



# Montana Earthquake Hazard Reduction Program

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# October is... Earthquake Preparedness Month!!

**M**ontana is a beautiful state. But...the forces that create its beauty are the same forces that can **Rock** your world. Earthquakes are caused by movement within the earth's crust. They are mystifying events and are as unpredictable as they are powerful - not even seismologists fully understand the forces that set them in motion. Although we can't prevent or predict them, we can prepare for them.

**Earthquakes  
Eat Rock**

## Facts on Earthquakes in Montana:

- ◆ Montana is the fourth most seismically active state in the U.S. trailing areas we typically associate with earthquakes: California, Alaska and Hawaii.
- ◆ Since 1896, 12 significant earthquakes (magnitude 6.0 or larger) have occurred in Montana. As a result we have suffered damaged & destroyed buildings, numerous injuries, and 29 deaths. Unfortunately, the costs have been high.
- ◆ A magnitude 6.1 earthquake would release the same amount of energy as the Hiroshima atomic bomb.
- ◆ In 1909, an earthquake with a range of estimates up to a magnitude 6.5, rocked Northeastern Montana near the Saskatchewan-North Dakota border.
- ◆ The 4.7 magnitude earthquake that recently occurred near Libby was not only the largest earthquake of 1998, but the largest to shake the state in 13 years. Even more interesting, the second largest earthquake of 1998 was a magnitude 4.5 and occurred in the perceived low-risk area of Roosevelt County.
- ◆ Approximately ¾ of Montana's population reside in areas that have been identified as the highest risk for damaging earthquakes.
- ◆ Since 1869, Montana has experienced significant earthquakes in 1897, 1909, 1925, 1935, 1947, 1959, 1964 and 1975.
- ◆ Regarding earthquakes in the 20th Century, Montana has one of the highest per-capita death rates in the United States.
- ◆ By far, earthquakes are the greatest single-event natural hazard Montana faces.

...But before they do

**Reduce  
Your  
Risk!**

**Do your part...**

By identifying potential hazards and minimizing their risk, you can **make it safe!**

Here's how:

- Secure your computers.
- If stacking items, keep them three feet high or lower.
- Bungee-cord all bookshelves.
- Anchor top-heavy furniture.
- Check ceiling panels & fluorescent lights to see if they are secured.
- Protect aquariums from sliding or overturning.
- Reinforce hanging plants or other heavy objects.
- Install latches on cupboards.
- Remove breakable and/or heavy objects from high places.
- Safely store flammables & chemicals in a secure area.
- Secure furniture that has wheels or may slide.
- Windows may break or implode in an earthquake. Film, tape, and even curtains can help protect you.
- Secure heavy pictures & mirrors to the walls-do not hang heavy objects over your bed.
- Keep a pair of shoes next to your bed. You may need them if broken glass or other debris is on your floor following an earthquake.
- Minimize the risk of exits becoming blocked.
- Learn to shut off electricity, gas and water main valves.



**Make it Safe!**

# Get Ready

Prepare to Survive!

Do your part... Earthquakes are the most unpredictable of all disasters. When the earth shakes, you may be left without everyday conveniences: electricity, water, food, and medical attention. Be prepared! Keep these items available at all times so you are prepared to survive!

## Preparedness Checklist...

- |  |  |  |   |   |  |
|--|--|--|---|---|--|
| <ul style="list-style-type: none"> <li>• Flashlight</li> <li>• Radio</li> <li>• Extra batteries</li> <li>• First aid kit</li> <li>• Water</li> <li>• Infant supplies</li> <li>• Prescription medication</li> <li>• Food (non-perishable &amp; easy to prepare)</li> <li>• Disposable dishes &amp; silverware</li> <li>• Bedding</li> <li>• Toiletries</li> </ul> | <br><br><br> | <ul style="list-style-type: none"> <li>• Towels</li> <li>• Cash</li> <li>• Water purifiers</li> <li>• Cookware</li> <li>• Matches or Lighter</li> <li>• Can opener</li> <li>• Knife</li> <li>• Ax, shovel, hammer &amp; bucket</li> <li>• Clothing</li> <li>• Shoes</li> <li>• Blankets</li> <li>• Personal records</li> </ul> | <br><br><br> | <ul style="list-style-type: none"> <li>• Pet supplies</li> <li>• Games &amp; books</li> <li>• Garbage bags</li> <li>• Pens &amp; paper</li> <li>• Heavy-duty tape</li> <li>• Soap &amp; disinfectant</li> <li>• Vitamins</li> </ul> | <br> |
|--|--|--|---|---|--|

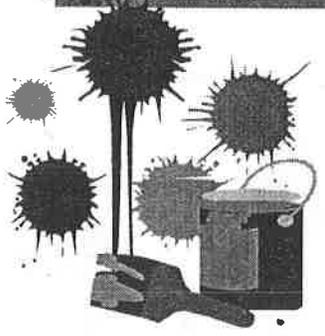
\*Include what you need to survive comfortably for at least 72 hours!!

# Earthquakes Rock

...And when they do

## Drop

Remain Calm.  
DROP down to the ground.



## Cover

Take **COVER** under a sturdy desk, table, or other piece of furniture. If not possible, take **COVER** against an interior wall. It is important to **COVER** your head and neck with your arms. Avoid danger spots: windows, hanging objects, mirrors, tall objects, exterior walls and heavy items on wheels.

## & Hold

If you take cover under a sturdy piece of furniture, **HOLD** onto it and be prepared to move with it. **HOLD** the position until the ground stops shaking and it is safe to evacuate the building. **Expect Aftershocks!!!**

## Drop Cover & Hold

# Know the Drill!!

If you are outdoors, remain calm. Try to avoid buildings, unstable structures, overhead power lines, and other obvious dangers. Although scary, this is a safe place to be!



For more information, contact your local DES County Coordinator/Emergency Manager or Monique T. Lay, Earthquake Program Manager at (406) 841-3963