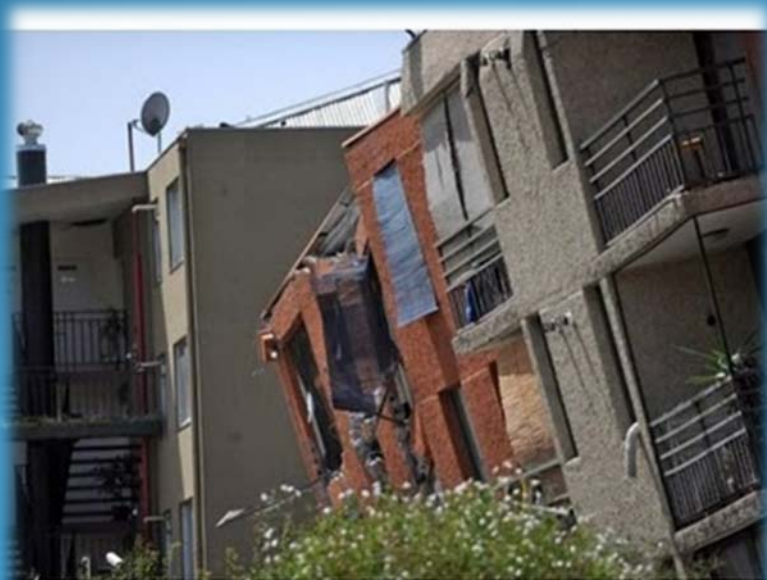
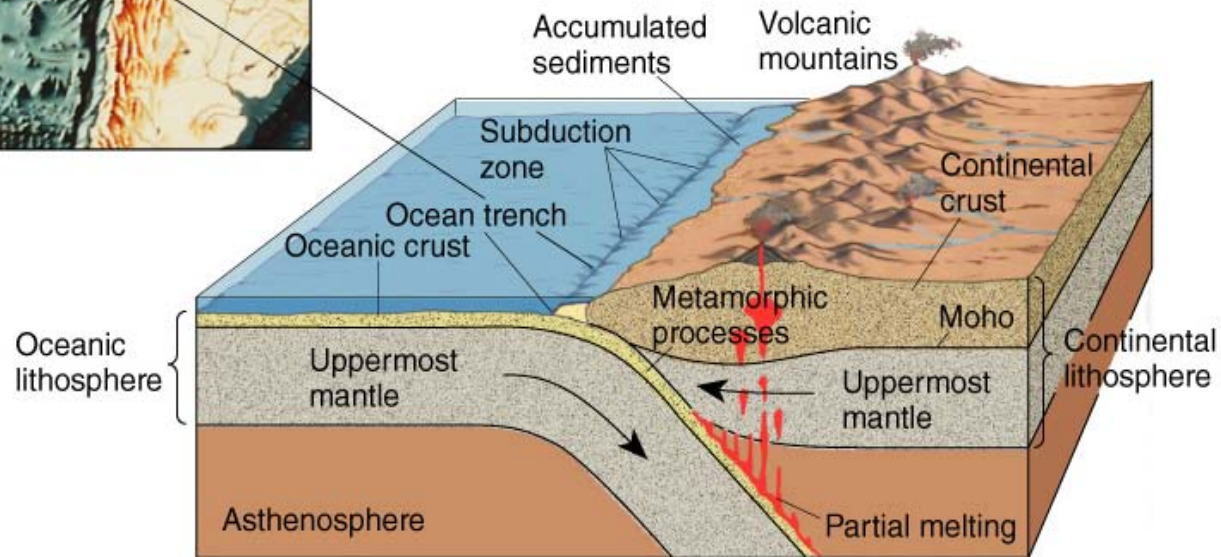
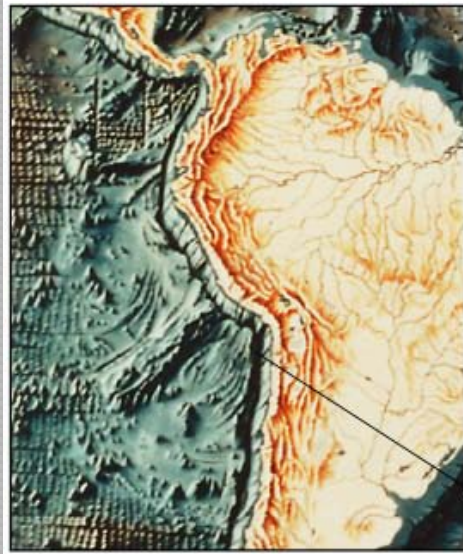


Earthquake Potential and Preparedness in the Northwest - Our Setting

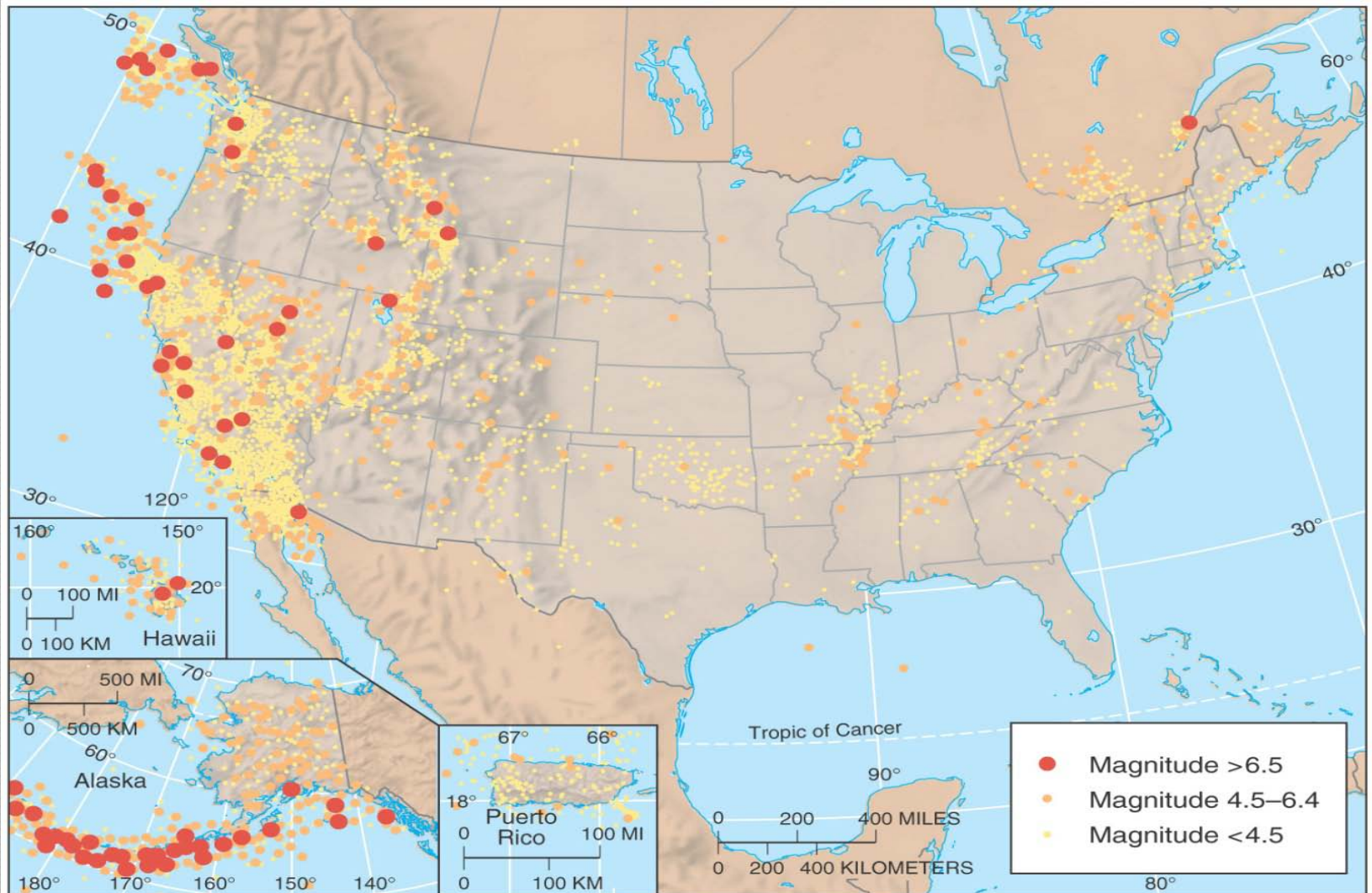


Oceanic- Continental Collision – The Cascadia Zone, Oregon’s “Big One”

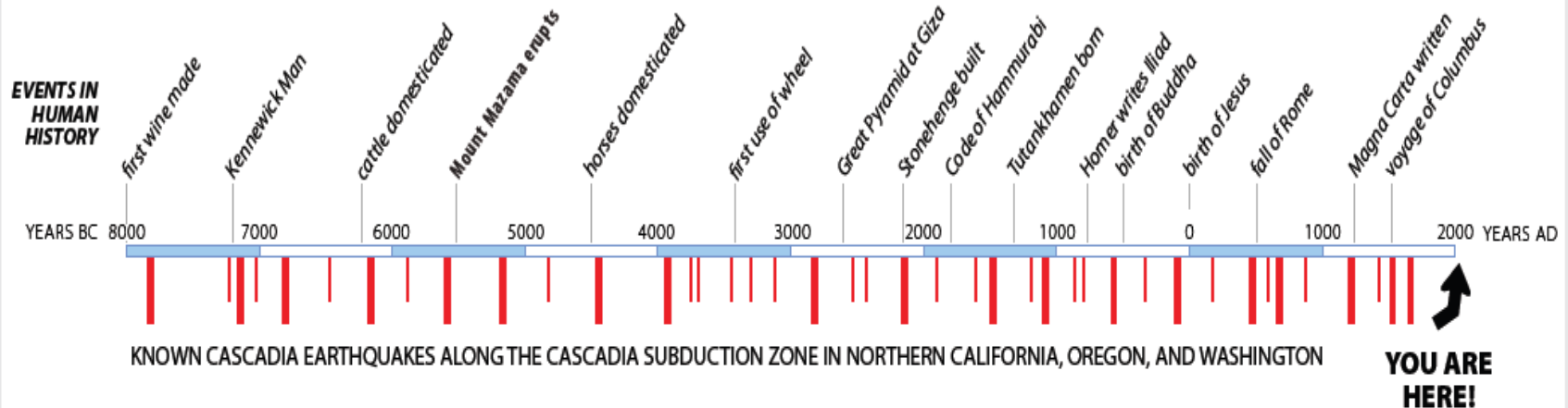


(a)

Historical Seismicity



CASCADIA EARTHQUAKE TIME LINE

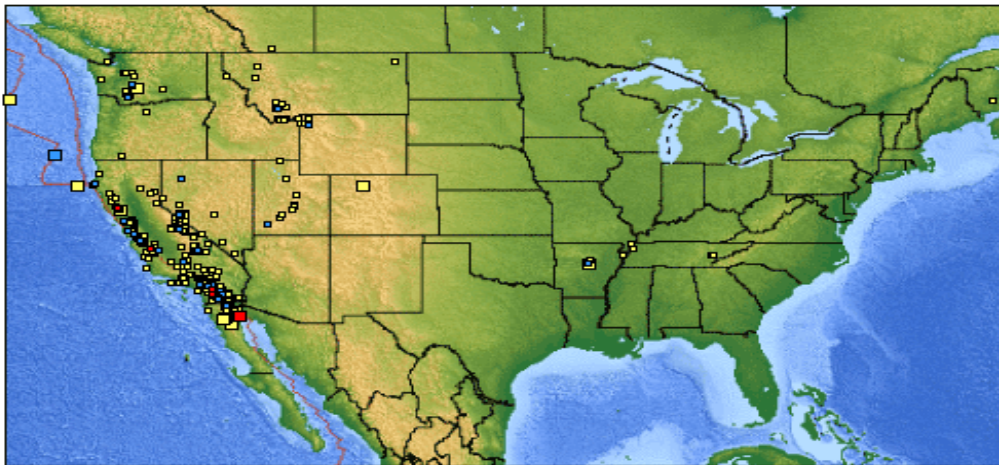


Comparison of the history of subduction zone earthquakes along the Cascadia Subduction Zone in northern California, Oregon, and Washington, with events from human history. Ages of earthquakes are derived from study and dating of submarine landslides triggered by the earthquakes. Earthquake data provided by Chris Goldfinger, Oregon State University; time line by Ian P. Madin, DOGAMI.

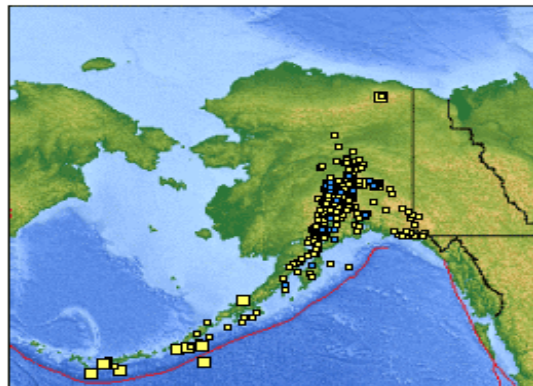
This timeline compares the 10,000-year-long history of Cascadia earthquakes to events in human history.

Local Earthquake Activity

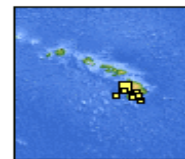
Tue Apr 12 16:31:53 UTC 2011
902 earthquakes on these maps



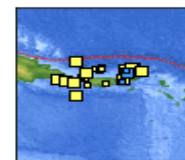
CONTIGUOUS 48 STATES



ALASKA



HAWAII



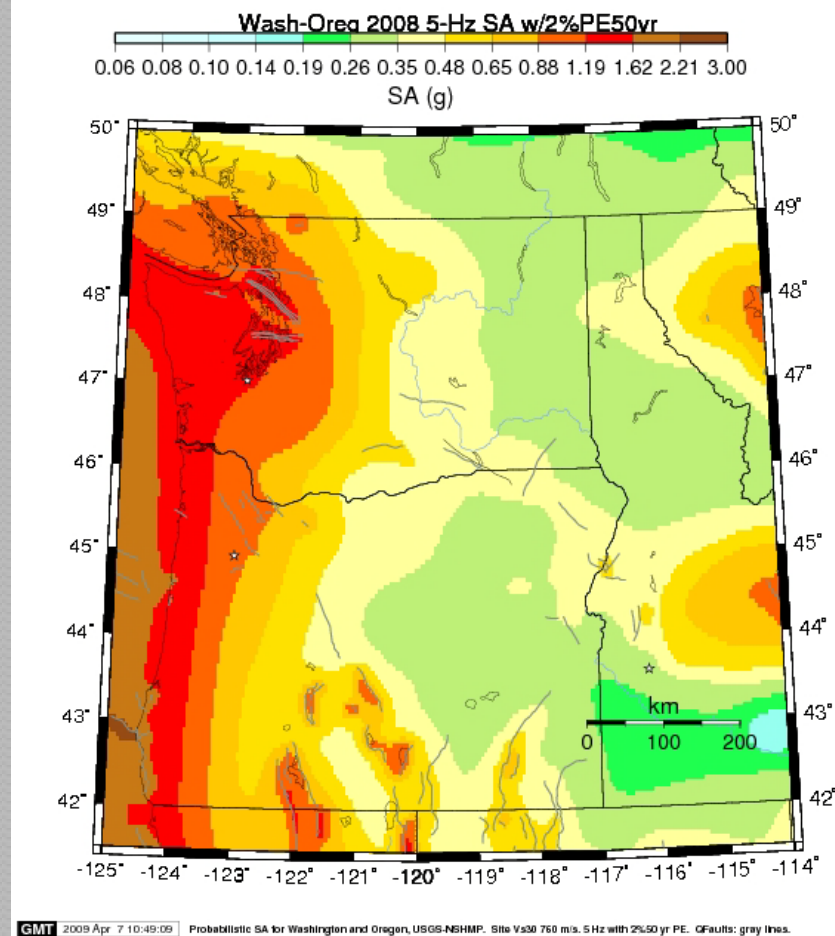
PUERTO RICO

magnitudes

- ☐ >5
- ☐ >3
- ☐ >1
- ☒ not yet known

- last hour
- last day
- last week

Oregon-Washington
Seismic Risk Map based
upon ground peak
accelerations during an
earthquake. (USGS, 2008)



Nature of Local Damage

- Most vulnerable buildings: Unreinforced Mason Buildings (URM's); most building in downtown Ashland are of this type!
- Some local buildings made of un-reinforced masonry; a current exception is Churchill Hall on the SOU campus which has just undergone a seismic retrofit.



Jackson County Courthouse 1939



Ashland Springs Hotel



Churchill Hall, SOU

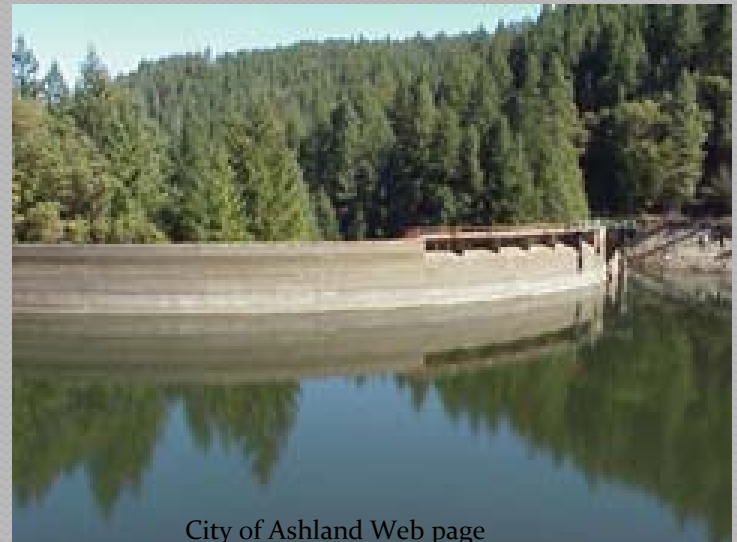
● Vulnerable Structures

- I-5 Viaduct
- Bridges
- Dams
- Cell towers
- Transformers
- Water treatment plants



I-5 Viaduct

Stockwell photos.com



City of Ashland Web page
Hosler Dam

The Nisqually Earthquake

- Occurred at 10:54 AM, February 28, 2001
- M: 6.8, Duration: 45 seconds, Focus (depth) 52 km (32 miles).
- 400 people injured (one death from a heart attack at the time).
- Most property damage to unreinforced concrete/ masonry buildings. The Alaskan Way Viaduct also damaged. Seattle's 4th Avenue Bridge damaged beyond repair.
- Extensive power outages in the greater Seattle area.

Damage from the Nisqually Earthquake, 2001



72 Hours Self Sufficient

- You may need to be entirely self sufficient for three days
- You may have to find your own:
 - food,
 - water,
 - emergency supplies,
 - and possibly shelter



Picture: AP

Christchurch, NZ

- Police, fire & ambulance service may be disrupted due to damaged streets and bridges
- You may have to turn off a leaky gas line or other utility at home or work.
 - know where utility shut-offs are & how to turn them off
 - do you need a special tool?



Have a Disaster Plan

- Evacuation routes & drills
 - Work plans
 - School plan
- Meeting places
- Communication plan
 - I'M OK
 - 2 out of town contacts
- Pets & livestock plan
- Individuals with special needs

Thank you