

# Central U.S. Earthquake Awareness Toolkit

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The Federal Emergency Management Agency ([FEMA](#)), the [Ready Campaign](#), and the Central United States Earthquake Consortium ([CUSEC](#)) are teaming up to highlight the importance of earthquake awareness in the central United States<sup>1</sup>.

According to CUSEC, earthquakes occur on a regular basis in the central U.S., though they are not typically as strong as those in other parts of the country. CUSEC and [FEMA Region 7](#), along with state and local emergency management officials, want to remind communities about the risk of earthquakes by designating February as Earthquake Awareness Month.

February 7 marks the anniversary of the last of the major [New Madrid earthquakes](#) to impact the Central U.S. in the winter of 1811-12. While scientists say there is a 7-10% probability of a reoccurrence of the 1811-12 earthquakes within any 50-year window, they also estimate there is a 25-40% probability of a magnitude 6.0 or greater earthquake occurring in the central U.S. within the same period of time. Although the primary focus of CUSEC is on the [New Madrid Seismic Zone](#), it's certainly not the only area of concern. Earthquakes also occur throughout the central U.S. in states like Oklahoma, Kansas, Ohio, and Texas. Some, in fact, can be felt [multiple states away](#) from the epicenter. Earthquakes also can occur along the east coast, in states such as Virginia, North Carolina, South Carolina, and Georgia, for example.

During the month of February, CUSEC, along with numerous states, will be involved with several events intended to educate the public and private sectors, first responders, and government officials. *Due to the ongoing concerns about the COVID-19 pandemic, the events will be taking place online this year.* You can find a list of events on the [CUSEC website](#).

In addition to asking Americans to learn their risks and take action to prepare, [FEMA Region 7](#) is encouraging everyone to get the word out and help the [Whole Community](#) prepare for earthquakes. This toolkit is designed to provide you and your organization with easy-to-use tools to promote this campaign and help your stakeholders be better prepared for disasters.

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<sup>1</sup> Much of the source materials and content of this toolkit come from the Central United States Earthquake Consortium, [www.cusec.org](http://www.cusec.org).



FEMA



## FEMA Region 7 Points of Contact

Public Affairs/Digital Communications	Kristiana Sanford	<a href="mailto:Kristiana.sanford@fema.dhs.gov">Kristiana.sanford@fema.dhs.gov</a> 202-705-9959
Congressional/Intergovernmental Affairs	Michael Cappannari	<a href="mailto:Michael.cappannari@fema.dhs.gov">Michael.cappannari@fema.dhs.gov</a> 816-810-5382
Private Sector/Tribal Affairs	Michael Cappannari	<a href="mailto:Michael.cappannari@fema.dhs.gov">Michael.cappannari@fema.dhs.gov</a> 816-810-5382
National Earthquake Hazards Program	Cheickh Koma	<a href="mailto:Cheickh.koma@fema.dhs.gov">Cheickh.koma@fema.dhs.gov</a> 816-283-7067
Volunteer Agency Liaison	De'An Bass	<a href="mailto:De'An.bass@fema.dhs.gov">De'An.bass@fema.dhs.gov</a> 816-863-4745
Community Preparedness Officer	Linda Davis	<a href="mailto:Linda.davis@fema.dhs.gov">Linda.davis@fema.dhs.gov</a> 816-585-7315
Regional Preparedness Liaison	Jennifer Tarwater	<a href="mailto:fema-r7-community-preparedness@fema.dhs.gov">fema-r7-community-preparedness@fema.dhs.gov</a>
Disability Integration	Georgette Wallace	<a href="mailto:Georgette.wallace@fema.dhs.gov">Georgette.wallace@fema.dhs.gov</a> 202-549-5681

## Key Messages

- Be Aware of Earthquakes:** Earthquakes are typically thought of as a threat to the Western part of the United States, but they still pose a risk to the central U.S. It's important for everyone to understand their risk, take action to prepare, and be an example.
- Know Your Risk:** Earthquakes are a frequent occurrence in the central U.S., even if their effects are not always felt. However, should an earthquake occur, the danger generally comes from falling objects and debris, rather than directly from the movement of the ground. The amount and duration of the shaking, as well as the age of a structure greatly determines the amount of damage that may result. The first step to being prepared is to understand the type of hazards that can affect where you live and work, such as age of different structures.
- Take Action:** While most earthquakes occur with little or no warning, there are steps you can take to protect yourself and your family. By taking action today, you can reduce your vulnerability to earthquakes that may happen in the future. Find out how you can stay safe before, during, and after earthquakes with these [Seven Steps to Earthquake Safety](#):

1. **SECURE** your space by identifying hazards and securing moveable items.
  2. **PLAN** to be safe by creating a disaster plan and deciding how you will communicate in an emergency.
  3. **ORGANIZE** disaster supplies in convenient locations.
  4. **MINIMIZE** financial hardship by organizing important documents, strengthening your property, and considering insurance.
  5. **DROP, COVER, and HOLD ON** when the earth shakes.
  6. **IMPROVE** safety after earthquakes by evacuating if necessary, helping the injured, and preventing further injuries or damage.
  7. **RECONNECT and RESTORE** daily life by reconnecting with others, repairing damage, and rebuilding the community.
- **Be an example where you live:** Be a helpful influence on your community by sharing earthquake preparedness information. Be a Force of Nature by letting your friends and family know what you did to become earthquake-ready and the steps they can take to do the same.

## Talking Points

### Earthquake and Seismicity Awareness

- Earthquakes occur without warning; therefore, it is important to take steps now to prepare, especially if you live within the [New Madrid Seismic Zone](#), which is considered a High earthquake risk area.
- Earthquake shaking can move almost anything, even large or heavy items. Safe spaces are places where heavy or falling objects and breaking glass will not injure you, such as under tables or desks along inside walls. When you enter a room, look for safe spaces to protect yourself and identify emergency exits.
- Movement of the ground is seldom the actual cause of death or injury. Most casualties result from partial building collapse and falling objects and debris, such as toppling chimneys, falling bricks, ceiling plaster, and light fixtures.

### Know Your Risk

- The key to surviving an earthquake and reducing your risk of injury lies in planning ahead, preparing, and practicing what you and your loved ones will do if it happens.
- There are many places in the United States, called “seismic zones,” that are at risk for serious earthquakes. These include states along the west coast, in the south, and

in the central United States. While very strong or intense earthquakes are rare, less powerful earthquakes can also be dangerous.

- The largest clustering of major earthquakes within the U.S. happened in 1811/1812, along the sparsely populated New Madrid region of Missouri, near the Kentucky, Illinois, Tennessee, and Arkansas borders.
- Today, this area known as the New Madrid Seismic Zone (NMSZ), is more densely populated, has a complex infrastructure, a vulnerable aged building stock, many important industries and is a critical link for commerce.
- According to USGS, the 10 states with highest populations exposed to very strong ground shaking levels are California, Washington, Utah, Tennessee, Oregon, South Carolina, Nevada, Arkansas, Missouri, and Illinois. Together, these states account for over 26% of the nation's total economic exposure. Although such a level of shaking is estimated to occur relatively infrequently, it could cause significant damage and casualties. Within the central and eastern United States, the New Madrid seismic zone (NMSZ) and the Charleston South Carolina earthquake zone poses significant earthquake threat. The NMSZ could affect millions of people across eight states: Alabama, Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri, and Tennessee.
- Large earthquakes can cause social and economic disruption that can be unprecedented to any given community, and the full recovery from these impacts may or may not always be achievable. In the United States (U.S.), the 1994 M6.7 Northridge earthquake in California remains the third costliest disaster in U.S. history; and it was one of the most expensive disasters for the federal government.

## Take Action

- There are many ways individuals and communities can lessen injuries, loss of lives and economic disruption after an earthquake event. Many of these conditions are easily preventable by following and practicing these steps:
  - Practice [Drop, Cover, and Hold On](#) with family and coworkers.
  - Make an Emergency Plan: Create a [family emergency communications plan](#) that has an out-of-state contact. Plan where to meet if you get separated. [Make a supply kit](#) that includes enough food and water for several days, a flashlight, a fire extinguisher, and a whistle.
- Being prepared allows you to avoid unnecessary excursions and to address minor medical issues at home. This can minimize your chance of serious injury, allowing hospitals and urgent care centers to focus critical needs.

- You can build your emergency supply kit over time. Making a few purchases each time you go to the store will help you stock your emergency supply kit with essential items.
- If an earthquake happens, protect yourself right away:
  - If you are in a car, pull over and stop. Set your parking brake.
  - If you are in bed, turn face down and cover your head and neck with a pillow.
  - If you are outdoors, stay outdoors away from buildings.
  - If you are inside, stay and do not run outside and avoid doorways.
- After an earthquake, there can be serious hazards such as damage to the building, leaking gas and water lines, or downed power lines.
  - Expect aftershocks to follow the main shock of an earthquake. Be ready to Drop, Cover, and Hold On if you feel an aftershock.
  - If you are in a damaged building, go outside and quickly move away from the building. Do not enter damaged buildings.
  - If you are trapped, send a text or bang on a pipe or wall. Cover your mouth with your shirt for protection and instead of shouting, use a whistle.
  - If you are in an area that may experience tsunamis, go inland or to higher ground immediately after the shaking stops. You should avoid contact with floodwaters as they can contain chemicals, sewage, and debris.
  - Check yourself to see if you are hurt and help others if you have training. [Learn how to be the help until help arrives.](#)
- Once you are safe, pay attention to local news reports for emergency information and instructions via battery-operated radio, TV, social media or from cell phone text alerts.
- Register on the American Red Cross "[Safe and Well](#)" website so people will know you are okay.
- Use text messages to communicate, which may be more reliable than phone calls.
- Be careful when cleaning up. Wear protective clothing, including a long-sleeved shirt, long pants, work gloves and sturdy thick-soled shoes. Do not try to remove heavy debris by yourself. Wear a mask and maintain a physical distance of at least six feet while working with someone else. Use an appropriate mask if cleaning [mold or other debris](#). People with [asthma and other lung conditions and/or immune suppression](#) should not enter buildings with indoor water leaks or mold growth that can be seen or smelled. Children should not take part in disaster cleanup work.

## Considerations for COVID-19

- Wear a mask when in public to slow the spread of COVID-19. You may not have time to put on a mask in the event of an earthquake. Wearing one regularly will allow you to be prepared to Drop, Cover, and Hold On safely with those who are not a part of your household. Masks should not be worn by children under two, those who have trouble breathing, and those who are unable to remove them on their own.
- Engage virtually with your community through video and phone calls. Know that it's normal to feel anxious or stressed. Take care of your body and talk to someone if you are feeling upset. Many people may already feel fear and anxiety about the coronavirus 2019 (COVID-19). The threat of an earthquake can add additional stress. Follow CDC guidance for [managing stress during a traumatic event](#) and [managing stress during COVID-19](#).

## **Additional Earthquakes Resources and Videos**

[When the Earth Shakes](#)

[Earthquake Preparedness: How to Stay Safe](#)

[Earthquake Safety Video Series](#) (Great ShakeOut Earthquake Drills)

[How to Prepare for an Earthquake](#) (PDF)

[How to Prepare Your Organization for an Earthquake](#) (PDF)

[Earthquake Preparedness: What Every Childcare Provider Should Know](#) (PDF)

[Earthquake Safety at Home](#) (PDF)

[Resources for People with Disabilities](#) (Earthquake Country Alliance)

[The Great ShakeOut: Earthquake Drills](#)

[American Red Cross](#)

[Earthquake Country Alliance](#)

# PRESS RELEASE TEMPLATE

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## <ORGANIZATION> Supports Earthquake Preparedness

<CITY, St.> – <INSERT ORGANIZATION> will be supporting [Earthquake Awareness Month](#) and encouraging all to know your risk, take action, and be an example where you live. <INSERT ORGANIZATION> is <INSERT EVENT INFORMATION HERE> or <committed to supporting earthquake preparedness in the community>.

Earthquakes are a nationwide threat to the United States and its territories throughout the year. However not all earthquakes are alike. Smaller earthquakes make cause minimal damage while larger ones can cause serious structural damage, falling debris, and even changes to the landscape. Additionally, earthquakes may only be felt locally, or across multiple states.

Everyone should be aware of earthquake hazards no matter where you live or work, but especially if you live or work near a fault line like the New Madrid Seismic Zone. Even small earthquakes can cause damage and may be an indication of a larger earthquake in the near future.

<ORGANIZATION>, alongside Federal Emergency Management Agency ([FEMA](#)), and the [Ready Campaign](#) will be encouraging <EMPLOYEES OR RESIDENTS> to take action against earthquakes by:

- Building an emergency kit and making a family communications plan.
- Taking steps to mitigate damage by securing objects like bookshelves or large furniture.
- Holding a discussion, drill, or exercise.

**\*QUOTE FROM LEADERSHIP TO SUPPORT THE EARTHQUAKE PREPAREDNESS CAMPAIGN\***

More information can be found at <INSERT ORGANIZATION WEBSITE or [Ready.gov](#)>. Information on the different types of hazards is available at [Ready.gov](#) or the Spanish-language web site [Listo.gov](#).

## Online Resources

Browse the links below for additional information on earthquake safety and preparedness:

- [Ready.gov/Earthquakes](https://www.ready.gov/earthquakes)
- [Central U.S. Earthquake Consortium](#)
- [Understanding Earthquake Risk](#)
- [Earthquake Safety Tips](#)
- [Earthquake Safety Video Series](#)
- [Earthquake Preparedness Social Media and Graphics](#)
- [Earthquake Resources for People with Disabilities](#)

To promote disaster preparedness, FEMA's Emergency Management Institute (EMI) has developed training programs to encourage safety:

- For the whole community: [IS-909: Community Preparedness: Implementing Simple Ideas for Everyone](#)
- For earthquake specific awareness: [IS-325: Earthquake Basics: Science, Risk, and Mitigation](#)
- For hazard mitigation disaster workforce staff: [IS-323: Earthquake Mitigation Basics for Mitigation Staff](#)
- For architects, engineers, and contractors: [IS-8.A: Building for the Earthquakes of Tomorrow: Complying with Executive Order 12699](#)

FEMA has developed these resources to educate and inform communities about the importance of earthquake safety awareness.

- [Earthquake Informational Poster](#)
- [How to Prepare for an Earthquake](#)
- [How to Prepare Your Organization for an Earthquake](#)
- [Earthquake Preparedness: What Every Childcare Provider Should Know](#)
- [Earthquake Safety at Home](#)

## SOCIAL MEDIA

The following messaging can be used to promote earthquake preparedness. Feel free to customize the following messaging to fit your audience's needs. We would love to see everyone posting to Google+, Facebook, Twitter, Instagram, Snapchat, Pinterest and



LinkedIn. Use the following messages or create your own to share.

- Earthquakes can happen anytime, anywhere. The best time to prepare for an earthquake is before it happens. #EarthquakeSafety #EarthquakePrep
- Talk about earthquakes with your family so everyone knows what to do. Discussions ahead of time help reduce fear, particularly for younger children. #EarthquakeSafety #EarthquakePrep
- Protect your property. Secure heavy items in your home like bookcases, refrigerators, televisions, and objects that hang on walls. #EarthquakeSafety #EarthquakePrep
- Practice with family & friends by 1) Dropping to your knees, 2) Covering your head, and 3) Holding on to sturdy furniture. #EarthquakeSafety #EarthquakePrep
- Depending on your needs, there are alternatives to Drop, Cover & Hold On. If using a walker or wheelchair: Lock, Cover & Hold On. If in a recliner or bed: cover your head & neck with your arms or a pillow #EarthquakeSafety #EarthquakePrep
- Remember that aftershocks can happen after an earthquake. Text loved ones to let them know you're ok instead of calling. Save your battery by only using your phone for emergencies. Monitor local news & officials for updates. #EarthquakeSafety #EarthquakePrep
- After an earthquake happens, clean-up begins. Know how to stay safe: Wear protective clothing. Put on thick-soled shoes, work gloves, and goggles. Work with others to lift heavy objects. #EarthquakeSafety #EarthquakePrep

## Relevant Images




**Ready**®

### SECURE YOUR HOME

Make sure your house is shake proof.

1. Bolt tall furniture.
2. Secure loose objects.
3. Know how to turn off utilities.



**Listo**®

### PROTEJA SU CASA

Asegúrese que este a prueba de Terremotos.

1. Atornille los muebles altos.
2. Asegure los objetos que se puedan caer.
3. Sepa como apagar los servicios de agua y electricidad