Great ShakeOut Earthquake Drills

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Southern California Earthquake Center @ USC
and
Earthquake Country Alliance
Great ShakeOut™ Earthquake Drills

Annual multi-state, multi-country, all-sector preparedness events when millions of people practice

Many do much more! Register at ShakeOut.org.
ShakeOut History

• Began in Southern California in 2008
  – Based on comprehensive “ShakeOut Scenario” created by USGS and many partners for a 7.8 magnitude earthquake
  – Became the scenario for a state-led emergency management exercise
  – ShakeOut drill created by Earthquake Country Alliance partners to involve families, schools, and organizations
  – 5.4 million Southern California participants

• More participants and additional states/countries each year
  – 2009: 6.9 million statewide in California
  – 2010: 8 million in California, Nevada, and Guam
  – 2011: 12.1 million, 15 states/territories & British Columbia
  – 2012: 19.4 million, 26 states/territories, 5 countries with official drills
  – 2013: 24.7 million, 44 states/territories, expansion worldwide
Why Do People Get Prepared?

Research by Mileti, Bourque, and others:

- 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

The ECA and ShakeOut put these findings into practice
What is the ShakeOut?

The ShakeOut inspires discussion (about earthquakes) and taking action as individuals, organizations & communities.

Millions of other people see & discuss:

DROPPED! COVERED! HELD ON!

and other areas have been watching…
ShakeOut Goals

• Participation of millions of people
  • Participants practice how to protect themselves: Drop, Cover, and Hold On!
  • Register at www.ShakeOut.org/

• Shift the culture about earthquakes & preparedness
  • Get people talking with each other about preparedness
  • Come together around a common vision for a resilient California

• Increase in earthquake readiness at all levels
  • Whole Community: Families, communities, schools, non-profits, businesses, government, and all others…
  • Build Resilience: Our capacity to survive, stabilize, and recover quickly
Nationwide and International

Participating States, Territories, Provinces, & Countries

- **Oct 17 (43)**
- **April 17 (1)**
- **International 10/17 (2)**
  (Others Various Dates)

Multi-state regions:
- Central US ShakeOut
- Southeast US ShakeOut
- Northeast US ShakeOut
- Rocky Mountain ShakeOut
Everyone... Everywhere!

- **Shakeout.Org** links to all Official ShakeOut Regions

- 2013: 21 state/regional ShakeOut websites each with custom resources and lists of participants

- People in any state or country can now also register (in English or Spanish) and be counted in the global total
www.shakeout.org/california
<table>
<thead>
<tr>
<th>Category</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total:</strong></td>
<td><strong>7,751,531</strong></td>
</tr>
<tr>
<td>Individuals/Families</td>
<td>5,332</td>
</tr>
<tr>
<td>Childcare and Pre-Schools</td>
<td>13,297</td>
</tr>
<tr>
<td>K-12 Schools and Districts</td>
<td>5,329,571</td>
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<tr>
<td>Colleges and Universities</td>
<td>1,177,929</td>
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<tr>
<td>Local Government</td>
<td>267,025</td>
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<tr>
<td>State Government</td>
<td>92,983</td>
</tr>
<tr>
<td>Federal Government (Including Military)</td>
<td>125,943</td>
</tr>
<tr>
<td>Tribes/Rancherias</td>
<td>1,503</td>
</tr>
<tr>
<td>Businesses</td>
<td>406,386</td>
</tr>
<tr>
<td>Healthcare</td>
<td>111,055</td>
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<tr>
<td>Senior Facilities/Communities</td>
<td>7,945</td>
</tr>
<tr>
<td>Disability/AFN Organizations</td>
<td>4,299</td>
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<tr>
<td>Non-Profit Organizations</td>
<td>19,877</td>
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<tr>
<td>Neighborhood Groups</td>
<td>15,034</td>
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<tr>
<td>Preparedness Organizations</td>
<td>2,151</td>
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<tr>
<td>Faith-based Organizations</td>
<td>151,984</td>
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<tr>
<td>Museums, Libraries, Parks, etc.</td>
<td>5,235</td>
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<td>Volunteer/Service Clubs</td>
<td>375</td>
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<td>Youth Organizations</td>
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<tr>
<td>Animal Shelter/Service Providers</td>
<td>140</td>
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<tr>
<td>Agriculture/Livestock</td>
<td>10</td>
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<tr>
<td>Volunteer Radio Groups</td>
<td>617</td>
</tr>
<tr>
<td>Science/Engineering Organizations</td>
<td>741</td>
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<tr>
<td>Media Organizations</td>
<td>11,456</td>
</tr>
<tr>
<td>Other</td>
<td>277</td>
</tr>
</tbody>
</table>

**Southern California West**

- Los Angeles: 2,757,388
- Orange: 824,419

**Southern California East**

- Imperial: 23,232
- Riverside: 564,627
- San Bernardino: 510,688

**San Diego County**

- San Diego: 543,675
LOCAL GOVERNMENT AGENCIES IN CALIFORNIA

375,576 participants are registered for Great ShakeOut Earthquake Drills worldwide in 2013, by 982 local government agencies.

249,872 of these participants are registered for the 2013 California ShakeOut, by 172 local government agencies.

The local government agencies on the list below agreed to be listed when they registered. (Not listed?)

Names are linked if a website was provided during registration.

7.3 million registered 2 months, 16 days until ShakeOut on 10/17

OTHER LISTS

Participants in other categories:
Select a category... Go

Local government agencies in other areas:
Select an area or county... Go

Participation totals:
Select an area or county... Go

NON-PROFIT ORGANIZATIONS IN CALIFORNIA

40,696 participants are registered for Great ShakeOut Earthquake Drills worldwide in 2013, by 465 non-profit organizations.

16,842 of these participants are registered for the 2013 California ShakeOut, by 136 non-profit organizations.

The non-profit organizations on the list below agreed to be listed when they registered. (Not listed?)

Names are linked if a website was provided during registration.

7.3 million registered 2 months, 16 days until ShakeOut on 10/17

OTHER LISTS

Participants in other categories:
Select a category... Go

Non-profit organizations in other areas:
Select an area or county... Go

Participation totals:
Select an area or county... Go

LIST

Page: 1 2  Next >

Alameda
City of Oakland, Keep Oakland Clean and Beautiful Division, Oakland
City of Oakland, Public Works Agency, Oakland
County of Alameda, Probation Department, Oakland
Hayward Area Recreation and Park District, Hayward

Colusa
Colusa County Sheriff’s Office, Office of Emergency Services, Colusa

Contra Costa
City of Lafayette, Lafayette
Contra Costa County Vocational Services, Concord
County of Contra Costa, Office of the Sheriff, Emergency Services Division, Martinez
Moraga-Orinda Fire District, Moraga

Del Norte
Big Rock Community Services District, Crescent City
County of Del Norte, Department of Health and Human Services, Mental Health Branch, Crescent City
Del Norte Local Transportation Commission, Crescent City

Humboldt
County of Humboldt, County Administrative Office Team, Administrative Office, Eureka
Department of Health and Human Services, Social Services Branch, DR Collections Unit, Eureka
Humboldt County Public Works, Roads Division, Eureka
Humboldt County Public Works Department, Public Works, Eureka
Humboldt County Risk Management, Risk Management, Eureka

Imperial
County of Imperial, Imperial County Public Health Department, Imperial County EMS Agency, El Centro
Imperial County Medical Reserve Corps, El Centro
Imperial County Office of Emergency Services, Helix

Kern

Los Angeles
A Place Called Home, Los Angeles
Academy of Television Arts & Sciences, North Hollywood
AIDS Project Los Angeles, Los Angeles
Albert Jewish Community Center, Long Beach
Behavioral Health Services Inc, Behavioral Health Services, Long Beach
California Association of Retirees, Los Angeles

Other Lists

Participants in other categories:
Select a category... Go

Non-profit organizations in other areas:
Select an area or county... Go

Participation totals:
Select an area or county... Go
NOW YOU CAN SHAKEOUT ANYWHERE!

Are you prepared to survive and recover quickly when a big earthquake happens in your area?

Mark your calendars! Millions of people worldwide will practice Drop, Cover, and Hold On at 10:17 a.m. on October 17th!

Most people participate in Official ShakeOut Regions (see list above).

Start here to be included in the 2013 ShakeOut!

*You can hold your drill at any time within 2 weeks of October 17th.

CHECK THE STATS

As more people and organizations register, these totals will grow larger. Please encourage others to ShakeOut!

Oct. 17, 2013 Total: over 3.7 million
Participants in ShakeOut regions: over 3.7 million
Participants in other areas: over 2,000
2013 Global Total: over 4.5 million

PLAY AND SHARE

PLAY BEAT THE QUAKE

QUAKE QUIZ

Earthquake by the American Red Cross
Download the FREE app today!
<table>
<thead>
<tr>
<th>Country</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>20 October</td>
</tr>
<tr>
<td>Angola</td>
<td>17 October</td>
</tr>
<tr>
<td>Australia</td>
<td>25 and 27 October</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>17 October</td>
</tr>
<tr>
<td>Burundi</td>
<td>17 October</td>
</tr>
<tr>
<td>Canada</td>
<td>17, 18 and 19 October</td>
</tr>
<tr>
<td>India</td>
<td>17 October</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>17 October</td>
</tr>
<tr>
<td>Kenya</td>
<td>17 and 19 October</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>17 October</td>
</tr>
<tr>
<td>Madagascar</td>
<td>17 October</td>
</tr>
<tr>
<td>Mozambique</td>
<td>17, 18 and 19 October</td>
</tr>
<tr>
<td>New Zealand</td>
<td>25 and 27 October</td>
</tr>
<tr>
<td>Pakistan</td>
<td>24 October</td>
</tr>
<tr>
<td>Rwanda</td>
<td>17 October</td>
</tr>
<tr>
<td>South Africa</td>
<td>17 and 19 October</td>
</tr>
<tr>
<td>Switzerland</td>
<td>17 October</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>24 and 25 October</td>
</tr>
<tr>
<td>United Arab Emirates</td>
<td>1 November</td>
</tr>
<tr>
<td>United States</td>
<td>24 and 26 October</td>
</tr>
</tbody>
</table>
www.shakeout.org/espanol
Great Japan ShakeOut

The Great Japan ShakeOut 2014 の登録者数 64,320 名

日本シェイクアウト 参加登録者総数
2014(平成26年) 64,320名
2013(平成25年) 2,226,890名

主催団体
都道府県
市町村その他

1. しゃがむ！ DROP
2. かくれる！ COVER
3. まつ！ HOLD ON
• Public and Private Partners
  – Many people and organizations working together to promote and improve preparedness, mitigation, and resilience

• A Whole Community approach
  – Customized information for over 20 categories of participants

• ShakeOut.org website
  – Online registration and listing of participants
  – Instructions for many types of organizations

• ShakeOut Drill Manuals
  – Schools, Businesses, Organizations, and Government Agencies
  – Multiple levels of drills (simple to advanced)

• Drill Broadcasts (audio and video narrated instructions)

• Radio, TV, and print promotion and PSAs

• Extensive traditional and social media coverage/interaction
ECA is a public-private partnership of people, organizations, and regional alliances, founded in 2003 in Southern California and expanded statewide in 2009.

Each regional alliance conducts its own activities and collaborates with the others.

Statewide committees determine long-range plans, sector-based needs, and develop resources.

Significant support for ECA provided by FEMA.

Join today: www.earthquakecountry.org/alliance
Strategic Partners

California Emergency Management Agency
Southern California Earthquake Center
United States Geological Survey
Federal Emergency Management Agency
California Earthquake Authority
California Geological Survey
American Red Cross
State Farm Insurance
Many Others
ECA Sector-Based Committees

- Businesses
- Communications
- EPIcenters (museums, parks, libraries, etc.)
- Evaluation
- Fire Advisory Cmte. (2013 subtheme)
- Government EM & Elected Officials
- Healthcare
- K-12 Schools
- Non-Profits and Faith-Based Organizations
- Seniors and People with Disabilities
Business Committee: Countdown

- Countdown to ShakeOut for Organizations
- Building partnerships with business networks
- Seven Steps to an Earthquake Resilient Business

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**Countdown to ShakeOut for Organizations**

6. Register your organization as an official participant in a ShakeOut Drill at www.ShakeOut.org/regions
   - Register the number of people participating organization-wide
   - Encourage employees to also participate if at home and register as an individual or as a family; invite friends and neighbors to register as individuals or organizations

5. Meet with department heads to review plan and obtain their buy-in, if necessary, and determine what level of drill your organization will conduct and who will participate. Consider drilling at a higher level to engage staff to be more effective during a disaster. (Drill manuals are available in the ShakeOut website Resources section)
   - Level 1 – Simple: Drop, Cover and Hold On
   - Level 2 – Basic: Life Safety Drill
   - Level 3 – Intermediate: Decision-Making Drill
   - Level 4 – Advanced: Business Operations Simulation Drill

4. Create a drill/exercise plan that includes overview of what your drill will consist of (even if just Drop, Cover and Hold On), what you expect to happen during the drill, and a feedback session after the drill to identify strengths and weaknesses
   - Inform employees/staff participants of date and time of drill, your expectations for their participation, and the benefits of the drill

3. Encourage suppliers, vendors, contractors, partnering organizations, and others in your network to participate – as a means of protecting your organization – and share ShakeOut resources with them. (Consider other tasks that can protect your organization, such as having Service Level Agreements in place to ensure that the services or products you rely on will be available after disaster.)

2. Create employee awareness campaign:
   - Hang ShakeOut banners and signs throughout your organization to encourage and remind employees, vendors, and customer to participate
   - Initiate an email campaign to employees, staff, and customers with information and tips on how to prepare at home and work
   - Encourage employees to post a ShakeOut-related safety message on their outgoing email messages.

1. Review and use ShakeOut materials in the Resources section of the website
   - Drill manuals; Drill broadcast; banners, posters, PowerPoint presentation; 7 Steps to an Earthquake Resilient Business booklet; etc.

0. Hold your drill on ShakeOut day (or an alternative date, if necessary)
   - Hold post-drill discussions to hear what people learned and plan next steps
Earthquake Preparedness Guide for People with Disabilities and Other Access or Functional Needs

Organized according to Seven Steps to Earthquake Safety

Think about What May Happen During and after an Earthquake or other Disaster:
Consider your daily activities; think about how a disaster will impact your life. Take into consideration what you do independently and where you may need assistance. Keep in mind that your regular sources of assistance may not be available after a disaster. Plan now for how you will meet your needs.

- What if power, gas, and phone lines are not working?
- What if roads and sidewalks are impassible or your means of transportation is unavailable?
- How will you maintain supplies of water, food, medications, and other critical needs?
  - Right now: Make a list of equipment and medication you may need if you had to leave your home. Store extras, labeled with your name and contact information, in your disaster supplies kit. (See Step 3, below)

This guide follows the Seven Steps to Earthquake Safety, featured in the Putting Down Roots in Earthquake Country series of publications at www.earthquakecountry.org/roots. The content has been specially adapted for people with disabilities and other access and functional needs.

STEP 1 – Secure Your Space, by identifying hazards and securing moveable items:
When you enter a room, look for safe places to “Drop, Cover, and Hold On” (see Step 5).

- Safe spaces are places where heavy or falling objects and breaking glass won’t injure you, such as under tables or desks, along inside walls, etc.
- The more limitations you have, the more important it is to create safe spaces for yourself - especially if you cannot Drop, Cover, and Hold On under a desk, table, etc.
- Create safe spaces by bolting heavy furniture to wall studs, moving heavy items to low shelves, securing hanging art to walls with closed hooks, or taking other measures found at http://www.daretorembrace.org/secure_your_stuff.html
- Secure essential equipment such as oxygen tanks or other life support devices, so they won’t fall and be damaged or cause injury.
- When you are in public places, be aware of your surroundings and identify your safe spaces.
State Government Involvement

- Focused effort in 2012
- Letters sent to all state cabinet secretaries from CalEMA Secretary
- Agency registration tracked for follow-up
- Registration by ~90% of State legislator offices
Mitigation Messaging/Activities

- **Buildings at Risk Summit**
  - 2011 & 2012: So Cal
  - 2013: So Cal and Bay Area

- **Secure Your Space**
  - Expanded content at new earthquakecountry.org site
  - Additional ShakeOut guidance
  - Featured in every major CA ShakeOut media event (*Big Shaker* earthquake simulator)

- **Beat the Quake**
  - Play at dropcoverholdon.org
Yearly Sub-themes

- 2010: Secure Your Space
- 2011: Earthquake Safety in Retail
- 2012: Commuter/Transportation aspects
- 2013: Fire Following Earthquake
- 2014: Tsunami (most likely)
Tsunami Messaging

• Suggestions for how to organize a tsunami drill with ShakeOut, developed with California Geological Survey

ShakeOut plus Tsunami Evacuation-WalkOut Drill

Add a tsunami evacuation drill to your ShakeOut Drill

First, find out if you live, work or play in a tsunami hazard area:
• Use the links listed below to find out where tsunami hazard zones occur.

CGS website: http://www.tsunami.ca.gov
CalEMA MyHazards http://myhazards.calema.ca.gov/
• Information from either of these websites can help you identify the tsunami hazard area in your community and help you prepare. If you are located just outside of a tsunami hazard area, you might consider working with your community to see what kind of assistance you might be able to provide for potential evacuees.

Add a Tsunami Evacuation Drill to your planned ShakeOut Drill
• For ShakeOut, it is important to register in advance for the event, and on the day of ShakeOut participate in the Drop-Cover-Hold On drill. Prior to ShakeOut, use the links above to determine if you are in a tsunami hazard area. If you are, you can add an organized tsunami evacuation drill that will follow the Drop-Cover-Hold On.
• To prepare for the drill, identify if there is an evacuation plan in place for your site. Contact your building manager, school district, and/or city or county offices of emergency services to find out the recommended procedures. Additionally, the maps at www.tsunami.ca.gov and http://myhazards.calema.ca.gov/ can lead you to links to local, regional, state, and national information sources.
• If there is no tsunami evacuation plan in place for your building, learn what the recommended tsunami evacuation routes are in your city, county and region. Some cities and counties have this information available online.
• Identify an area outside the tsunami hazard zone where you can safely relocate (school, church, parking lot).
• Walk your evacuation route prior to the drill. Make sure there are no potential hazards that may prevent you from using this evacuation route safely.
ShakeOut is Social!

ShakeOut milestones, preparedness tips, and other info, with community interaction

Facebook.com/greatshakeout

Twitter.com/shakeout
## 2012 CA Organization Outcomes (N=747)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings meet current safety standards</td>
<td>71</td>
</tr>
<tr>
<td>Hazardous materials limited/eliminated/secured</td>
<td>63</td>
</tr>
<tr>
<td>Have alternate site/continuity plans</td>
<td>59</td>
</tr>
<tr>
<td>Secure tall/heavy furnishing/equipment</td>
<td>61</td>
</tr>
<tr>
<td>Encourage staff to prepare for disasters at home</td>
<td>53</td>
</tr>
<tr>
<td>Train staff in EQ preparedness</td>
<td>51</td>
</tr>
</tbody>
</table>

- **Done because of ShakeOut**
- **Done (not because of ShakeOut)**
<table>
<thead>
<tr>
<th>Outcome</th>
<th>%</th>
<th>Outcome</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazardous materials limited/eliminated/secured</td>
<td>9</td>
<td>Have alternate site/continuity plans</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>71</td>
<td>Buildings meet current safety standards</td>
<td>10</td>
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<tr>
<td></td>
<td></td>
<td>Secure tall/heavy funishing/equipment</td>
<td>14</td>
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<tr>
<td></td>
<td></td>
<td>Encourage staff to prepare for disasters at home</td>
<td>32</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Train staff in EQ preparedness</td>
<td>37</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>55</td>
</tr>
</tbody>
</table>

Done because of ShakeOut: 9/10/14/32/37

Done (not because of ShakeOut): 71/35/80/70/55
Encourage staff to prepare for disasters at home

Train staff in EQ preparedness

Hazardous materials limited/eliminated/secured

Secure tall/heavy furnishing/equipment

Buildings meet current safety standards

2012 CA District Outcomes (N=67)
2012 CA Higher Ed Outcomes (N=39)

- **Outcome**: Encourage staff to prepare for disasters at home
  - **%**: 56 (41)
  - **Legend**: Blue = Done because of ShakeOut, Gray = Done (not because of ShakeOut)

- **Outcome**: Train staff in EQ preparedness
  - **%**: 54 (33)

- **Outcome**: Have alternate site/continuity plans
  - **%**: 23 (33)

- **Outcome**: Secure tall/heavy furnishing/equipment
  - **%**: 18 (54)

- **Outcome**: Buildings meet current safety standards
  - **%**: 18 (64)

- **Outcome**: Hazardous materials limited/eliminated/secured
  - **%**: 13 (67)
Over the last 4 years, roughly 70% of individual participants have indicated that one way they have prepared for the ShakeOut is to encourage others to participate, including:

- Learning more about earthquake safety and preparedness
- Participating in the ShakeOut drill
- Visiting the ShakeOut website
Future Directions

• Longitudinal analysis

• Role of social media

• Specific influence of schools and the workplace on household preparedness

• Qualitative analysis of open ended questions, focus groups, in-depth interviews about the role of drills in preparedness behavior over time
Register and Encourage Others

• Use ShakeOut resources to educate your employees and the public about earthquake preparedness and safety (flyers, posters, manuals)

• Use ShakeOut more than just for earthquake preparedness; combine with fire or other drills, replenish supplies, etc.

• Encourage contracts with schools, universities, businesses, government agencies, and other large organizations or groups of people to register—along with friends, family, neighbors, co-workers…

• Link to ShakeOut.org from your website (web banner graphics on the Resources page)

• Use social media to highlight your own drill plans and encourage others. Invite the news media to cover your drill activities