

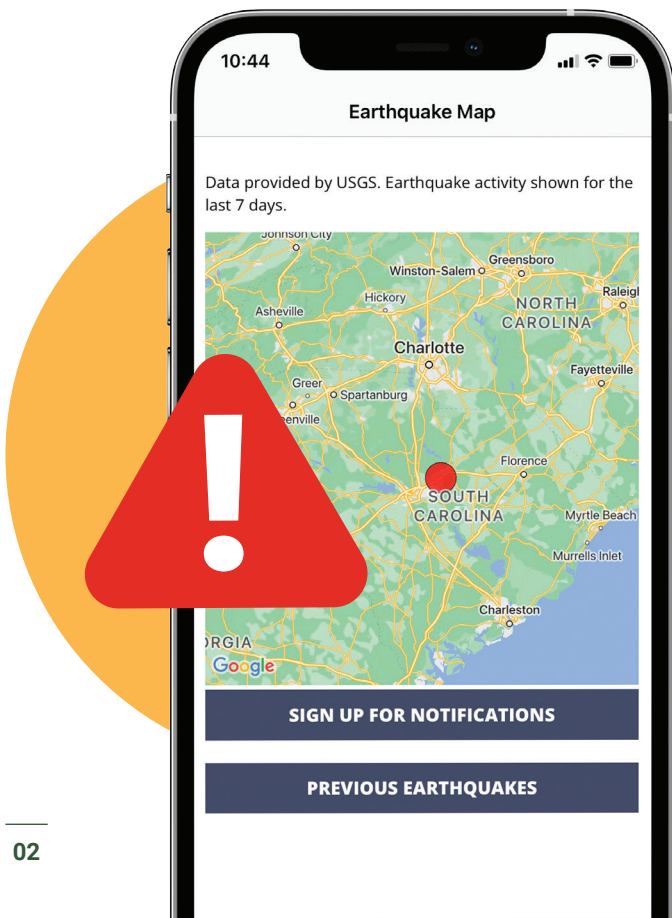
SOUTH CAROLINA EARTHQUAKE GUIDE

Prepare. Drop, Cover & Hold.
Stay Connected.



Contents

- 03 Earthquakes in SC
- 05 Know
- 07 Prepare
- 09 Pets
- 10 Aftershock
- 12 Moments of Magnitude and Intensity
- 13 History
- 14 Myths & Facts
- 15 Common Earthquake Terms



Get the App

SC EMERGENCY MANAGER APP

Take advantage of the official app of the South Carolina Emergency Management Division (SCEMD).

- Get notified when an earthquake occurs
- Keep track of your disaster supplies
- View the earthquake tracker map
- View local emergency manager information
- Utilize emergency strobe light & alert whistle
- Share your location with emergency contacts
- Get traffic & weather updates
- Document property damage
- Know about state office closings & delays
- “Emergency Mode” during major disasters

Earthquakes in South Carolina

Earthquakes are probably the most frightening, naturally occurring hazard encountered. Why? Earthquakes typically occur with little or no warning. There is no escape from an earthquake! While South Carolina is usually not known for earthquakes, ten to twenty earthquakes are recorded annually and two to five earthquakes are felt each year. These earthquakes tend to be less than magnitude 3.0 on the magnitude scale and cause little damage.

Earthquake Causes

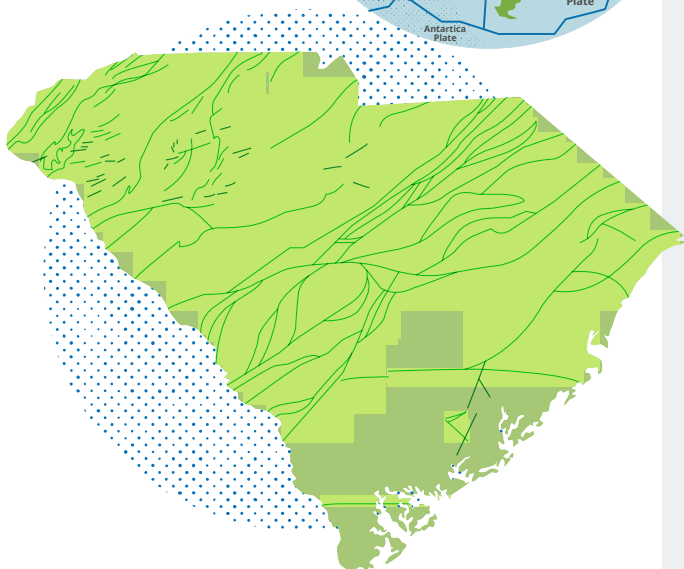
An earthquake is the violent shaking of the earth caused by a sudden movement of rock beneath its surface.

Plate Tectonics

Although earthquakes can occur anywhere on Earth, the majority of earthquakes worldwide occur at plate boundaries. These earthquakes are known as interplate earthquakes. In contrast, South Carolina is located within the interior of the North American plate, far from any plate boundary. Earthquakes occurring within a plate are intraplate earthquakes.

Fault Systems

Little is known as to why intraplate earthquakes occur. The most widely accepted model is that several geologically old fault systems of varying orientations within the subsurface are being reactivated while being subjected to stress. This stress buildup may be due to the Plate Tectonic Theory. For hundreds of millions of years, the forces of continental drift have reshaped the Earth. Continental drift is based on the concept that the continents bumped into and slid over and under each other and at some later time broke apart. Today, most people accept the theory that the Earth's crust is on the move.



SOUTH CAROLINA'S FAULT SYSTEM

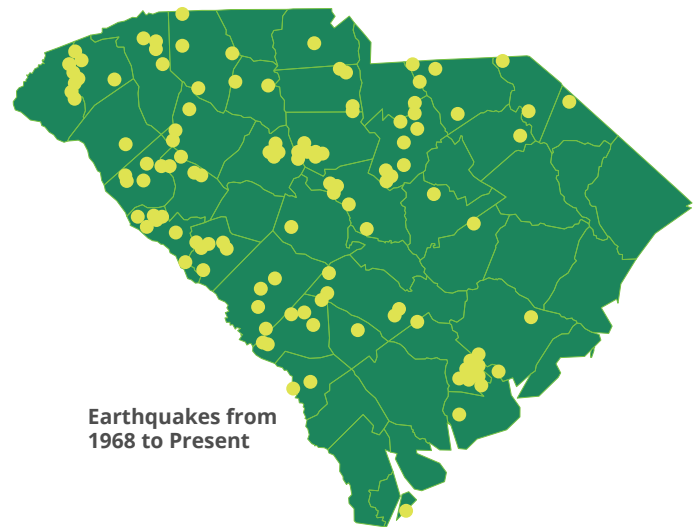
Most of South Carolina's earthquakes occur in the Coastal Plain, where the underlying rocks are very faulted or broken from the break-up of the plates. These cracks in the deep rocks mean the area of the plate is weak. If pressure is exerted on the edge of the plate, some of these faults/breaks will allow the rocks to move.

Faults in South Carolina have been mapped and estimated. Fault rupture is not the only cause of earthquakes. Small earthquakes may also occur near dams from water pressure and near the Appalachian Mountains.

THREAT LEVEL FOR SOUTH CAROLINA

Currently, there is no reliable method for predicting an earthquake's time, place, and size. Several areas of South Carolina regularly experience earthquakes and have experienced strong earthquakes in the past. Approximately 70% of all earthquakes in the state occur in the Coastal Plain with most clustered around three areas of the State:

Ravenel-Adams Run-Hollywood, Middleton-Place-Summerville, and Bowman. There is a consensus among seismologists that where earthquakes have occurred before, they can occur again.

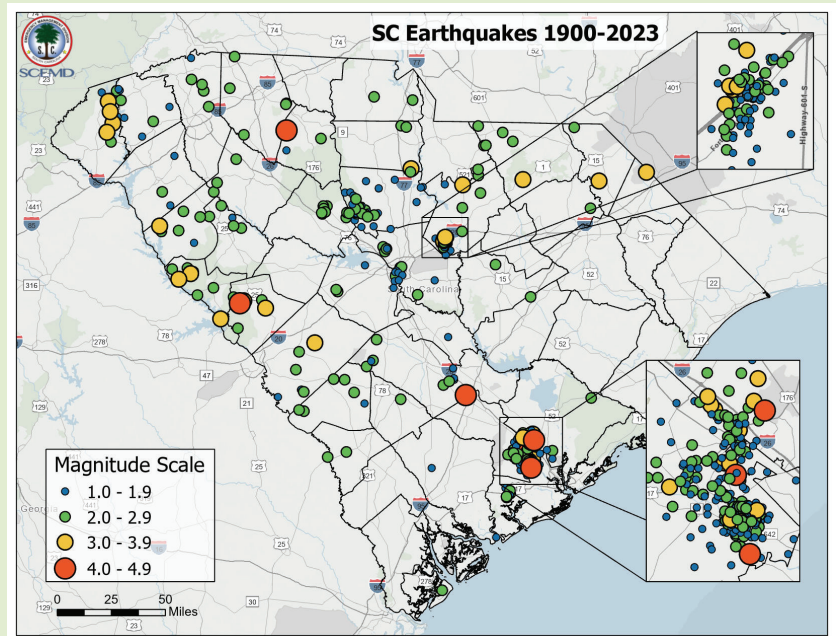


Earthquakes from 1968 to Present

SWARMS AND BACKGROUND SEISMICITY

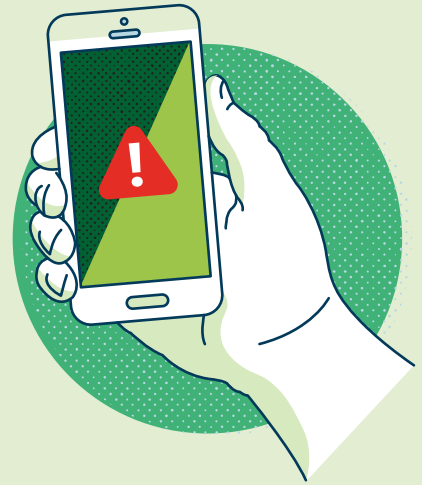
The majority of the low-magnitude earthquakes in South Carolina can be described as normal background seismicity for our region. However, clusters, or **swarms**, of earthquakes can occur in one particular area, alarming nearby residents who report feeling these successive, low-magnitude tremors. Since the 3.3m quake on December 27, 2021, Kershaw County has experienced 91 earthquakes, with the strongest being a 3.6m on June 29, 2022, centered near Elgin, South Carolina. These earthquakes have not been intense enough to cause damage, and the state's seismologists continue to research these occurrences.

In late 2021, USGS confirmed seven low-magnitude earthquakes in the vicinity of the Monticello Reservoir in Fairfield County. Seismologists believe these were normal background activity and not indicators of larger earthquakes to come. A much larger swarm of microearthquakes occurred as the reservoir was first filled in December 1977. Thousands of earthquakes, none larger than magnitude 2.9, occurred in the following years. Earthquake activity declined in the late 1980s through the mid-1990s but then picked up again in late 1996. Between December 1996 and mid-1999, several more earthquake swarms occurred, with nearly 1,000 earthquakes occurring at that time, the largest having a magnitude of 2.5. (Source: Dr. Steven Juame, College of Charleston)

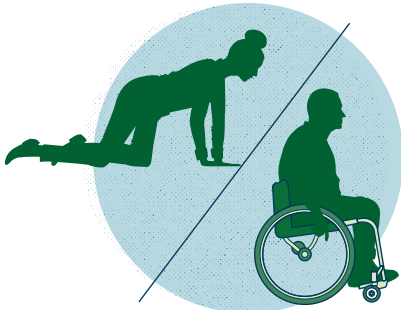


Know

South Carolina is one of the most seismically active states in our part of the country. Unlike some disasters, earthquakes cannot be predicted. You should know what to do immediately when the ground starts to shake. Planning ahead is key. Identifying potential hazards ahead of time can reduce the dangers of serious injury or loss of life.



WHEN THE GROUND MOVES

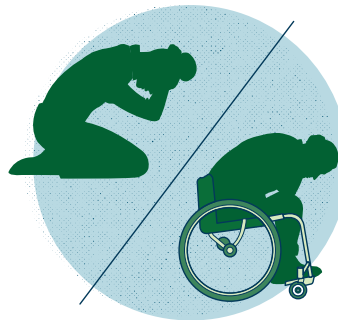


Drop

The first thing to do when you feel an earthquake is to **DROP** down to the ground.

PEOPLE WITH FUNCTIONAL NEEDS:

If you are able, drop to the ground immediately. If you use a wheelchair, lock your wheels. If you have other mobility impairments and cannot drop, stay where you are and make yourself as low as possible.



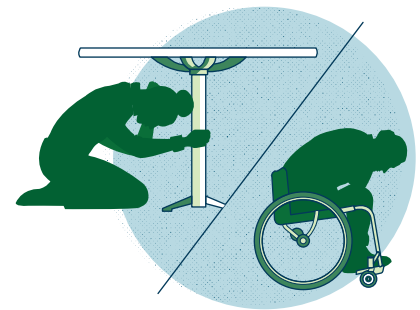
Cover

COVER your head and your neck with one arm and hand, and if sturdy table or desk is nearby, crawl underneath it for shelter.

If that isn't possible, crawl next to an interior wall and protect your head and neck with your arms. Avoid danger spots near windows, hanging objects, mirrors, or tall furniture. With your head protected by your arms, stay on your knees and bend over to protect your vital organs.

PEOPLE WITH FUNCTIONAL NEEDS:

Cover your head and neck with your arms, and if able, seek shelter by getting under a sturdy desk or table. If you're unable to do that, make sure to stay as low as possible, protecting your head and neck with your arms, a book, or a pillow.



Hold On

If you take cover under a sturdy piece of furniture, **HOLD ON** to it with one hand, and continue to protect your head and neck with the other hand. Be prepared to move with the shelter, and hold the position until the shaking stops and it is safe to move.

If there is no shelter, hold on to your head and neck with both arms and hands until the shaking stops.

PEOPLE WITH FUNCTIONAL NEEDS:

If under a shelter, hold on to it with one hand, and protect your head and neck with the other hand. Hold your position until the shaking stops, and remember to protect your head and neck with your arms. Don't try to leave until the shaking is over.

Remember, you may need to adapt your response depending on your personal situation and abilities. The Earthquake Country Alliance has developed detailed instructions on different ways to stay safe during an earthquake, and you can find at www.earthquakecountry.org/step5.

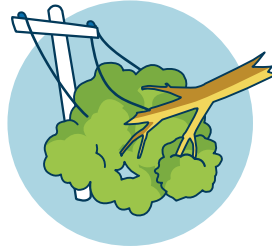
TIPS FOR EVERY SITUATION

An earthquake can occur wherever you are with little to no warning. Know how to protect yourself as quickly as possible in any situation to maximize your chances of survival with minimal injuries. Always try to make sure your head and neck are protected during a major earthquake.



Inside a High-Rise Building

When in a high-rise building, move against an interior wall if you are not near a desk or table. Protect your head and neck with your arms. Do not use the elevators.



Outdoors

When outdoors, move to a clear area away from trees, signs, buildings, or downed electrical wires and poles.



On a Sidewalk Near Buildings

When on a sidewalk near buildings, duck into a doorway to protect yourself from falling bricks, glass, plaster and other debris.



While Driving

When driving, pull over to the side of the road and stop. Avoid overpasses and power lines. Stay inside your vehicle until the shaking stops.



Inside a Crowded Store

When in a crowded store or other public place, move away from display shelves containing objects that could fall. Do not rush for the exit.



In a Stadium or Theater

When in a stadium or theater, stay in your seat, get below the level of the back of the seat and cover your head and neck with your arms.

THINGS YOU CAN DO RIGHT NOW

Talk to neighbors, family or caregivers



about how to protect your home and belongings from earthquake damage. Check for hazards in your home. Repairing deep plaster cracks in ceilings and foundations and anchoring overhead lighting will help reduce the impact of an earthquake.

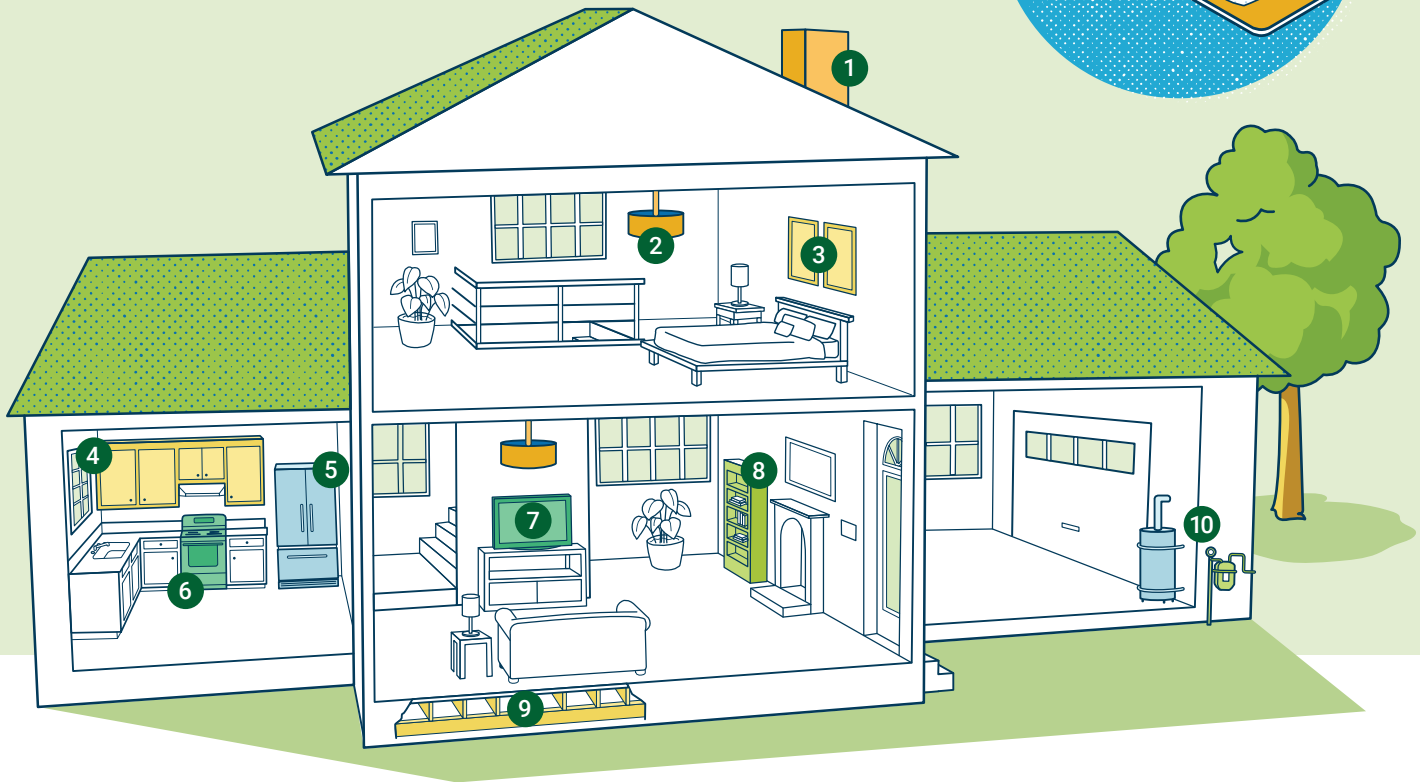
Make sure that you have your supplies kit



and that it is maintained. Some of the supplies you should have in your kit include batteries for hearing aids, flashlights, and similar devices, extra oxygen tanks, electrical backups for medical equipment, emergency food and water, provisions for special dietary requirements, and an emergency supply of your medications.

Prepare

Use this Home Hazard Hunt to identify any potential hazards that could be dangerous during a major earthquake.



1 Brace or replace masonry chimneys.

2 Secure ceiling fans and hanging light fixtures.

3 Securely fasten or relocate heavy pictures and mirrors over beds.

4 Secure cabinets to wall studs; use latches to keep doors from opening during an earthquake.

5 Prevent rolling or tilting of refrigerators.

6 Ensure that gas appliances have flexible connections.

7 Strap down televisions and other expensive or hazardous electrical components.

8 Strap bookcases & shelves to walls to prevent tipping.

9 Upgrade unbraced crawlspace walls (or other foundation problems).

10 Know how & where to shut off utilities.



BASIC DISASTER SUPPLIES KIT

Your basic disaster supplies kit should contain at least three days of supplies for everyone in your family. When preparing for any disaster, put your supplies in a water-tight container you can take with you if you can't stay in your home.

Include at a minimum:

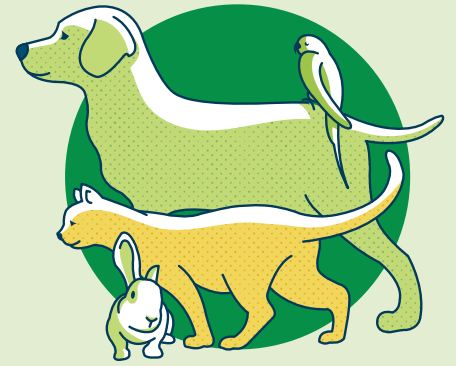
- Water, two gallons of water per person per day for at least three days, for drinking and sanitation.
- Food, at least a three-day supply of non-perishable food.
- Battery-powered or hand crank radio and a NOAA Weather Radio with tone alert and extra batteries for both.
- Flashlight and extra batteries.
- First aid kit.
- Whistle to signal for help.
- Moist towelettes, garbage bags and plastic ties for personal sanitation.
- Wrench or pliers to turn off utilities.
- Manual can opener for food (if kit contains canned food).
- Local maps.
- Cell phone with chargers.
- Prescription medications and glasses.
- Infant formula and diapers.
- Pet food and extra water for your pet.
- Important family documents such as copies of insurance policies, identification and bank account records in a waterproof, portable container.
- Family emergency contact information.
- Cash (enough to fill up a vehicle with gas).

Additional items to consider include:

- Sleeping bag or warm blanket for each person. Consider additional bedding and clothing if you live in a cold-weather climate.
- Complete change of clothing including a long sleeved shirt, long pants and sturdy shoes.
- Fire extinguisher.
- Multipurpose tool.
- Matches in a waterproof container.
- Duct tape.
- Dust mask to help filter contaminated air.
- Feminine supplies and personal hygiene items.
- Mess kits, paper cups, plates and plastic utensils, paper towels.
- Paper and pencil.
- Books, games, puzzles or other activities for children.

Pets

Including your pets in your family emergency plan is essential. Your veterinarian is an excellent resource to help you prepare. In an earthquake, we may not have a warning, but you can prepare for your pets as you do for any other disaster.



HOW TO PREPARE YOUR PET FOR AN EARTHQUAKE

Before

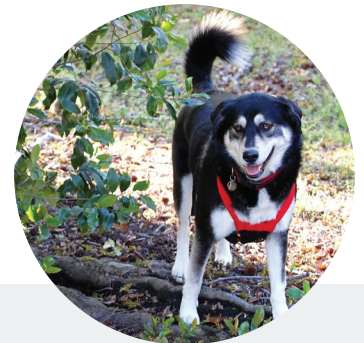
- Maintain a list of locations and phone numbers of potential refuge sites: specialized pet shelters, boarding facilities, veterinary clinics, pet-friendly hotels, stables, or homes of friends and relatives. Share the list with family and neighbors.
- Choose and use an ID method for each animal. Examples include micro-chipping, ID tags on collar, and photos of you with your animal. This is extremely important if your animals become lost.
- Keep your animals' immunizations - especially rabies - current.
- Maintain animals' health records, proof of vaccinations, microchip numbers, and necessary prescriptions with your other important family papers.
- Maintain a disaster 'go kit' for each animal: means of confinement (cage or carrier large enough for them to stand and turn around in), leash, harness, bowls, 3-days of water and food, medications, specific care instructions, litter box, and clean-up supplies.
- Meet with or notify your county emergency manager if you wish them to be aware of special needs you may have, such as assistance with evacuation if you possess a guide dog or other service animal.

Immediate Aftermath

- Damage from the earthquake may cause our familiar landscape to be unrecognizable. Our companion animals may be displaced from their homes. The immediate focus for emergency workers during this time will be human safety.
- When circumstances allow, there will be personnel who are trained in animal emergencies integrated into the incident management structure to assist emergency workers and citizens with animal needs. These needs may include 'rescue' (capture and transport to safety), ID, treatment, temporary shelter and care, and reuniting with owners.
- Public information about options for assistance with animals will be provided as soon as possible from the SC Emergency Management Division (SCEMD) by way of news briefings, telephone hotlines, and social media sources.

After

- If your animals cannot be found, contact your veterinarian, animal care and control office, and/or county and state emergency managers who can provide you with search lists and databases of animals that have been found and sheltered during the event.
- When you and your animals return home, check to be sure your surroundings are clear of dangers such as downed power lines, debris, and displaced wild animals.



OTHER RESOURCES

Clemson Livestock-Poultry Health

803-788-2260
clemson.edu/LPH

SC Department of Agriculture

803-734-2210
agriculture.sc.gov

Charleston Animal Society

843-747-4849
Charlestonanimalsociety.org

SC Association of Veterinarians

1-800-441-7228
scav.org

Aftershock

Earthquakes can cause primary and secondary hazards, some of which you can be prepared for. Building collapses and aftershocks are two of the most commonly known dangers. Utility line ruptures, fires, chemical leaks, liquefaction and landslides are just a few examples of additional hazards caused by major earthquakes. If a major earthquake occurs, you should be aware of these potential hazards as you look for help and begin recovering from the disaster.



Aftershocks are earthquakes that follow the largest shock of an earthquake sequence. They are usually smaller than the main shock and within 1-2 rupture lengths distance from the main shock. Aftershocks can continue over a period of weeks, months, or years. After the 1886 Summerville earthquake, 300 aftershocks were recorded in the Lowcountry for a 2 ½ year period. In general, the larger the main shock, the larger and more numerous the aftershocks, and the longer they will continue.



Primary Effects are features that are always present in a severe earthquake. When the earthquake is over, review what has occurred.

- Buildings collapse
- Large areas of ground can shift position
- Electric lines and gas mains can snap
- Large bodies of water can rise and fall

Secondary effects are other disasters caused by the ground movement of earthquakes. Most of the damage done by earthquakes is due to secondary effects that can occur over very large regions, causing wide-spread damage, such as:



Landslides

These occur in hilly/mountainous regions. The damage caused can range from blocked roads to possibly huge property damage and many deaths.



Soil Liquefaction

This happens when the movement caused by an earthquake forces water to seep into the material beneath a building. This causes saturated granular material to lose strength and briefly change from a solid to a liquid. This forces the foundations of structures to become very unstable and sink into the ground.



Fires

Ground movements can lead to gas and fuel leaks in pipes, cutting off electrical cables, etc. The destruction of water pipes makes it harder to fight such fires should they occur.

WHEN THE EARTHQUAKE IS OVER, REVIEW WHAT HAS OCCURRED:

- ✓ Check on the status of your family's physical health and the safety of your home.
- ✓ You will probably be on your own for three days or more if roads or bridges are damaged and/or blocked. Be prepared to take care of your family until help arrives.
- ✓ Take one step at a time and pay attention to the mental health of your family.

AFTER YOU'VE RECOVERED:

- ✓ Restock your supplies kit.
- ✓ Review and update your personal emergency plan.
- ✓ Get trained and volunteer so you can help others in your community.

INSURANCE

Most people don't buy earthquake insurance because they think it's too expensive and an earthquake will never happen to them. In South Carolina, the entire state is considered to have a moderate to high risk for earthquakes.



Reasons to Consider Earthquake Insurance

- An earthquake of the same magnitude as the 1886 earthquake would cost close to \$40 billion in today's dollars. *(Source: Applied Insurance Research)*
- Most homeowner and rental insurance policies DO NOT cover damages caused by an earthquake, but coverage can be added to most policies as an "endorsement" for an additional cost.
- Even in earthquake-prone areas, only 25-28% of homeowners have earthquake insurance. *(Source: Western Insurance Information Institute)*
- Earthquake deductibles are set as percentages, i.e. 5% or 10% of the coverage amount rather than dollar amounts. The earthquake deductibles apply separately from your basic homeowner's (and business) policy deductible.
- Following a damaging earthquake, South Carolinians could face loss of life, injury and property damage. Without earthquake insurance, you will have to pay for all losses to your home and possessions.

IMPORTANT CONTACTS

South Carolina Emergency Management Division
scemd.org

The Great Southeast Shakeout
shakeout.org/southeast

South Carolina Geological Survey
dnr.sc.gov/geology/

State Seismic Network via the University of South Carolina
seis.sc.edu/projects/SCSN/

Lowcountry Hazards Center via College of Charleston
hazards.cofc.edu/index.php

The Central United States Earthquake Consortium
cusec.org

United States Geological Survey
usgs.gov/programs/earthquake-hazards/earthquakes









Earthquake Safety Information for People with Disabilities
earthquakecountry.org/accessibility

Moments of Magnitude and Intensity

Modern-day seismologists use many measurements to gauge the scope and scale of an earthquake. Magnitude is the most common measure of an earthquake's size. The United States Geological Survey currently reports earthquake magnitudes using the Moment Magnitude Scale, though many other magnitudes are calculated for research and comparison purposes. This scale is where most earthquake reports get the numbered magnitude (2.0, 4.1, 7.3, etc.).

Intensity measures the shaking and damage caused by the earthquake and is often determined largely by people's observations of what they felt and any damage that occurred. Although numerous intensity scales have been developed over the last several hundred years to evaluate the effects of earthquakes, the one currently used in the United States is the Modified Mercalli (MM) Intensity Scale. Written as a roman numeral, intensity can vary depending on a person's location in relation to the epicenter of an earthquake, while magnitude does not change. *(source: USGS)*

MODIFIED MERCALLI (MM) INTENSITY SCALE

	INTENSITY	SHAKING	DAMAGE	DESCRIPTION
	III	WEAK	NONE	Felt quite noticeable by persons indoors. Many people do not recognize it as an earthquake. Standing cars may rocks slightly, vibrations are similar to a passing truck.
	IV	LIGHT	NONE	Felt indoors by many, outdoors by few. At night, some are awakened. Dishes, windows and doors are disturbed. Sensation like a heavy truck striking a building.
	V	MODERATE	VERY LIGHT	Felt by nearly everyone; many awakened. Dishes and windows are broken. Unstable objects are overturned. Pendulum clocks may stop.
	VI	STRONG	LIGHT	Felt by all; many frightened. Some heavy furniture moved. A few instances of fallen plaster. Damage is slight.
	VII	VERY STRONG	MODERATE	Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
	VIII	SEVERE	MODERATE/HEAVY	Slight damage to specially designed structures. Considerable damage to ordinary construction, including partial collapse. Damage is great in poorly built structures. Fall of chimneys, columns, walls. Heavy furniture overturned.
	IX	VIOLENT	HEAVY	Considerable damage to specially designed structures; well-designed frame structures are thrown out of plumb. Damage is great in substantial buildings, with partial collapse. Buildings shifted off foundations.
	X+	EXTREME	VERY HEAVY	Some well-built wooden structures destroyed; most masonry and frame structures with foundations are destroyed. Rails are bent.



History

Large events, like the 1886 earthquake, have been recorded in the oral history of the area. Additionally, paleoseismic investigations have shown evidence for several pre-historic, liquefaction-inducing earthquakes in coastal South Carolina in the last 6000 years. If the present is the key to the past, and the past is an analog for the future, then the Charleston region can expect to experience another 1886 magnitude event in the future. (Source: *South Carolina Earthquake Education and Preparedness, College of Charleston*)

Charleston 1886



On August 31, 1886, Charleston, South Carolina, experienced the most damaging earthquake in the eastern United States. The initial shock lasted nearly one minute. The earthquake had a magnitude of 7.3 (Johnson, 1996) and was felt over 2.5 million square miles, from Cuba to New York, and Bermuda to the Mississippi River.

Structural damage extended several hundreds of miles to cities in Alabama, Ohio, and Kentucky. At the time of the earthquake, many of the residents of Charleston thought it was a calamity that struck the entire world. Many residents were surprised when they discovered it was principally their area where the majority of severe damage occurred.

INTENSITY: X

Few, if any, (masonry) structures remain standing; bridges are destroyed; rails are significantly bent. Damage total; lines of sight and level are distorted; objects are thrown into the air.

SHAKING:
MAJOR TO GREAT

MAGNITUDE:
7.0+

Union County 1913



On January 1, 1913, Union County experienced an earthquake that, by today's standards, would probably be measured as a 4.1 on the Magnitude scale. Not much is known about the cause of the Union County earthquake because of the lack of technology at the time.

INTENSITY: IV-V

IV: Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, and doors are disturbed; walls make cracking sounds. Vibrations felt are similar to a heavy truck striking a building.

V: Felt by nearly everyone; many awakened; some dishes, windows broken, and unstable objects overturned; pendulum clocks may stop.

SHAKING:
LIGHT

MAGNITUDE:
4.1-4.9

Myths & Facts

I've heard South Carolina sits on a fault line

There are many fault lines running throughout South Carolina.

Fracking causes earthquakes in South Carolina

There is no fracking anywhere in South Carolina since no natural gas or oil reserves exist here.

Earthquakes only happen on the West Coast of the U.S.

Earthquakes can strike anywhere, according to USGS. Earthquakes east of the Rocky Mountains hit differently, causing noticeable ground shaking over much farther distances. Eastern North America has older rocks that have had more time to heal. When an earthquake occurs here, many more people report feeling it because seismic waves can travel more effectively. Earthquakes on the East Coast also tend to cause higher frequency shaking or back-and-forth motion than quakes of similar magnitude in the West.

Get in a doorway when an earthquake occurs

You may have been taught that a doorway is one of the safest places to be during an earthquake. But in most cases, doorways are no stronger than the rest of the building, and they do not provide protection from flying or falling objects, which pose the greatest risk of injury to people during a quake. Instead, if you can move safely, get under a sturdy piece of furniture, and hold on. Drop to your hands and knees, cover your head, and neck with your arms, and hold on.

Run outside if you are indoors during an earthquake

If you are indoors, stay there until the shaking stops and you are sure that it is safe to exit. Research shows that most injuries occur when people within a building move around or attempt to go outside.

The worst is over. It is time to assess damage and clean up

Do not assume that you are safe immediately after the shaking has stopped. Aftershocks can occur minutes after the first quake ends. While they are usually not as strong, they can cause additional damage and injuries. Drop, cover and hold on again in the case of aftershocks.

Dogs and other animals can "sense" when an earthquake is going to strike

Changes in animal behavior sometimes have been observed prior to earthquakes, but that behavior is not consistent, and sometimes there's no perceptible behavior change prior to an earthquake. It's a fascinating aspect of earthquakes but at this point, only anecdotal evidence exists.

Small earthquakes keep big ones from happening

Each magnitude level represents about 30 times more energy released. It takes 30 magnitude 3s to equal the energy released in a magnitude 4, 900 magnitude 3s to equal a magnitude 5, and 729 billion magnitude 3s to equal a single magnitude 9. So, while a small quake may temporarily ease stress on a fault line, it does not prevent a large earthquake.

Small earthquakes almost always mean a larger earthquake is about to happen

Per USGS Worldwide, the probability that an earthquake will be followed within 3 days by a large earthquake nearby is just over 6%. In California, that probability is about 6%. This means there is about a 94% chance that any earthquake will NOT be a foreshock. About half of the biggest earthquakes in California were preceded by foreshocks; the other half were not. At this time, we cannot tell whether or not an earthquake is a foreshock until something larger happens after it.

Earthquakes are becoming more frequent

Research shows that earthquakes of magnitude 7.0 or greater have remained constant throughout the century and have actually decreased in recent years. However, since there are a greater number of seismological centers and instruments capable of locating many small earthquakes that went undetected in earlier years, it may seem as if there are more.

Earthquake faults can open wide enough to swallow people and buildings

A popular literary device is a fault that opens during an earthquake to swallow up an inconvenient character. Gaping faults exist only in fiction. During an earthquake, the ground moves across a fault, not away from it. If the fault could open, there would be no friction. If there were no friction, there would be no earthquakes.

We can predict earthquakes

There is currently no scientific way to determine when earthquakes will occur. Scientists can make statements about earthquake rates and where earthquakes are likely to occur at some future point, but they cannot calculate when and where earthquakes of certain magnitudes will strike.

Common Earthquake Terms

Epicenter

The point on the Earth's surface above the point at depth in the Earth's crust where an earthquake begins.

Fault

A fault is a fracture along which the blocks of the Earth's crust on either side have moved relative to one another parallel to the fracture. There are several types of faulting. South Carolina's geology consists of many fault systems, which run throughout the entire state.

Foreshock

Foreshocks are earthquakes that precede larger earthquakes in the same location. An earthquake cannot be identified as a foreshock until after a larger earthquake in the same area occurs.

Aftershock

Aftershocks are earthquakes that follow the largest shock of an earthquake sequence. They are smaller than the mainshock and within 1-2 rupture lengths distance from the mainshock. Aftershocks can continue over a period of weeks, months, or years. In general, the larger the mainshock, the larger and more numerous the aftershocks, and the longer they will continue.

Earthquake Swarm

A swarm is a sequence of mostly small earthquakes with no identifiable mainshock. Swarms are usually short-lived, but they can continue for days, weeks, or sometimes even months. They often recur at the same locations.

Seismologists

Scientists who study earthquakes and their causes and results.

Seismogram

The record made by a seismograph.

Seismographs

Instruments that make an automatic record of the time, duration, direction, and intensity of earthquakes.

Theory of Plate Tectonics

States that the earth's crust is divided into a number of relatively rigid plates that collide with, separate from, and translate past one another at their boundaries; this disruption commonly results in earthquakes.

Intraplate

Intraplate pertains to earthquake activity (like the kind we experience in South Carolina within a tectonic plate vs. between them (interplate).

Modified Mercalli Intensity (MMI) Scale

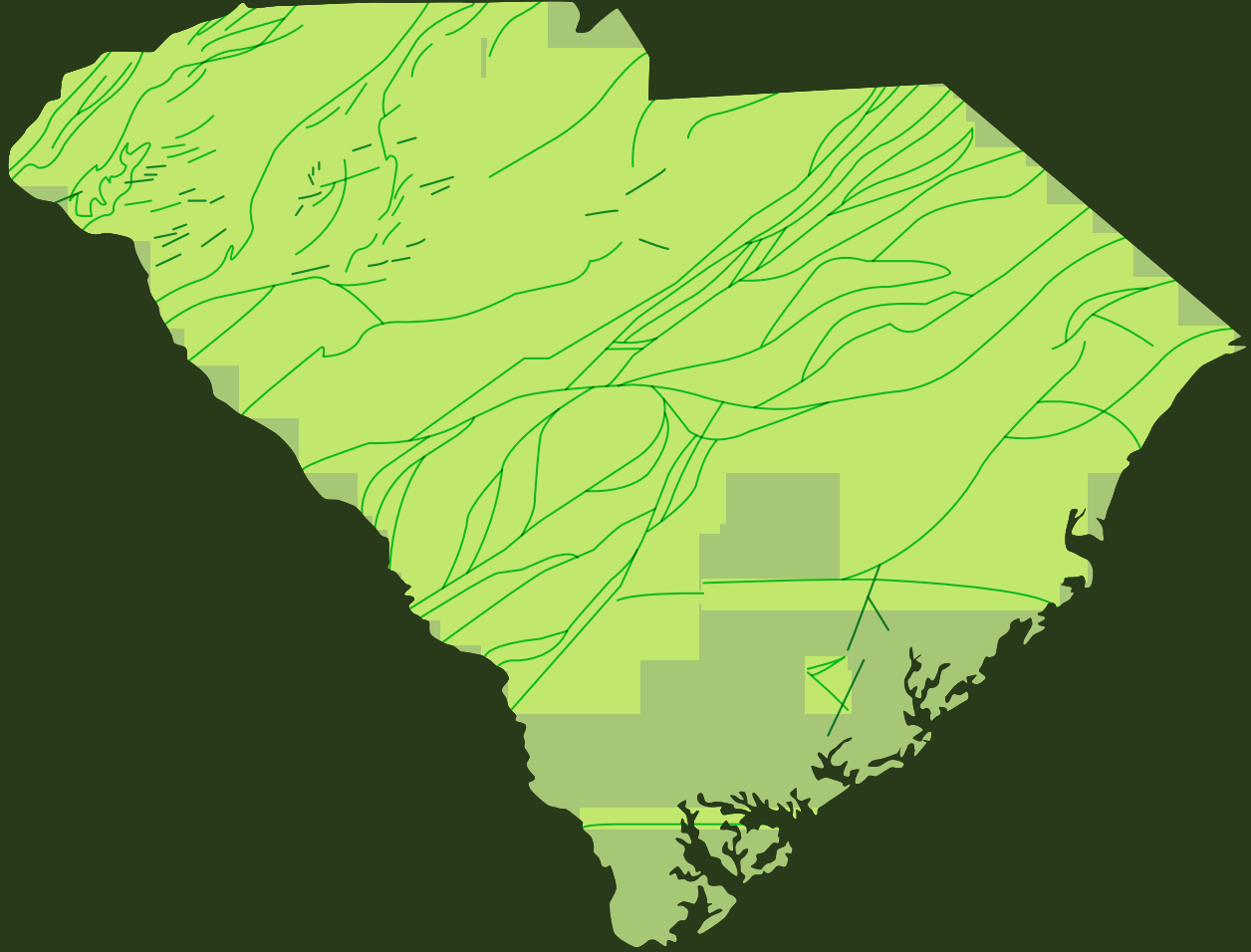
The Modified Mercalli Intensity Scale is commonly used in the United States by seismologists seeking information on the severity of earthquake effects.

Moment Magnitude Scale

Magnitude is the most common measure of an earthquake's size. It is a measure of the size of the earthquake source and is the same number no matter where you are or what the shaking feels like. The Richter scale is an outdated method for measuring magnitude that the USGS no longer uses for large, teleseismic earthquakes. The USGS currently reports earthquake magnitudes using the Moment Magnitude Scale.



South Carolina Earthquake Faults



FOLLOW US!
@SCEMD

