

Earthquakes and Hazards

What are the potential hazards associated with earthquakes?

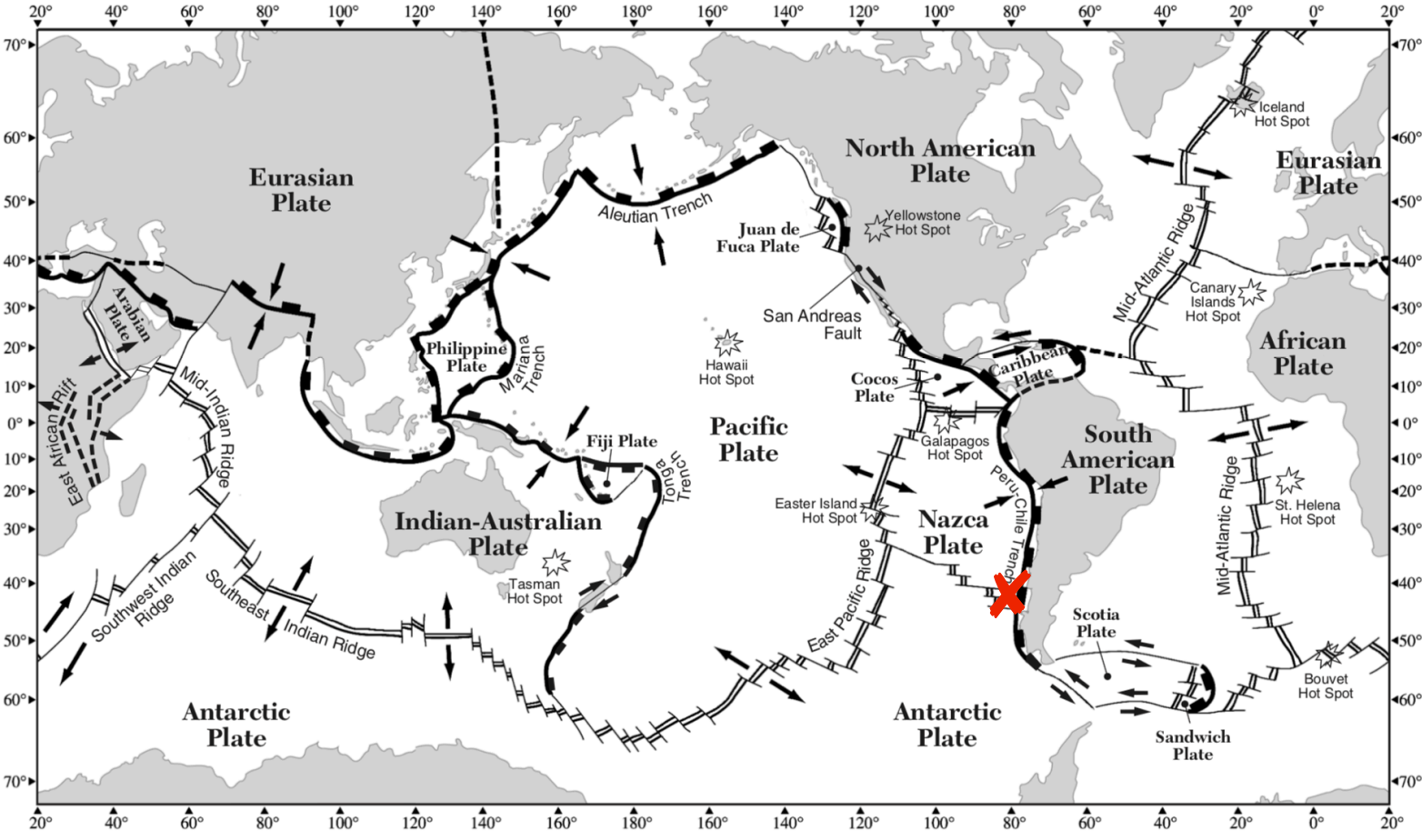
Earthquakes and Hazards

- Largest earthquake in the world:
 - Location: Chile
 - Date: May 22, 1960
 - Magnitude: 9.5
 - Deaths: 5,700
 - Duration: 10 minutes



Corral, Chile

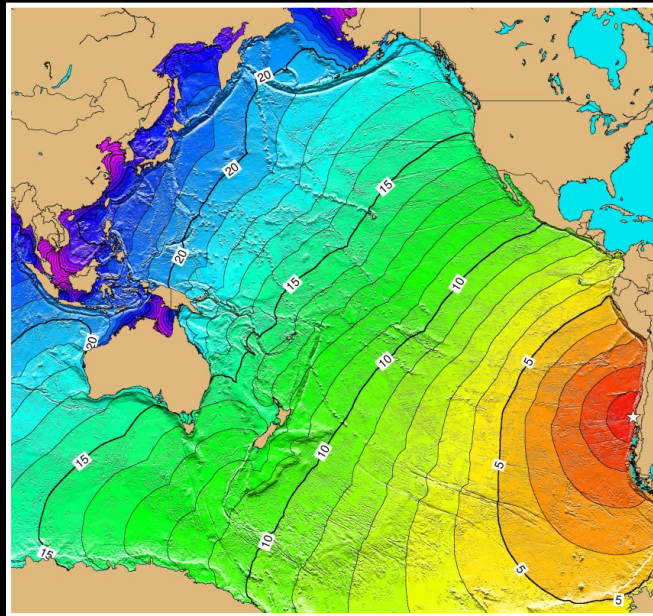
Tectonic Plates





Valdivia, Chile

Earthquakes and Hazards



Tsunami Propagation

Earthquakes and Hazards

- The tsunami hit Hawaii 14 hours after the earthquake and killed 61 people



Hilo, Hawaii

Earthquakes and Hazards

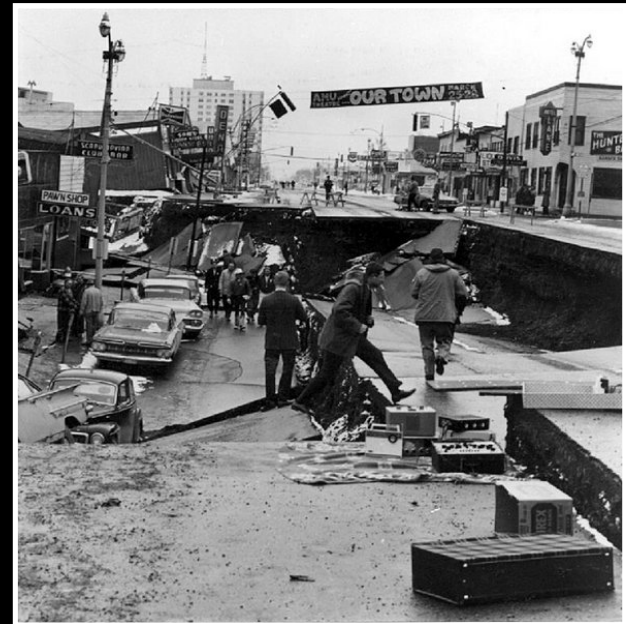
- The tsunami hit Japan 22 hours after the earthquake and killed 138 people



Kamaishi, Japan

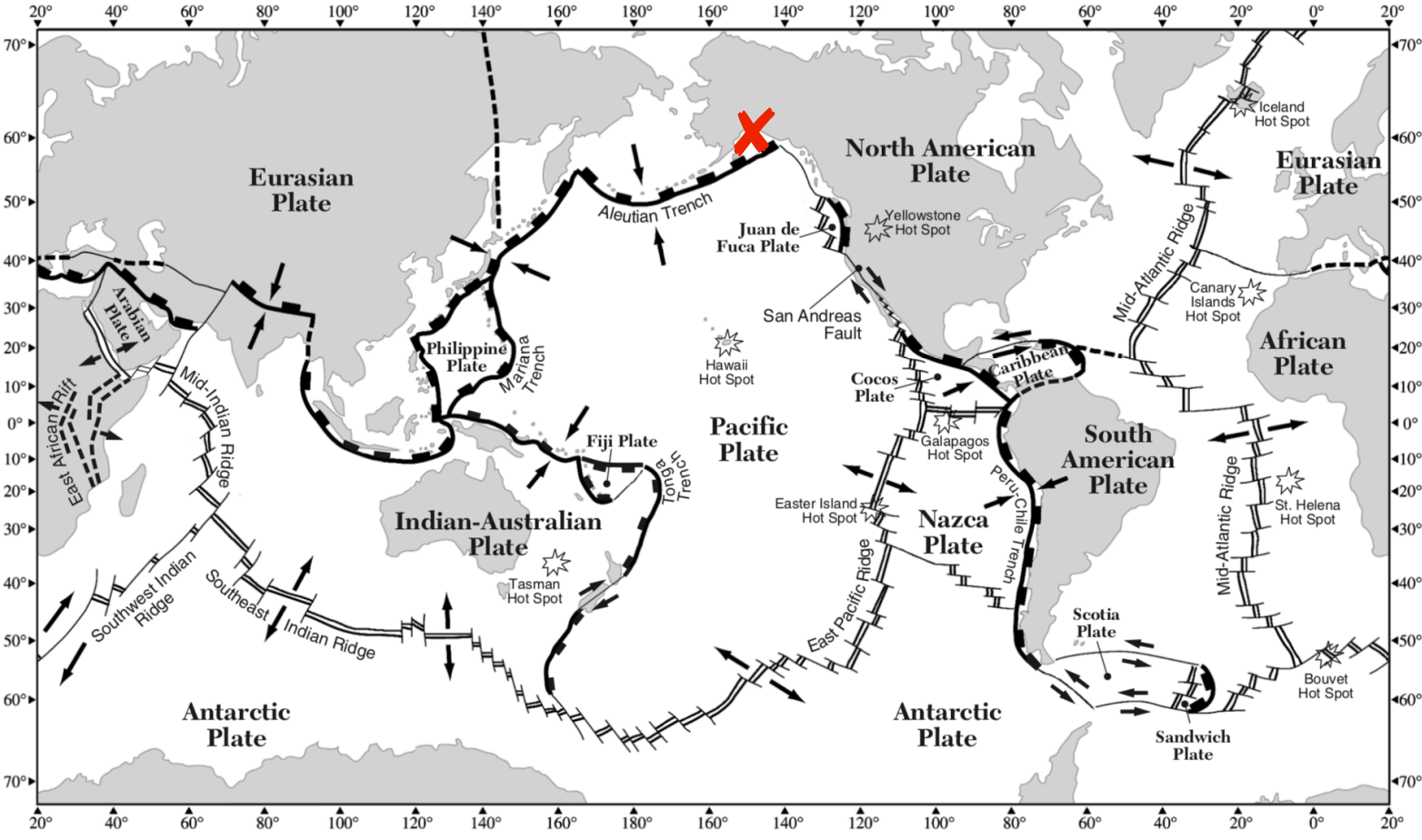
Earthquakes and Hazards

- Largest earthquake in the US:
 - Location: Alaska
 - Date: March 28, 1964
 - Magnitude: 9.2
 - Deaths: 131
 - Duration: 5 minutes



Anchorage, Alaska

Tectonic Plates





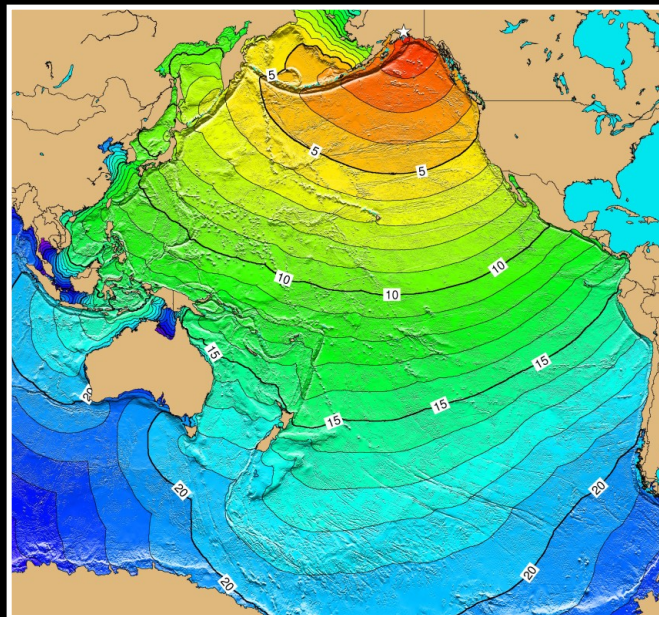
Anchorage, Alaska

Earthquakes and Hazards



Anchorage, Alaska

Earthquakes and Hazards



Tsunami Propagation



Valdez Harbor, Alaska

Earthquakes and Hazards

- The tsunami hit Valdez Harbor almost instantly and killed 122 people



Valdez Harbor, Alaska

Earthquakes and Hazards

- Earthquake Hazards:
 - Fissure - large opening or crack in the ground



Anchorage, Alaska



Honshu Earthquake, Japan

Earthquakes and Hazards

- Earthquake Hazards [continued]:
 - Liquefaction - the behavior of loose unconsolidated soils go from a solid to a consistency of a heavy liquid



New Zealand



Liquefaction

Earthquakes and Hazards

- Earthquake Hazards [continued]:
 - Landslides - the sliding down of a mass of earth or rock from a mountain



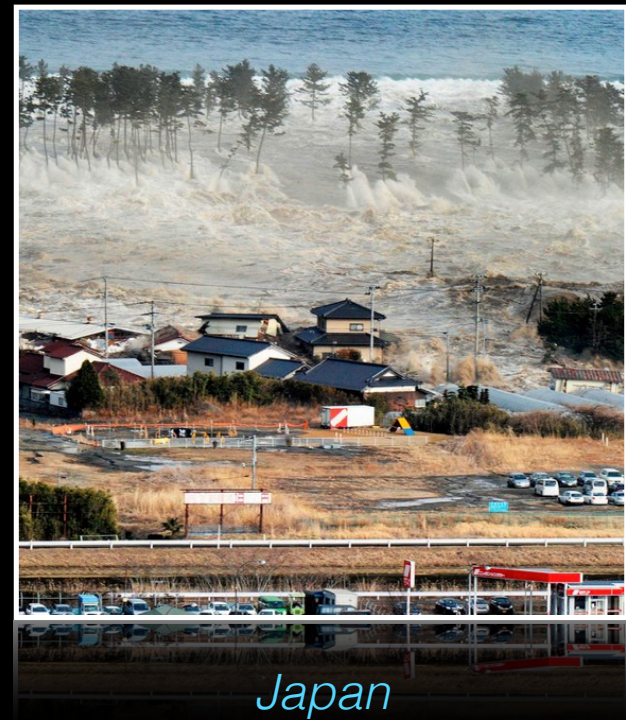
El Salvador

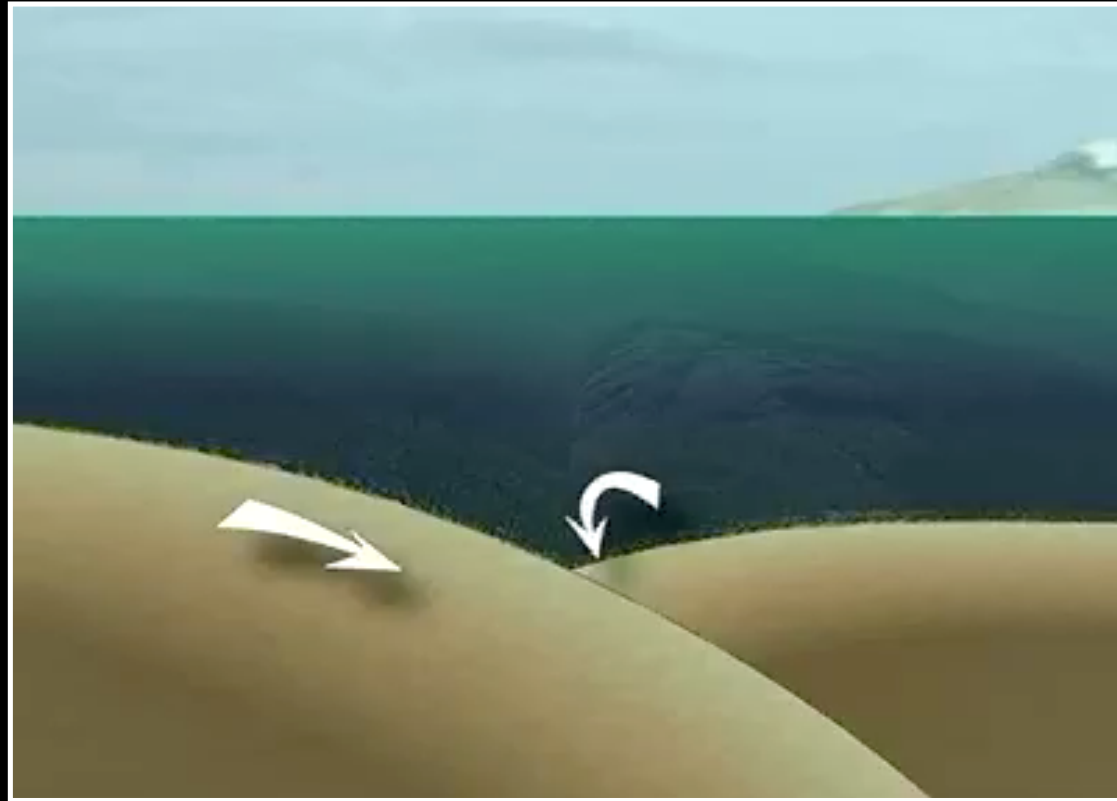


Earthquake in Nepal

Earthquakes and Hazards

- Earthquake Hazards [continued]:
 - Tsunami [harbor wave] - a long high sea wave caused by an earthquake





Tsunami Generation



Tsunami, Japan



Tsunami, Japan



Tsunami, Japan

Earthquakes and Hazards



Tsunami, Japan

Earthquakes and Hazards



Tsunami, Japan

Earthquakes and Hazards

- Emergency Preparedness:
 - What do you do if there is an earthquake?

DROP AND TAKE COVER

Earthquakes and Hazards

- Emergency Preparedness:
 - What do you do if there is a tsunami warning?

RUN TO HIGHER GROUND