



*Study and keep this brochure so that you can be prepared if another earthquake similar to the one in 1886 hits.*

### After an Earthquake

After the shaking stops, it is time to assess the damage to yourself, your family and your property. Stay calm and lend a hand to others.

- ▶ Be prepared for possible aftershocks.
- ▶ Check for gas and water leaks, and broken electrical wiring. If there is damage, turn the utility off at the source. Immediately report gas leaks to your utility company.
- ▶ Listen to your portable radio for instructions and news reports. Cooperate fully with the public safety officials and follow instructions.
- ▶ Do not use your vehicle unless there is an emergency.

## Get Supplies

### Can You Go It Alone for Three Days?

Taking the time to assemble a Disaster Supplies Kit to meet the basic needs of your household can make the difference in your survival. Your supply kit should be built around basic items that will help you cope with these hardships. Keep it in a central location.

**Water:** 1 gallon per person per day. Store water disinfectant (iodine tablets) or unscented chlorine bleach (8 drops per gallon) to purify water if necessary. Water may also be boiled vigorously for 3 minutes to purify it.

**Flashlight and spare batteries:** Do not use matches or candles after an earthquake until you are certain there are no gas leaks.

**Portable radio with spare batteries:** Most telephones will be out of order or limited to emergency use. The radio will be your best source of information.

**Special items:** Have at least a week's supply of essential medications for everyone in your family. Include in your disaster kit: infant supplies, clothing and bedding, first aid kit, and sanitation supplies. Do not forget food, water and a leash (or carrier) for pets.

*Many businesses were damaged in the 1886 earthquake.*



For more information contact:  
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Or visit us on the Web at:  
**www.scemd.org**



The Pine Ridge National Guard Armory was retrofitted to provide South Carolina with its first state-of-the-art Emergency Operations Center.



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## South Carolina Emergency Management Division



# S.C. Earthquakes

## Frequency in South Carolina

South Carolina experiences several earthquakes annually. These are typically very minor earthquakes (magnitudes of ~1.0 to 3.0) that are recorded but generally not felt by people. However, South Carolina has experienced much stronger and damaging earthquakes in the past. (Magnitude is the energy released and is measured from 1.0 to 8.0+)

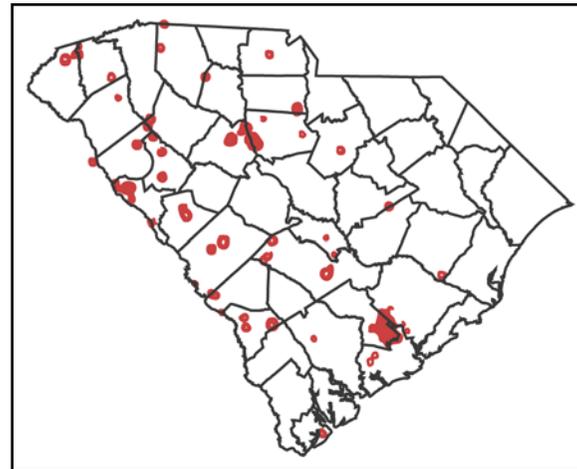
The two most significant historical earthquakes in South Carolina were the 1886 Charleston earthquake and the 1913 Union County earthquake with estimated magnitudes of 7.3 and 4.5, respectively. Approximately 70 percent of all recent earthquake activity in the state has been in the vicinity of the epicenter of the 1886 Charleston earthquake, a region referred to as the Middleton Place-Summerville Seismic Zone (MPSSZ). However, this is not the only region in South Carolina that experiences earthquakes. The accompanying map shows the locations of earthquakes in South Carolina from 1974 to 1995.

## Threat Level for South Carolina

Currently, there is no reliable method for predicting the time, place, and size of an earthquake. Several areas of South Carolina regularly experience



South Carolina has several small earthquakes annually, but the state has experienced none of large magnitude in many years.



Location of earthquakes in South Carolina from 1974 to 1995.

S.C. Seismic Network, 1998

rience earthquakes and have experienced strong earthquakes in the past. There is a consensus among seismologists that these areas may experience strong and damaging earthquakes (magnitude 6 to 7) in the future.

## What Causes Earthquakes?

An earthquake is characterized by a sudden shaking or vibration of the ground. Earthquakes are produced when blocks of the Earth's crust suddenly slip along a break, or fault, in the Earth's crust. The majority of earthquakes worldwide occur in narrow belts that wind around the globe. In general, these earthquake belts coincide with boundaries that separate very large sections of the Earth's surface called plates. For example, earthquakes in California occur along the San Andreas fault system, which marks the boundary between the North American plate and the Pacific plate. Movement of the plates along this boundary causes earthquakes. In contrast, South Carolina is located within the interior of the North American plate, far from any plate boundary. The mechanisms that cause earthquakes in South Carolina are not well understood. Large earthquakes in South Carolina, such as the 1886 Charleston earthquake, occur less frequently than in California. However, these

earthquakes have generally caused structural damage over a larger area than earthquakes of similar magnitude in California. Several models for determining the cause of earthquakes in South Carolina have been proposed and are currently being studied. The most widely accepted model is that periodic movement occurs along several deeply buried, geologically old fault systems.

# Prepare To Survive

## Before an Earthquake

Earthquakes can happen anytime and without warning. Make a family earthquake plan. Plan to have enough supplies to get you and your family through at least the first 72 hours. The following checklist will help you get started.

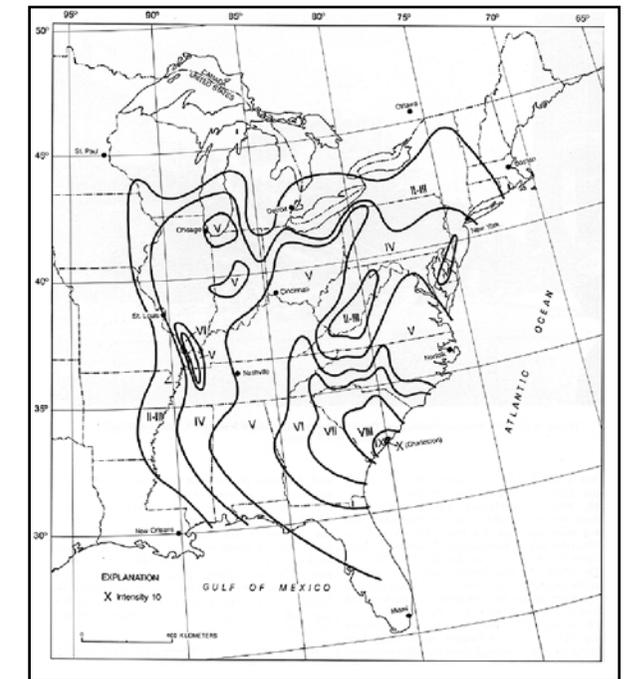
- ▶ Identify the danger areas. Stay away from windows and heavy objects that may fall.
- ▶ Select a safe place in every room. This can be under a sturdy table, desk or against an interior wall.
- ▶ Practice “**Drop, Cover and Hold On**” drills.
- ▶ Identify and know how to operate the shut-off valves and switches for gas, electricity and water. **Safety Note:** Do not attempt to relight the gas pilot; call the utility company.
- ▶ Make a plan on how and where to reunite family members if separated during an earthquake. Choose a person outside the immediate area where family members can call after the earthquake to report on their whereabouts and condition.
- ▶ Collect all of your important family documents and keep them either in a waterproof, portable container or in a safe deposit box. Make a video or take pictures of your valuables.



Many people were left homeless after the Charleston earthquake of 1886.

## During an Earthquake

- ▶ If **outside or driving**, move to a clear area away from trees, overpasses, buildings and power lines.
- ▶ If in a **crowded public place**, do not rush for the exits. Drop and cover your head and neck with your hands and arms.
- ▶ If in a **building**, stay away from windows and outside walls. Drop, cover and get under a table to hold on! Do not use the elevators.



The intensity (strength) of the 1886 earthquake in Charleston.