ECA's Safer at Home Webinar Series

Step 6: Improve Safety (After Earthquakes)







EarthquakeCountry.org/step6

Terremotos.org/paso6

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Earthquake Country Alliance

- 3000+ Public-Private-Grassroots leaders
- Statewide Sector-based committees and Outreach Bureaus develop resources and deliver programs
- Local Regional Alliances organize meetings and outreach activities
- California's Office of Emergency Services provides FEMA funding for ECA activities
- USC's Southern California Earthquake Center administers ECA



Join Us: EarthquakeCountry.org/alliance



Safer at Home Webinar Series

Step 1 – Secure Your Space: June 30

Step 2 – Plan to Be Safe: August 19

Step 3 – Organize Disaster Supplies: September 2

Step 4 – Minimize Financial Hardship: September 23

Step 5 – Drop, Cover, and Hold On: September 30

Step 6 – Improve Safety: October 28

Step 7 – Reconnect & Restore: Mid-November

EarthquakeCountry.org/SaferAtHome

Step 6: Improve Safety Webinar Team

Host

 Janet Ruiz (Director – Strategic Communications, Insurance Information Institute & Media Bureau Coordinator, Earthquake Country Alliance Bay Area)

Presenters

- Margaret Vinci (Manager, Caltech Office of Earthquake Programs & Chair, Earthquake Country Alliance Southern California)
- Morgan Page (Research Geophysicist, USGS)
- Glen Granholm (Vice President, Safe-T-Proof)
- Scott O'Connell (Regional Disaster Officer, American Red Cross Central California Region)
- Yvette LaDuke (Tsunami Planning Coordinator, California Governor's Office of Emergency Services)

Moderators

- Mark Benthien (Associate Director, So. California Earthquake Center (SCEC) @ USC & Executive Director, Earthquake Country Alliance)
- Sharon Sandow de Groot (Director for Strategic Partnerships, SCEC @ USC & Deputy Director, ECA)
- Jason Ballmann (Communications Manager, SCEC @ USC & Media/Participation Bureaus Liaison, ECA)

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Step 6 Webinar Agenda

- 1. Personal and Neighborhood Safety
- 2. Communicating and staying informed
- 3. Being alert for aftershocks (and what to expect)
- 4. If, when, and how to evacuate:
 - a) Due to damage/fire or as an element of safety plans
 - b) When shaking is felt near the coast, or if there is a tsunami warning
- 5. Helping the injured
- 6. Preventing further injuries or damage



After an Earthquake...



Roads may be impassible



Transportation unavailable

After an Earthquake...



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

Getting accurate information will be difficult





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Staying Safe After the Earth Shakes



Margaret Vinci

Manager

Caltech Office of Earthquake Programs

& Chair, ECA SoCal



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?



EarthquakeCountry.org/step3

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Purpose: prevent injury and improve safety immediately after shaking Cut feet and hands Tripping over objects Open jammed doors Help injured



Under-Bed Bags

Essential Items:

- · Sturdy shoes
- Flashlight/batteries or miners light
- Work gloves
- Glasses









Secondary Items:

- Hard Hat w/ miners light
- Protective clothing
- Crow Bar
- Whistle
- First Aid Kit
- Water
- Face Mask











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How to Signal Rescuers

- Teach everyone in your household to use emergency whistles and/or to knock three times repeatedly if trapped.
- Rescuers searching collapsed buildings will be listening for sounds.
- Keep one in every room of the house, car, pocket, etc.



Immediately After an Earthquake

- Put on protective clothing
 - Long pants, long sleeved shirt
- Check for injuries help others
- · Smell gas turn off
- Turn off water to the house
- Place Help or OK sign in the window











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• Grab "Go Bag" and take to neighborhood meeting place

· If near water, go to high ground

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Remain Connected: Personal Support Team

AT LEAST 3 PEOPLE

Who can come to your assistance immediately

Practice:

- · How to assist you
- Use of assistive devices
- Evacuating you with your supplies
- Emergency Drills/Exercises



Keep Exits and Pathways Clear





Secure Furniture, TVs, and other Objects to Prevent Damage, Injury, and Blocked Exits

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Secure Furniture (In advance!)









Use flexible nylon straps (adhesive with Velcro or fasteners)

Seniors and People with Disabilities Resources

- Earthquake Preparedness Guide for People with Disabilities and Other Access or Functional Needs
- Adapts messaging from ECA's Seven Steps to Earthquake Safety
- EarthquakeCountry.org/disability

Earthquake Preparedness Guide for Seniors, People with Disabilities, and Others with Access and Functional Needs (AFN)

Senior. People with Disabilities, and others with Access and Functional Needs (AFN)

Senior. People with Disabilities, and others with Access and Functional Needs (AFN) may have additional needs before, during and after an earthquake.

Questions to consider:

• What can you do independently and where may you need asistance?

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Communication - Let people know you are OK

- Register on the Red Cross "Safe and Well" website so people will know you are okay:
- Phone service may be out.
 When possible, text or call
 your out-of-area contact and
 tell them where you are,
 THEN STAY OFF THE
 PHONE. This will allow calls to
 be made for emergencies.





Stay Informed

- · Check your battery-powered radio for a news station that is on the air. Listen for announcements and alerts.
- Also, listen to your NOAA Weather Radio for emergency information.
- Sign up for city, county, and/or state emergency alert systems to receive information via text, or download apps that provide similar information. (California: CalAlerts.org.)
- Your smart phones and computers are a great resource for information, as long as you have power or can recharge your batteries.







Ham Radio

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Earthquake Early Warning Options

Download from App Store:

- MyShake App
- ShakeAlertLA
- QuakeAlertUSA













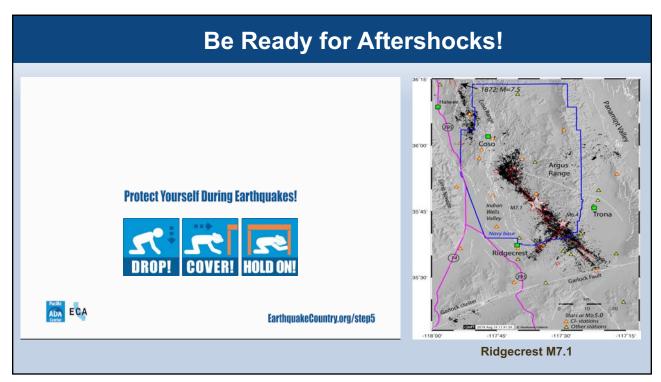
Push Notification:

- Wireless Emergency Alerts (WEA)
- Google Android OS





ShakeAlert.org





Please type your questions into the "Q&A" tool.

We will try to answer all questions, either in writing or via discussion "live"

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After the Quake Understanding Aftershocks



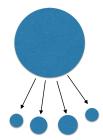
Dr. Morgan Page U.S. Geological Survey Pasadena CA

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How scientists model aftershocks (like epidemics!)

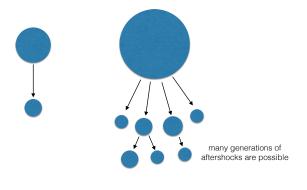
All earthquakes potentially trigger aftershocks, but big earthquakes trigger more





How scientists model aftershocks (like epidemics!)

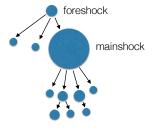
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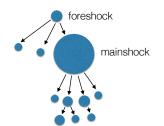
How scientists model aftershocks (like epidemics!)

There is a small chance (~5%) that an earthquake will trigger an aftershock bigger than itself



How scientists model aftershocks (like epidemics!)

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A foreshock is just a mainshock whose aftershock is bigger than itself

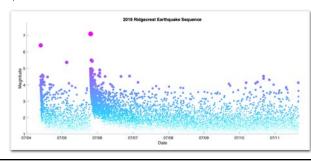
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Contract Analysis and and analysis analysis and analysis analysis and analysis and

2019 Ridgecrest Earthquake Sequence

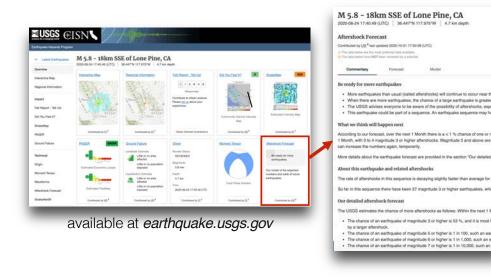
M6.4 preceded the M7.1 by 34 hours

Graphic: NYTimes, Data: USGS



- ★ Aftershocks become less numerous as time passes
- ★ Most aftershocks are close to the mainshock rupture area
- ★ Even late in the sequence, big aftershocks are possible

The USGS issues aftershocks forecasts after all M5+ earthquakes in the US



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How Do you Know if You Need to Go?



Glen Granholm Vice President Safe-T-Proof

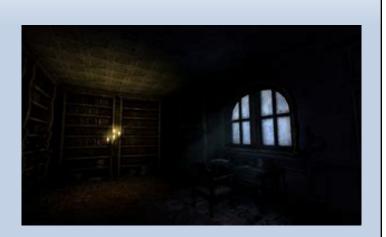


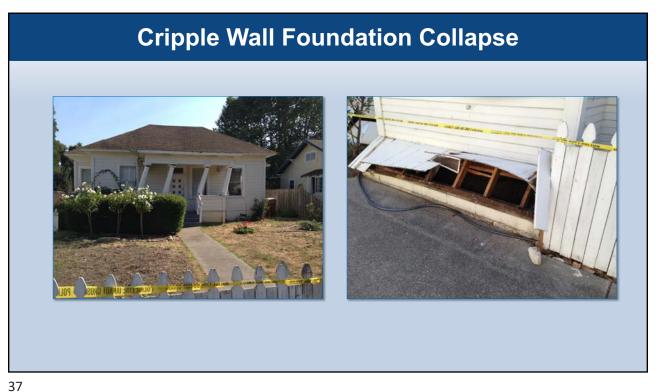
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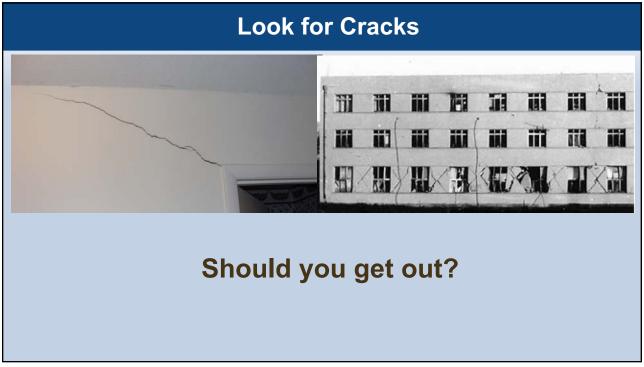
Is it Safe?

THE POWER IS OUT

I CAN'T SEE A DARN THING!







Vulnerable Buildings





1989 Loma Prieta
6 of 7 collapsed buildings were four story corner apartments with first story parking

1994 Northridge

200 weak story buildings suffered damage or collapsed

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Q&A

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Tsunamis: Are You in the Zone?

When to Evacuate, and Where to Go



Yvette LaDuke
Tsunami Planning Coordinator
California Governor's Office of
Emergency Services



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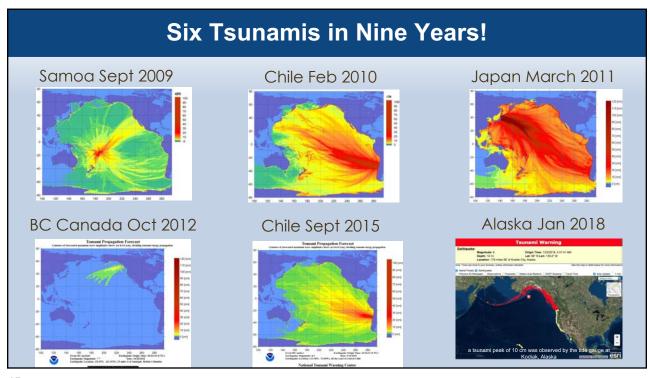
What is a Tsunami?

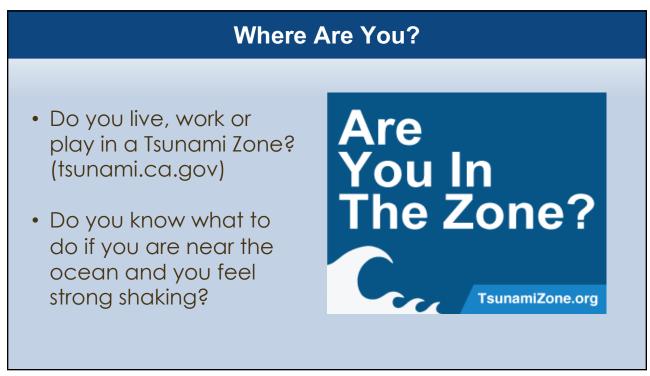
Origin:

Japanese Tsu = Harbor Nami = Wave



- A series of large ocean waves produced especially by submarine earth movement or volcanic eruption.
- Cannot be Surfed No Face & Usually Debris-Filled









Local Tsunami Threat

Natural Warning Signs

- Feel Strong Earth Shaking
- See Water Receding, Exposing Sea Floor
- Hear Loud Ocean Roar



If one or more natural warning signs occurs – go immediately to high ground or inland and stay there.

You may only have **minutes** before a tsunami arrives!

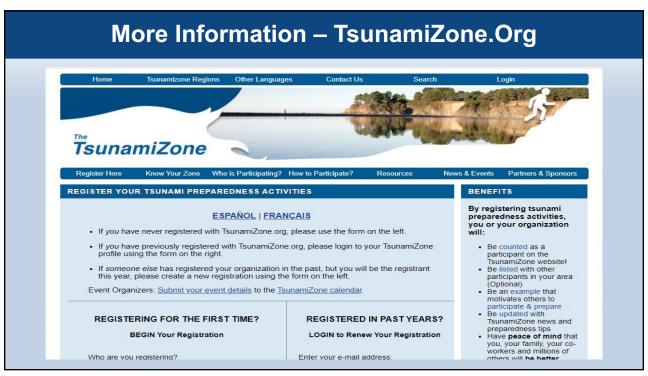
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Earthquakes Near the Ocean OROP! COVER! HOLD ON! Protect Yourself During Earthquakes GO TO HIGH GROUND OR INLAND! The Shaking is Your Tsunami Warning STAY THERE! Tsunami Waves May Arrive for Hours

What Should I Do?

- Be Informed
- Be Prepared
- Sign-up for Local Emergency Notifications
- Listen to Instructions from Local Emergency Responders
- Walk the Evacuation Route if Possible (practice walking route)
- <u>Last Resort</u>: If You Cannot Evacuate the Area, Go to the Fourth or Higher Floor of a Sturdy Concrete/Steel Building
- If You Are Outside the Tsunami Hazard Zone Take No Action / Stay put

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Helping the Injured After Earthquakes



Scott O'Connell
Regional Disaster Officer
American Red Cross
Central California Region



First things first

Who is the most important person on this call?

YOU ARE

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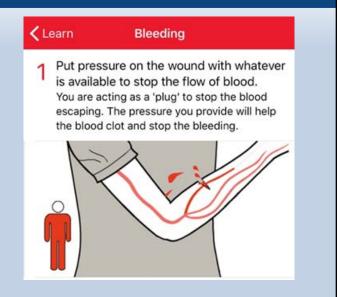
First steps

- Get medical help for serious injuries.
 Call 9-1-1 if available
- Do not move seriously injured persons unless they are in immediate danger of further injury.



First Aid

- Check your first aid kit for detailed instructions on first aid measures (or install the Red Cross First Aid App if you have service).
- If a person is bleeding, put direct pressure on the wound. Use clean gauze or cloth, if available.



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Hands only CPR

 If a person has no pulse, begin <u>Hands Only CPR</u> (cardiopulmonary resuscitation).



American Red Cross Trainings

- Take a Red Cross first aid and CPR training course.
- Take a disaster preparedness class
- Donate Blood
- Download our Emergency App



www.redcross.org

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Know Your Neighbors

- Work with your neighbors to identify who has skills and resources that will be useful in an emergency.
- Learn who may need special attention (children, elderly, disabled, etc).



Take CERT Training

 Check with your city or county to see if there is a Community Emergency Response Team (CERT) in your area.



• If not, ask how to start one.

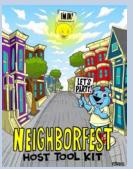
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Neighborhood Programs

- Learn about neighborhood preparedness programs such as:
 - Ready Your LA Neighborhood
 - Map Your Neighborhood
 - Neighborfest









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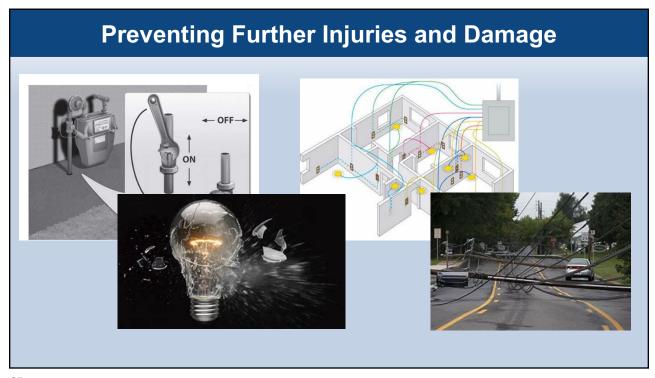
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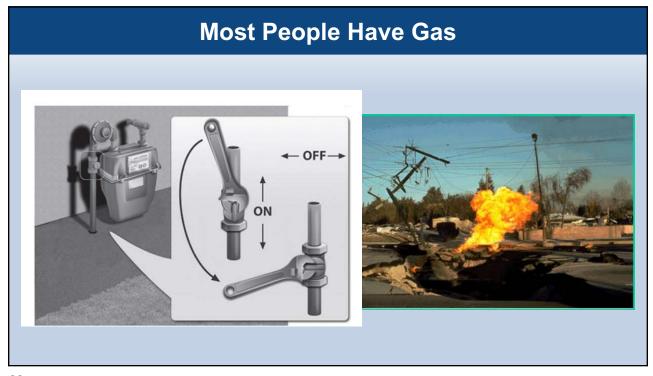
How to Prevent Further Injuries and Damage

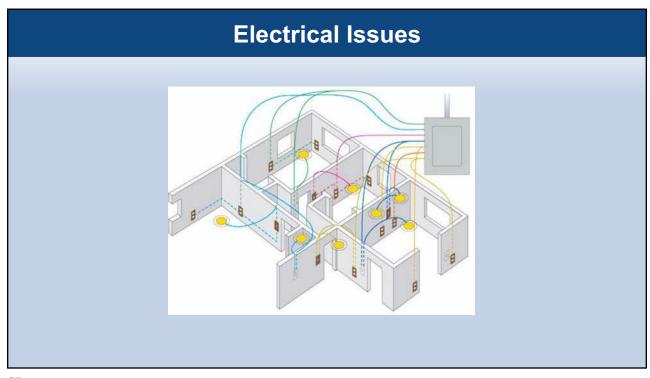


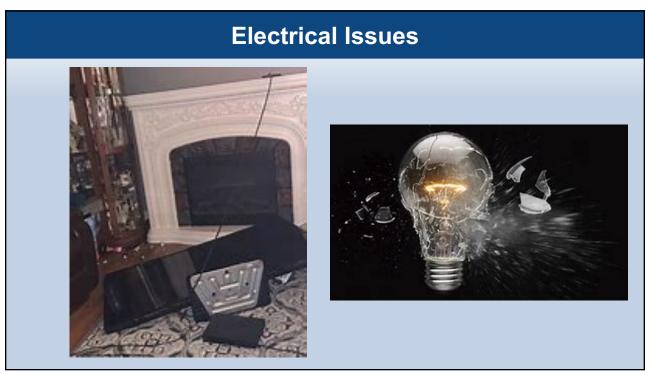
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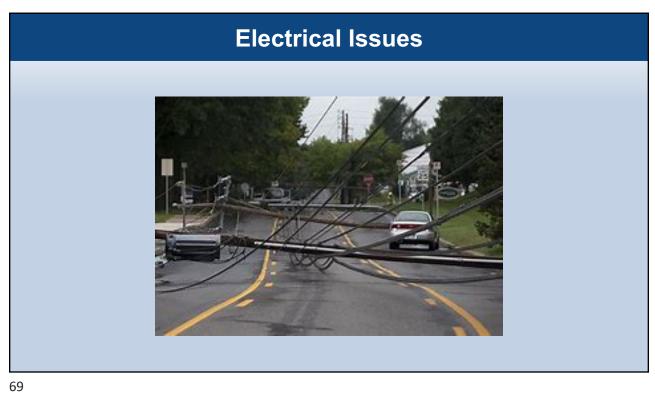








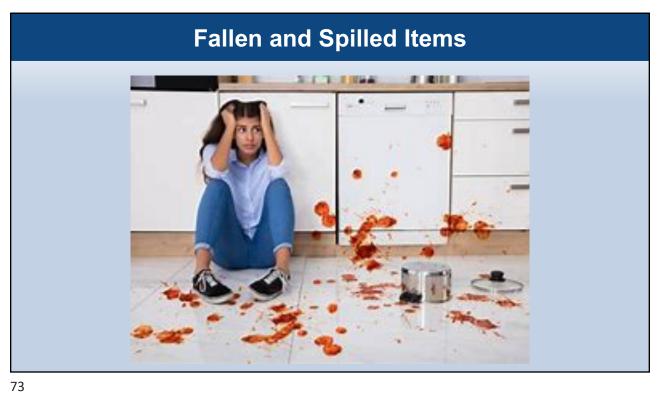
















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Emergency Financial First Aid Kit

- · Build a Kit
 - Emergency Financial First Aid Kit (EFFAK)
 - -Store the kit
 - -Maintain the Kit

ready.gov/financial-preparedness



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Great ShakeOut Earthquake Drills October 15

Step 6 – Improve Safety: October 28

Step 7 – Reconnect & Restore: Mid-November

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ECA's Safer at Home Webinar Series

Step 6: Improve Safety (After Earthquakes)



Thank you!



Please take our survey: surveymonkey.com/r/XNVKR2V

Questions? info@earthquakecountry.org

Look for the Survey (now) and Webinar Recording (next week) at EarthquakeCountry.org/SaferAtHome