steel gas connectors
- Secure large appliances to wall studs



Secure Your Space Guide & Worksheet

Step 1: Secure Your Space

How to prevent items from falling during earthquakes



Imagine your entire home or workplace being picked up and shaken during an earthquake – even heavy objects can fall or be thrown around! This usually causes the most injuries during earthquakes, and replacing items or repairing damages can also be very costly.

These issues can be prevented through simple actions to secure furniture and other items in place. That's why "Secure Your Space" is Step 1 of the Seven Steps to Earthquake Safety!

Start now by moving tall furniture like bookcases away from beds, sofas, or other places where people spend a lot of time. Move heavy objects to lower locations.

Then continue by securing things such as televisions, dressers, water heaters, cabinet doors, hanging objects, and small objects, following the instructions within this document. Try securing at least one item every weekend until you get everything done. You may need to ask others for help or to borrow tools. Perhaps you might help them too. We're all in this together!



Learn more at EarthquakeCountry.org/Step1




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Secure Your Tall Furniture

Furniture such as bookcases, china hutches, and dressers are top-heavy and can fall over during earthquakes causing damage and injuries, and possibly blocking exits. Flexible fasteners allow furniture to sway slightly without falling over.

- Nylon strap kits available in stores or online screw to the wall at one end and have adhesive pads that stick to the furniture with either Velcro or Suckle fasteners.
- These must be screwed into wall studs; identify where these are with a stud finder.
- Screw nylon straps to wall studs near each side of the furniture through a pre-punched hole in the strap. These can be hidden behind the furniture.
 - If taller than 6 feet, secure straps to the sides, at 2/3 the height.
- Attach the adhesive end of the strap to the furniture, following the kit's instructions.



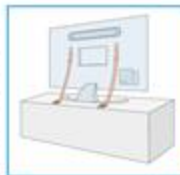
Secure Your Television

Televisions can easily tip over or fall during earthquakes. Here are two options to prevent this.

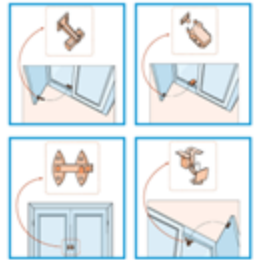
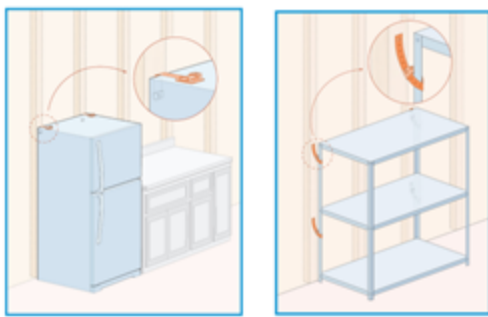
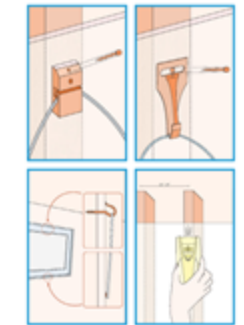
Option 1: Attach the TV to furniture (as shown)

- Use flexible nylon strap packages, with buckle or Velcro fasteners, available at hardware stores and online.
- Stick one end of each strap onto the furniture as shown, following the package's instructions.
- Connect the other end to the back of the TV by screwing the strap into TV mount holes, or by sticking adhesive fasteners onto the TV.
- If the furniture the TV is on is tall, properly secure it to studs in the wall using a stud finder to find the correct locations.

Option 2: Attach the TV to a wall with a mounting kit (available where TVs are sold or online). Carefully follow the manufacturer's instructions.



Page 2 of 4 © 2022 Earthquake Country Alliance



Secure Your Space - Worksheet

Earthquake shaking can move almost anything, even large or heavy items. Imagine your home or workplace being shaken by an earthquake sideways and up-and-down — what could be thrown around? **How can you prevent it?**



START NOW by moving furniture such as bookcases away from beds, sofas, or other places where people sit, sleep, or spend a lot of time. Move heavy objects to lower shelves and secure bookcases to walls. Then continue your "hazard hunt" to help identify and fix things such as unsecured televisions, computers, furniture, water heaters, etc. Use the chart below to list what you need to secure these items and plan how to get it done. Guidance for how to secure most items is at EarthquakeCountry.org/step1.

Item to Secure or Move	Location	How	Who	When





Page 6 of 6 © 2022 Earthquake Country Alliance

EarthquakeCountry.org/step1

Begin to *Secure Your Space*:

TODAY:

Move a heavy object to a lower location

- Review **EarthquakeCountry.org/step1**
- List potential hazards to be secured
- Secure everything in a weekend, or over time
- Show your friends, family, neighbors, tenants, etc. to encourage them to *Secure Their Space*
(even better... help each other!)

Step 2: Plan to Be Safe

BEFORE

- Create a disaster plan
- Decide how to communicate in an emergency



EarthquakeCountry.org/step2

Know Your Hazards

The screenshot displays the MyHazards website interface. At the top left is the Cal OES logo (Governor's Office of Emergency Services) and the title "MyHazards". To the right are links for "Cal OES" and "My Location". Below the header is a navigation bar with tabs for "Home", "Earthquake Risk", "Flood Risk", "Fire Risk", "Tsunami Risk", and "All Risks". The "All Risks" tab is selected. Below the navigation bar are indicators for "High Risk" and "Moderate Risk".

The main content area features a section titled "How does MyHazards work?" with a paragraph explaining the tool's purpose: "MyHazards is a tool for the general public to discover hazards in their area (earthquake, flood, fire, and tsunami) and learn steps to reduce personal risk. Using the MyHazards tool, users may enter an address, city, zip code, or may select a location from a map. The map targets the location, and allows users to zoom and scroll to their desired view. The screen then presents information on the risks identified within the search radius, and recommended actions. MyHazards website performs best when using Internet Explorer. Hazard Data is approximate and data layer visibility are subject to the extent of the Map."

Below this text is a search input field containing "san jose, ca", a "Search" button, and a "Print" button. The search results are displayed as a map of the San Jose, California area. The map shows various hazard zones: a large blue hatched area on the left representing tsunami hazard, and several red and yellow areas representing fire and flood hazards. Major cities like San Jose, Palo Alto, and San Francisco are labeled. A scale bar and a "TsunamiHazardArea July2021" legend are visible at the bottom left of the map.

MyHazards.CalOES.ca.gov

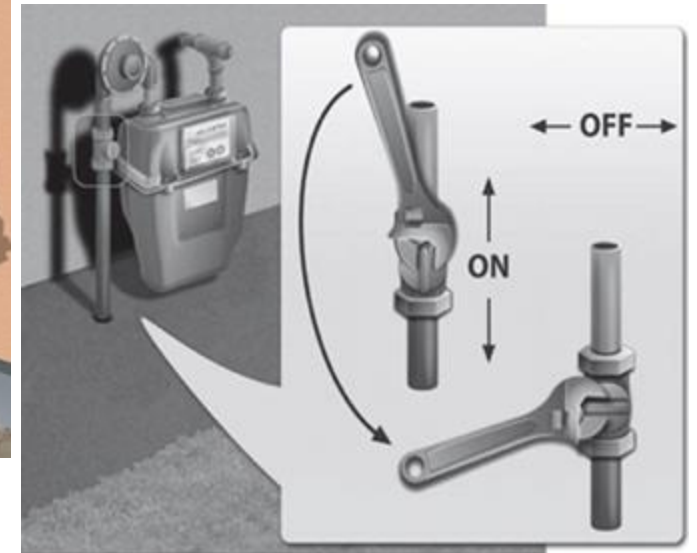
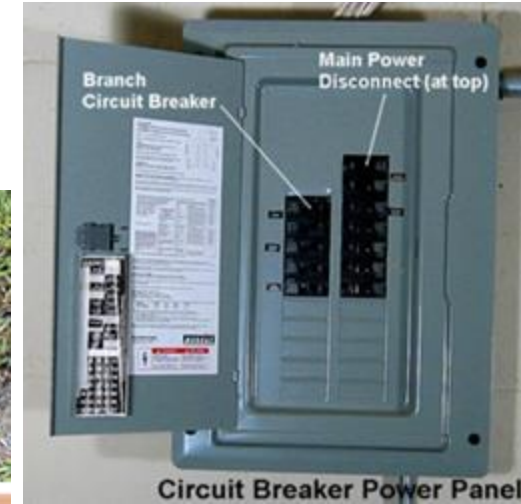
Plan Your Response: Extinguish Small Fires

- Get a fire extinguisher for your home.
- Your local fire department can train you and your family to use it properly.



Plan to Respond: Utility Shutoffs

- Know the location of utility shutoffs (gas, water, and electricity)
- Keep needed tools nearby
- Know how to shut them off
- Gas:
 - Only turn off the gas if you smell, hear, or see leaking gas
 - Use wrench and turn ¼ way
 - Or have automatic gas shutoff valve installed



Take Training/Networking Programs

- Learn about local programs, such as:
 - CERT
 - Map Your Neighborhood
 - Neighborfest
 - Red Cross trainings



Plan to Communicate and Connect

- Choose a meeting place where everyone will go if your home is not accessible.
- Share a list of key contacts (include someone in another area to text or call)
- If you are a person with a disability, identify and include your support network
- Sign up for local emergency text alerts or download alert phone apps.
- Get a NOAA Weather Radio for weather updates or any portable radio for news

Step 3: Organize Disaster Supplies

BEFORE

- At home, work, and in your car
- Copies of prescriptions, extra glasses, etc.
- Essentials for 3 days, ideally 2 weeks



EarthquakeCountry.org/step3

Disaster Supplies Checklist

- Choose where you want to store your supplies:
 - Under-Bed bag?
 - Go-Bag?
 - Home?
 - Work?
 - Car?
- What personal items do you need?

Step 3: Organize Emergency Supplies
The Seven Steps to Earthquake Safety

Earthquake Country Alliance

It may be easier and cheaper than you think to **organize emergency supplies in convenient locations**. This is not just about "having a kit." Include supplies specific to you, such as medications, eyeglasses, clothing, shoes, toiletries, and more. This is in addition to the basic supplies everyone should have (water, food, first-aid, flashlight, radios, etc...).

The chart below can help you customize supplies for when and where you need them: **under-bed bag** (immediate supplies), **evacuation** ("go-bag" - 3 days), **home** (2 weeks), and perhaps at **work** and in your **car**. Choose what makes the most sense based on your needs and budget. Learn more at EarthquakeCountry.org/step3.

Under-Bed?	Go-Bag?	Home?	Work?	Car?	Item:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clothing, shoes, hard hat / helmet, gloves
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Whistle
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flashlight / headlamp
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dust mask and goggles
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Glasses / contacts
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tools (gas wrench, shovel, crowbar, knife)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Contact lists (in-state, out-of-state)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Copies of ID / important documents
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Batteries, battery pack, & charging cables
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Medications / Copies of Prescriptions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	First-aid supplies and emergency blanket
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water and food (long shelf-life)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Portable radio
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Toiletries (sunscreen, tissue, hygiene items)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cash (small bills)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Maps (local and regional)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pet supplies (food, water, toys, leashes)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Litter / sand (spills, traction)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jumper cables, spare tire, inflator, jack
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flares / road hazard lights
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Personal item _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Personal item _____

Choose... what makes sense for YOU and where to keep it!

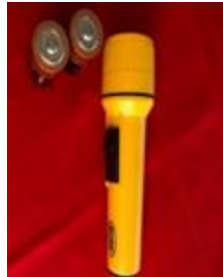
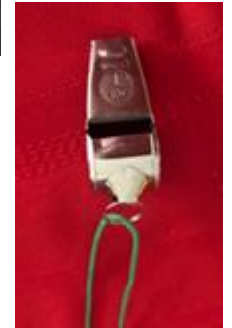
Cal OES FEMA nctrip

© 2022 Earthquake Country Alliance

**EarthquakeCountry.org/
step3**

Under-Bed Bags

- Keep **shoes** and a **flashlight** in a **closed** bag attached to each bed.
- You can also include other items as in this picture.



Prevents...

- Cut feet and hands
- Tripping over objects

Allows you to...

- Open jammed doors
- Help injured

Home Supplies / Stay Kits

- Up to 2 weeks of water, food, and other supplies

1 gallon of water per person or pet, per day, for up to 2 weeks

3 people +1 dog = 4 gallons/day

4 gallons x 14 days = 54 gallons

- Keep items in containers, backpacks, etc. – you may need to take with you

Under-Bed?	Go-Bag?	Home?	Work?	Car?	Item:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Clothing, shoes, hard hat / helmet, gloves
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Whistle
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flashlight / headlamp
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Dust mask and goggles
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Glasses / contacts
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tools (gas wrench, shovel, crowbar, knife)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Contact lists (in-state, out-of-state)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Copies of ID / important documents
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Batteries, battery pack, & charging cables
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Medications / Copies of Prescriptions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	First-aid supplies and emergency blanket
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water and food (long shelf-life)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Portable radio
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Toiletries (sunscreen, tissue, hygiene items)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cash (small bills)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Maps (local and regional)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pet supplies (food, water, toys, leashes)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Litter / sand (spills, traction)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Jumper cables, spare tire, inflator, jack
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flares / road hazard lights
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Personal item _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Personal item _____



Step 4: Minimize Financial Hardship

BEFORE

- Organize important documents
- Strengthen your property
- Consider insurance

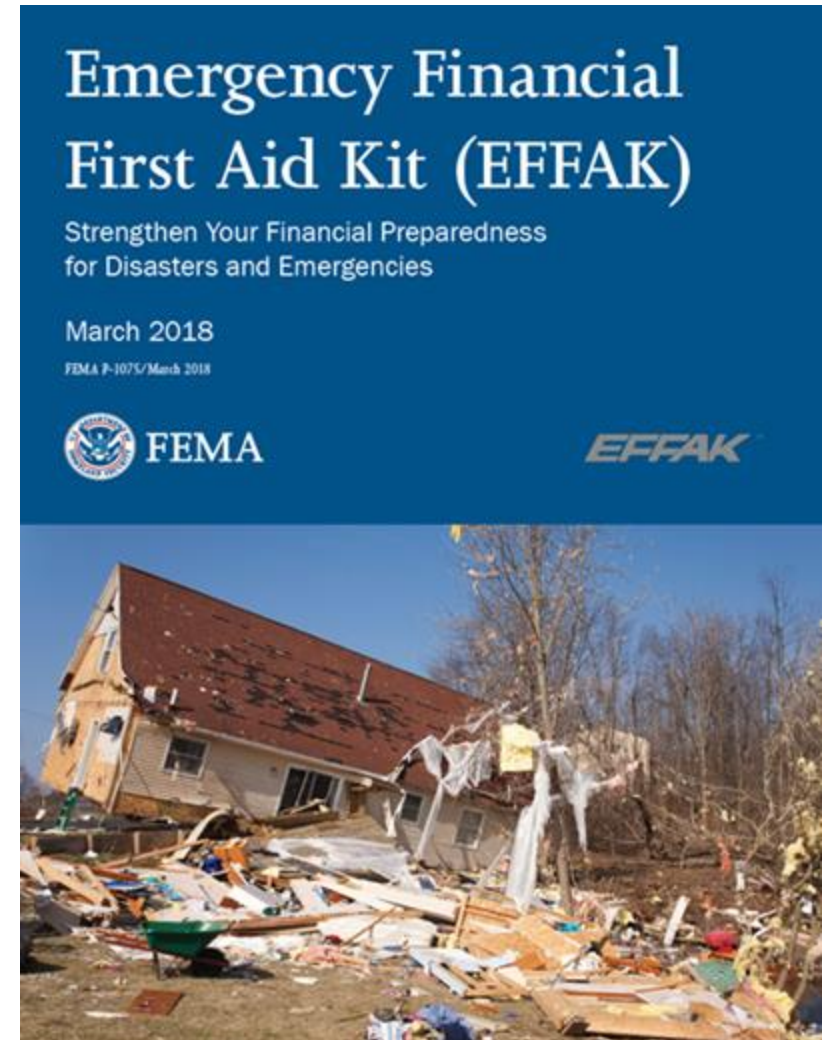


EarthquakeCountry.org/step4

Emergency Financial First Aid Kit

- Keep a small amount of cash at home in a safe place
- Have an emergency savings account
- Store copies of important documents and account numbers (insurance, etc.)
- Download FEMA's *Emergency Financial First Aid Kit (EFFAK)*

[ready.gov/financial-preparedness](https://www.ready.gov/financial-preparedness)



Older Buildings & Infrastructure

- Many cities require retrofit of some older, vulnerable buildings
- California Earthquake Authority offers home retrofit incentives and guidance:
EarthquakeBraceBolt.com
StrengthenMyHouse.com
- Freeway bridges are retrofitted
- Extensive work underway by water, power, and other utilities



California Earthquake Authority: Premium Calculator

- Earthquake damage is not covered by homeowners' insurance
- Many options now available for customizing your coverage
- Home, condo, mobile home, and renters' policies are available
- **EarthquakeAuthority.com:**
Click on "Free Estimate" at top right.

The screenshot shows the 'Homeowners Choice' premium calculator interface. At the top, it displays 'Homeowners Choice' with a house icon, 'ZIP Code: 90038', and 'Effective Policy Start: 2019'. A large gauge shows an 'Estimated Monthly Premium' of \$79.25 and an 'Annual Premium' of \$951.00. Below this are several customizable options:

- SELECT YOUR DWELLING DEDUCTIBLE:** A slider set to 15%, with options for 25% and 5%.
- WOULD YOU LIKE TO INCREASE YOUR BUILDING CODE UPGRADE COVERAGE?:** A slider set to \$20,000, with options for \$10K and \$30K.
- WOULD YOU LIKE TO ADD MASONRY VENEER COVERAGE?:** Radio buttons for 'NO' (selected) and 'YES'.
- HOW MUCH PERSONAL PROPERTY COVERAGE WOULD YOU LIKE?:** A slider set to \$50,000, with options for 'NONE' and '\$200K'.
- WOULD YOU LIKE A SEPARATE PERSONAL PROPERTY DEDUCTIBLE?:** A slider set to 15%, with options for 'NO' and '5%'.
- WOULD YOU LIKE TO ADD COVERAGE FOR BREAKABLE ITEMS?:** Radio buttons for 'NO' (selected) and 'YES'.
- HOW MUCH LOSS-OF-USE COVERAGE WOULD YOU LIKE?:** A slider set to \$15,000, with options for 'NONE' and '\$100K'.

Language options 'EN ESPAÑOL' and '中文' are visible in the top right corner.

Step 5: Drop (Lock), Cover and Hold On

DURING

- When the earth shakes, act immediately
- Protect yourself from falling to the ground, or from falling objects



EarthquakeCountry.org/step5

Why *Drop, Cover, and Hold On?*

- Strong consensus for many years, based on data for how people are injured, and experience of Urban Search and Rescue firefighters
- Prevents being thrown to the ground
- Reduces injury from falling or flying items... including structural elements and exterior façades (brick, glass, etc.)
- Increases chance of surviving collapse



Classroom in Calexico, CA
April 2010 M7.2



EarthquakeCountry.org/step5

Adapt to Your Situation

- if you can't get back up on your own, don't drop down
- Practice your preferred method with others who assist you
- [EarthquakeCountry.org/accessibility](https://www.earthquakecountry.org/accessibility)

If You Feel Shaking or Get an Alert:

If Possible



Using Cane



Using Walker



Using Wheelchair



[EarthquakeCountry.org/step5](https://www.earthquakecountry.org/step5)

Know How to Protect Yourself

In *most* situations and building types:



Drop on to your hands and knees, where you are



See [EarthquakeCountry.org/step5](https://www.EarthquakeCountry.org/step5) for advice for a variety of settings

Know How to Protect Yourself

In *most* situations and building types:



Cover your head and neck with one arm and hand

- *If a sturdy table or desk is nearby, crawl underneath it for shelter*
- *If no table/desk, crawl against a wall or next to low furniture for sideways protection*



See [EarthquakeCountry.org/step5](https://www.earthquakecountry.org/step5) for advice for a variety of settings

Know How to Protect Yourself

In *most* situations and building types:



Hold On to your shelter until shaking stops

- Be ready to move with your shelter
- *If not under a shelter*, hold on to your head/neck with both arms and hands



See [EarthquakeCountry.org/step5](https://www.earthquakecountry.org/step5) for advice for a variety of settings

Earthquake Safety Video Series

The logo for 'Shake Out' features the word 'Shake' in a large, blue, sans-serif font, with the word 'Out' in a smaller, blue, sans-serif font positioned below it. A small 'TM' trademark symbol is located to the right of the 't' in 'Out'.

Shake
Out™

**IF NEAR A STURDY
DESK OR TABLE**

The logo for 'Shake Out' features the word 'Shake' in a large, blue, sans-serif font, with the word 'Out' in a smaller, blue, sans-serif font positioned below it. A small 'TM' trademark symbol is located to the right of the 't' in 'Out'.

Shake
Out™

**IF THERE'S NO STURDY
DESK OR TABLE**

- Separate short (1-8 min) videos:
 - indoors, nearby table/desk
 - indoors, no table/desk
 - theater/stadium
 - near the shore
 - in a car
 - in bed
 - for users of mobility devices/aids
- View full videos at [Youtube.com/greatshakeout](https://www.youtube.com/greatshakeout)
- Download full videos at [ShakeOut.org/messaging](https://www.ShakeOut.org/messaging)

shake
Out™

IF USING A CANE

shake
Out™

IF USING A WHEELCHAIR

shake
Out™

IF USING A WALKER

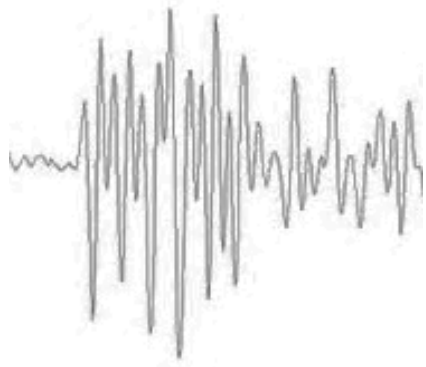
Shake
Out™

IF YOU'RE IN BED

When Should You Protect Yourself?



When You
Feel
Earthquake
Shaking



When You
Get an
Earthquake
Warning

EARTHQUAKE
WARNING
CALIFORNIA

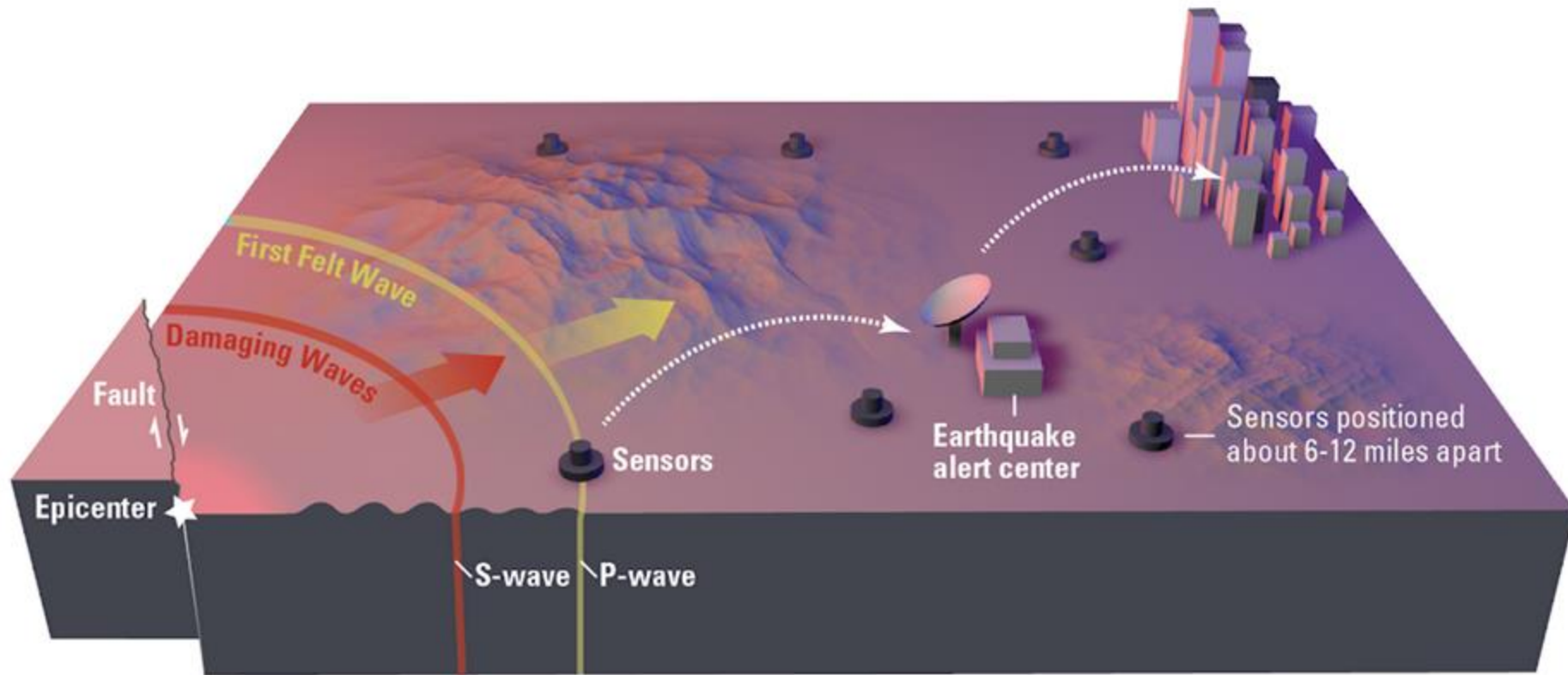


When You
Do an
Earthquake
Drill



ShakeOut.org
2022: October 20

Earthquake Early Warning



Powered by **ShakeAlert[®]**

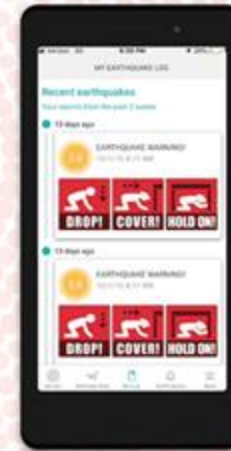
Earthquake Warning California

Earthquake Early Warnings
Now Available through Wireless
Emergency Alerts (WEA)



Magnitude = 5 or greater
and
Intensity at your location =
greater than IV

Download the  MyShake™
Earthquake Early Warning App.



Magnitude = 4.5 or greater
and
Intensity at your location =
greater than III



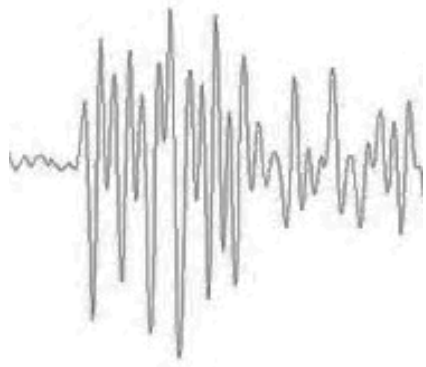
Magnitude = 4.5 or greater
and
Intensity at your location =
greater than III

earthquake.ca.gov

When Should You Protect Yourself?



When You
Feel
Earthquake
Shaking



When You
Get an
Earthquake
Warning

EARTHQUAKE
WARNING
CALIFORNIA



When You
Do an
Earthquake
Drill



ShakeOut.org
2022: October 20

Great ShakeOut Earthquake Drills

- Annual opportunity for schools, organizations, and families practice earthquake safety and other aspects of their emergency plans
- Created in So. Calif. in 2008; statewide 2009; with FEMA NEHRP funding SCEC added other regions (all US states/territories involved since 2015)
- 2023 International ShakeOut Day:
October 19 (but can drill anyday)

So far: **48.2 million** worldwide; **15.7 million** U.S.

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

The logo for ShakeOut, featuring the word "Shake" in a large, bold, black font above the word "Out" in a similar font. A small "TM" trademark symbol is located at the bottom right of the "Out" text.

Social Science Research Basis for ShakeOut

People Get Motivated to Prepare When:



- They see and hear consistent information about what to do frequently, in many forms, and from many sources
- They see others like themselves getting prepared
- They talk about preparedness with people they know
- They learn potential consequences, and how to avoid them

Based on research results of Miletic, D., Wood, M., Bourque, L., and others

ShakeOut puts these findings into practice

ShakeOut Goals

Shift the culture about earthquakes and preparedness



Shift happens.

ShakeOut. Don't FreakOut.
Register Now at www.ShakeOut.org
October 19, 2017



ShakeOut Goals

Increase earthquake resilience at all levels



ShakeOut Goals

Encourage people worldwide to practice earthquake safety



Benefits of Registering



- Be **counted** in the world's largest earthquake drill
- Be **updated** with news and safety tips
- Be **listed** with other participants
- Be an **example** that motivates others
- Have **peace of mind** that you have taken action and helped others
- Be **better prepared** to survive and recover!

ShakeOut.org/register

Example ShakeOut Resources

Official Participant



Join Us in the World's Largest Earthquake Drill.



October 19, 2023



Register at ShakeOut.org



Protect Yourself!

If you feel shaking or get an alert.



Learn more at ShakeOut.org

ShakeOut Great ShakeOut Earthquake Drills

K-12 Schools and Districts

Register today at ShakeOut.org

At 10:18 a.m. on October 18, 2018, millions of people will "Drop, Cover, and Hold On" in the Great ShakeOut, the world's largest earthquake drill ever! All K-12 schools and districts are encouraged to participate in the drill (or plan a more extensive exercise).

Major earthquakes may happen anywhere you live, work, or travel. The ShakeOut is our chance to practice how to protect ourselves, and everyone to become prepared. The goal is to prevent a major earthquake from becoming a catastrophe for you, your organization, and your community.

Why is a "Drop, Cover, and Hold On" drill important? To respond quickly you must practice often. You may only have seconds to protect yourself in an earthquake before strong shaking knocks you down, or something falls on you.

Millions of people worldwide have participated in Great ShakeOut Earthquake Drills since 2008. The Great ShakeOut is held on the third Thursday of October each year.

Everyone can participate! Individuals, families, businesses, schools, colleges, government agencies and organizations are all invited to register.



As a registered ShakeOut Participant you will:

- Learn what you can do to get prepared
- Be counted in the largest earthquake drill ever
- Receive ShakeOut news and other earthquake information
- Set an example that motivates others to participate

© 2018



ShakeOut Great ShakeOut Earthquake Drills

Businesses

Register today at ShakeOut.org

At 10:18 a.m. on October 18, 2018, millions of people will "Drop, Cover, and Hold On" in the Great ShakeOut, the world's largest earthquake drill ever! All businesses are encouraged to participate in the drill (or plan a more extensive exercise) and to inform the public about the drill.

Major earthquakes may happen anywhere you live, work, or travel. The ShakeOut is our chance to practice how to protect ourselves, and for everyone to become prepared. The goal is to prevent a major earthquake from becoming a catastrophe for you, your organization, and your community.

Why is a "Drop, Cover, and Hold On" drill important? To respond quickly you must practice often. You may only have seconds to protect yourself in an earthquake before strong shaking knocks you down, or something falls on you.

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- Set an example that motivates others to participate

© 2018



ShakeOut Great ShakeOut Earthquake Drills

Drill Guidance for Organizations

(Remote Work, In-Person or Both)

ShakeOut Great ShakeOut Earthquake Drills

Drill Guidance for Grades K-4

(Distance Learning or In-Person)


ShakeOut Simulacros de Terremoto Great ShakeOut

Orientación de Simulacros para Organizaciones

(Por videoconferencia, en persona o ambos)

Get Ready to ShakeOut.

October 19, 2023



Register: ShakeOut.org

ShakeOut ShakeOut Drill Manual for Government Agencies and Facilities

Are You Ready to ShakeOut?

Major earthquakes can cause unprecedented catastrophes. With earthquakes as an inevitable part of our future, people should make plans and take actions to ensure that disasters do not become catastrophes. What we do now, will determine what our lives will be like afterwards. With this in mind, the Earthquake Country Alliance (www.EarthquakeCountry.org) created the Great California ShakeOut an earthquake drill and preparedness activity in which everyone can participate, which has now been replicated in many other states and regions. To register as a participant for a ShakeOut drill in your area visit www.ShakeOut.org. Government entities of all sizes can also use the drill to get their citizens, employees, and other stakeholders involved and prepared for a big earthquake.

Government-level emergency management offices have frequent exercises that go beyond these guidelines, however, to ensure the continuity of vital civic functions, all public employees must be prepared and coordinated to survive a major earthquake. So it can be a good idea for non-emergency government entities to hold (simpler) drills to practice their response. Furthermore, the level of your staff's own personal and family preparedness will be key to their availability to support your agency's response and recovery efforts after a disaster.

Although they were created for ShakeOut drill events across the nation, the instructions on the following pages can be used or adapted for earthquake drills anywhere and anytime. They have been designed for non-emergency government agencies and personnel. To be flexible, three levels of drills (simple, basic, intermediate) are provided below, each with steps to be taken before, during, and after the drill. Each drill uses the general earthquake response of Drop, Cover, and Hold On (www.EarthquakeCountry.org/step3) as its foundation.

Drills for Government Agencies and Facilities

Level 1 - Simple: Drop, Cover, and Hold On Drill 2


This drill uses simple steps to inform all employees how to perform Drop, Cover, and Hold On - a quake-safe action designed to protect people from falling furniture and flying objects during ground shaking.

Level 2 - Basic: Life Safety Drill 3

This life safety drill is designed to engage employees to take through their emergency response actions during an earthquake, then afterwards to review and discuss what worked or what did not, in order to make improvements for the next drill or actual earthquake.

Level 3 - Intermediate: Life Safety and Continuity Planning Drill 5

This life safety drill is designed to engage employees to think through their emergency response actions during and after an earthquake, then afterwards to review and discuss what worked or what did not, in order to make improvements for the next drill or actual earthquake.



© 2021 Earthquake Country Alliance

Recommended Earthquake Safety Actions

Federal, State, and local emergency management experts and other official preparedness organizations agree that the actions described below will reduce injury and death during earthquakes.

In most situations, if you feel shaking or get an earthquake alert, immediately:

- DROP where you are, onto your hands and knees. This position protects you from being knocked down and allows you to stay low and crawl to shelter if nearby.

COVER your head and neck with one arm and hand.






- If a sturdy table or desk is nearby, crawl underneath it for shelter.
- If no shelter is nearby, crawl next to an interior wall (away from windows).
- Stay on your knees; bend over to protect vital organs.

HOLD ON until the shaking stops.

- Under shelter: hold on to it with one hand; be ready to move with your shelter if it shifts.
- No shelter: hold on to your head and neck with both arms and hands.

If you are unable to drop to the ground, sit and bend over, covering your head and neck with your hands and arms. If you use a cane, keep it with you even if you go under a table to help you get back up. If you use a wheelchair or walker with wheels (a rollator), LOCK your wheels (or set the brake) and remain seated until the shaking stops. Always COVER your head and neck with your arms, a pillow, a book, or whatever is available and HOLD ON until shaking stops. For other accessibility recommendations see EarthquakeCountry.org/accessibility.

People in California are encouraged to download the MyShake app to receive earthquake alert messages on their cellphone.

ShakeOut Drill Broadcast in English




#ShakeOut

ShakeOut.org

ShakeOut. Don't Freak Out.

October 19, 2023 Register now at ShakeOut.org



ShakeOut.org/messaging

- Social media messaging #ShakeOut
- News release templates
- Downloadable earthquake safety videos
- Video Conference backgrounds
- Animated GIFs and more!

Post 1:

Have you registered for ShakeOut yet? We did! JOIN US in the world's largest earthquake drill on October 19: [ShakeOut.org/register](https://www.shakeout.org/register).



Suggested Alt Text: Social media banner for ShakeOut 2023, with the text "Join us in the world's largest earthquake drill," and a link to ShakeOut.org.

CONTACT: **Your Name, Agency** FOR IMMEDIATE RELEASE
Mobile/Desk Phone #
Your email

FIFTH ANNUAL "GREAT YOUR REGION SHAKEOUT"
SET FOR OCTOBER 19, 2017
All citizens, businesses, and communities in YOUR CITY/STATE encouraged participate

CITY, St — Following FEMA's "National Preparedness Month" in September, individuals and communities throughout **YOUR REGION** will participate in the **fifth** annual **Great YOUR REGION ShakeOut** earthquake drill.

Held annually on the third Thursday of October, the *ShakeOut International Day of Action* is set for Thursday, **October 19, 2017 at 10:19 a.m.** During the self-led drill, participants practice how to "Drop, Cover, and Hold On". Endorsed by emergency officials and first responders, the safe response to an earthquake is to:

DROP where you are, onto your hands and knees. This position protects you from being knocked down and also allows you to stay low and crawl to shelter if nearby.

COVER your head and neck with one arm and hand

- If a sturdy table or desk is nearby, crawl underneath it for shelter
- If no shelter is nearby, crawl next to an interior wall (away from windows)
- Stay on your knees; bend over to protect vital organs

HOLD ON until shaking stops

- Under shelter: hold on to it with one hand; be ready to move with your shelter if it shifts
- No shelter: hold on to your head and neck with both arms and hands.

(Insert any recent or memorable earthquake events here) The April 2015 M7.8 Nepal earthquake and M8.3 September 16, 2015 earthquake near **Illapel**, Chile serve as reminders that large earthquakes can occur with little to no warning. Citizens in the central U.S. are not immune to earthquakes—the region is home to several active seismic zones capable of producing damaging earthquakes, including the New Madrid and Wabash Valley Seismic Zones.

According to Spokesperson Name/Title Here, "While damaging earthquakes here may be fewer in number when compared to other areas, they can occur at any time wherever we work, live, or travel within the region and beyond. Everyone, everywhere should know how to protect themselves from an earthquake."

The ShakeOut is free and open-to-the-public, and participants include individuals, schools, businesses, local and state government agencies, and many other groups. To take part in the ShakeOut, individuals and organizations are asked to join the drill by registering to participate www.shakeout.org. Once registered, participants receive regular information on how to plan their drill and become better prepared for earthquakes and other disasters.



Step 6: Improve Safety

DURING

- Evacuate if necessary
- Help the injured
- Prevent further injuries or damage



EarthquakeCountry.org/step6

Evacuation (If Needed)

- If there is **building damage, a fire, or other hazard**, safely go to your planned meeting place (Step 2).
- If you feel shaking and are **near the coast**, move to higher ground once you can safely move. Tsunami waves can arrive within minutes. Distant-source tsunamis may have official alerts and more time to evacuate. Learn more at [TsunamiZone.org](https://www.tsunamiZone.org).
- Remember to bring your Go-Bag!



[EarthquakeCountry.org/step6](https://www.earthquakeCountry.org/step6)

Help the Injured & Prevent Damage

Help the injured:

- Check your first aid kit for instructions or a first aid app.
- Ask permission before helping someone else.
- If someone is bleeding, put direct pressure on the wound.
- If someone is not breathing, provide hands-only CPR
- Do not move a seriously injured person unless there is danger of further injury.
- Call 9-1-1 to request medical help for serious injuries.

Prevent further damage:

- Move or secure items that may fall during aftershocks
- Use a fire extinguisher for small fires only.
- Shut off the gas only if you smell or hear a gas leak.
- Use flashlights instead of lighting candles or matches.

EarthquakeCountry.org/step6

Step 7: Reconnect and Restore

AFTER

- Restore daily life
- Reconnect with others
- Repair damage
- Rebuild community



EarthquakeCountry.org/step7

Step 7: Reconnect and Restore

During the first weeks after the earthquake:

- If your gas was turned off, contact the gas company
- Visit [FEMA.gov/assistance](https://www.fema.gov/assistance) to learn what might be available.
- If you need repairs, check that your contractor is licensed.
- Talk with others about how they are feeling, and help them seek counseling if needed.

If you cannot stay in your home:

- Shelters may be overcrowded; staying with friends or family, or in a hotel, may also be options.
- Tell a neighbor and your out-of-area contact where you are going.
- Only take your Go-Bag and absolutely essential items to a shelter.
- Have a plan for pets in case they cannot stay with you.

[EarthquakeCountry.org/step7](https://www.earthquakecountry.org/step7)

Together We Prepare

- Start preparing *TODAY!*
- Share information with your family, friends, & community
- Become engaged in community preparedness & other stakeholder opportunities (CERT, RYLAN, Red Cross, ECA...)



Connect with ECA & ShakeOut

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

- ShakeOut.org
- ShakeOut.org/espanol
- info@shakeout.org
- [Twitter.com/shakeout](https://twitter.com/shakeout)
- [Facebook.com/greatshakeout](https://facebook.com/greatshakeout)
- [Instagram.com/greatshakeout](https://instagram.com/greatshakeout)

