

Chapter 1 : Magnitude earthquake triggers tsunami fears in Caribbean

Chapter 7: More U.S. and Canadian Earthquakes Bank calendrierdelascience.com Alaska and California are ignored, the list of 10 largest U.S. earthquakes shows _____. A. only events centered in Washington and Oregon B. only events centered in Washington, Oregon, and Hawaii C. only events centered in Washington, Oregon, Hawaii, and Nevada D. 8 events centered in western states and 2 events centered in Missouri E.

These are the major cities most prone to damage by an Earthquake. Earthquakes can cause catastrophic damage, and tragic losses of life. Indonesia 20, casualties. Haiti 20, Japan 20, Nepal 9, Earthquakes very strong, very calamitous events rock our planet on a regular basis. But as with many things, the danger is not distributed evenly and when you take into account a nations ability to confront the aftermath of such a disaster, we discover things are not distributed evenly at all. On any given day, it is estimated that million people are exposed to the possibility of a major shake up. The areas where major plates of the earth touch are the places where quakes are most likely to happen. These junctures between continental plates are called faults, and living on a fault line puts humans at risk of suffering damage or death at the hands of an earthquake. This, however, has not stopped mankind from building some of the largest, most densely-populated cities on the planet over the most active fault lines. Tokyo, Japan When accounting for overall exposure to the five major natural catastrophes-river floods, earthquakes, wind storms, storm surges and tsunamis Tokyo remains first. The capital of Japan sits spot-on the Pacific Ring of Fire , where its 37 million citizens are threatened by earthquakes and other natural disasters on a daily basis. On top of its prolific tectonic activity, Japan is also home to volcanoes, making it the most disruptive geographic location in terms of natural catastrophes. According to international organization Swiss Re, But earthquakes are not the only natural catastrophe to factor in: It is this singular potential for multiple disasters that makes Tokyo such a dangerous city. An important aspect in understanding the threat posed to Tokyo is how these events would reverberate on the world scale. Jakarta, Indonesia Jakarta, the capital of Indonesia sits in an area that is extremely earthquake prone. But the complications do not end there: In the event of a major earthquake, an estimated Its elevation also places Jakarta at risk for severe flooding. When accounting for exposure to all five major natural catastrophes, it places fifth on the world scale. The Indian Ocean Earthquake and ensuing tsunami killed over people. Of course, due to the nature of the region, many earthquakes of much smaller magnitude occur much more frequently more than once a month. Manila, Philippines Damage to Manila would greatly affect the nation as a whole. The danger posed by earthquakes to Manila is threefold. It is, of course, snug with the Pacific Ring of Fire, making it especially susceptible not only to quakes, but also volcanic eruptions. With a population of 1. The threat to Manila is worsened due to its soft soil, which presents the risk of ground liquefaction. But a disaster would not end in death and destruction: Although both cities are highly developed, neither are fully outfitted to face a quake without shaking. Los Angeles and San Francisco do not rate quite so high in terms of loss of production to their national economy as some of the other earthquake-prone major cities on this list other major U. But scientists estimate that the Cascadia Subduction Zone, opposite the Pacific Ring of Fire and near San Fransisco, Vancouver and Portland, has the potential of unleashing a much greater earthquake than the San Andreas - an earthquake that could reach up to 9. Osaka, Japan, ranks fifth on our list of most-exposed communities. Ranking close behind LA at In fact, on a list of aggregated dangers, Osaka ranks fourth after Tokyo, Manila and the Pearl River Delta whose main threat lies in storms and flooding, not earthquakes. The effect of a loss of productivity in Osaka would be catastrophic not only to the Japanese economy, but also the world economy, as a natural disaster in the area gives it a ranking of fourth on global impact after Tokyo, LA, and San Fransisco. The threat to Osaka also lurks in tsunamis and storm surges catastrophes with a tendency to amplify one another. But until we wake up to shuddering high-rises, crumbling infrastructure and mass pandemonium, all we can do is wait.

Chapter 2 : John Tenta - Wikipedia

NOTICE: The Canadian National Seismograph Network (CNSN) is undergoing equipment upgrades over the next few years. The seismograms from some stations may not be viewable on the web although we continue to acquire and process data from them.

Earthquake Facts Get up-to-date information on earthquake activity in your area. These plates are in constant slow movement. With these movements come small tremors and earthquakes. Shallow crevasses can form during earthquakes due to landslides or other types of ground failures. Buildings do not automatically collapse in earthquakes. Earthquakes cannot be predicted. What to expect during an earthquake

Small or moderate earthquakes These can last only a few seconds and represent no emergency risk. Ceiling lights may move and some minor rattling of objects may occur in your home. You may feel a slight quiver under your feet if you are outside. If you are close to its source, you may hear a loud bang followed by shaking.

Large earthquakes These can last up to several minutes and constitute a natural disaster if its epicentre is near a densely populated area, or its magnitude sufficiently large for the region. The ground or floor will move, perhaps violently. Whether far away or close to the source, you will probably feel shaking followed by a rolling motion, much like being at sea. If you are far away from the source, you might see swaying buildings or hear a roaring sound. You may feel dizzy and be unable to walk during the earthquake. If you live in a high rise or a multi-storey building, you may experience more sway and less shaking than in a smaller, single-storey building. Lower floors will shake rapidly, much like residential homes. On upper floors, movement will be slower but the building will move farther from side to side. Furnishings and unsecured objects could fall over or slide across the floor. Unsecured light fixtures and ceiling panels may fall. Fire alarms and sprinkler systems may be activated. Lights and power may go off.

Chapter 3 : Five coal miners missing after earthquake hits Poland

About Latest Earthquakes Version Info Clicking the list icon in the top right corner will load the earthquake list. Clicking the map icon in the top right corner will load the map.

Display large image of Figure 8 The epicentre was beneath the ocean about 30 km south of the southernmost point of the Queen Charlotte Islands. Observed aftershocks indicate it ruptured the Queen Charlotte Fault in a southerly direction for about 35 km. The faulting mainly involved right lateral strike-slip motion; however, analysis of seismic data revealed that this was the first earthquake in the region to show a significant component of thrusting, which is consistent with the convergent motion between the Pacific and North American plates. A slight swell was observed in Tasu Harbour, km north of the epicentre and about 10 minutes after the earthquake, but no tsunami was observed on tide gauges. The sequence began with a surprising M 6. The earthquakes were felt to distances of about km. Because no community is closer than km to the epicentres, no major structural damage was reported. At Wrigley, about km north of the epicentre, residents reported seeing the ground roll. Vehicles bounced on the road and trees and power lines whipped back and forth. Sections of the banks of the Mackenzie River slumped into the water. Inside homes, furniture moved, dishes fell from cupboards, doors swung open and shut, and walls flexed. One of the largest rock avalanches ever recorded in Canada Fig. A m scarp resulted from the landslide, which was estimated to displace 5 to 7 million m³ of rock. Recordings of shaking for this earthquake were the strongest ever recorded in Canada and provided important information on ground motion processes and earthquake hazards Choy and Boatwright ; Boore and Atkinson Deployment of seismographs to record the hundreds of aftershocks revealed that the earthquake sequence involved thrusting along a shallow, 50 km-long by km wide, west-dipping fault Wetmiller et al. Rock avalanche triggered by the October 5, Nahanni earthquake Horner et al. Display large image of Figure 9 This earthquake, like the similar-sized events in the same area in and , was centred within the Juan de Fuca plate about 60 km beneath the surface. There was some minor damage including broken windows, pipes and chimney damage in Victoria and greater Vancouver, BC Molnar et al. Studies of the earthquake provided important new information on the hazards associated with these deep, oceanic plate earthquakes Frankel et al. All have occurred along the active plate boundaries off the west coast Fig. This earthquake was likely similar, in many ways, to the Sumatra M 9. The Cascadia earthquake of occurred prior to European exploration and settlement of the area, although the event was recorded in the oral traditions of First Nations peoples on Vancouver Island. These oral reports describe the collapse of houses because of landslides in the Cowichan area, shaking that was so severe that people could not stand, and so prolonged that it made them sick. They also describe the destruction of a winter village on the west coast of Vancouver Island near present-day Pachena Bay Rogers Numerous other First Nations oral histories in Washington and Oregon are likely related to this event Ludwin and Smits Japanese records of the tsunami triggered by the earthquake Satake et al. Geological evidence from Vancouver Island to California demonstrates that M 9 earthquakes occur, on average, about every years along the Cascadia fault, and that the interval between earthquakes varies from to years. In addition to large tsunami and liquefaction, they can also cause sudden coastal subsidence Atwater et al. The sequence began on September 4, with a M 8. Significant topographic changes resulted from this earthquake " a maximum uplift of Subsidence of as much as 2 m was observed in a few areas. Other documented phenomena included surface faulting, avalanches, fissures, spouting from sand craterlets, and slight damage to buildings. A destructive tsunami 11 m in height occurred in Yakutat Bay, and localized tsunamis were observed at other places along the Alaskan coast. For each earthquake see text the rupture zone is shown in red. Display large image of Figure 10 37 The first earthquake was strong enough to throw people off their feet at Disenchantment Bay nearly km from the epicentre. The largest event on September 10 shook a mostly unsettled region, so the total affected area is unknown. The event was felt strongly in northwestern BC and southern Yukon, including Whitehorse. Prospectors camped on Disenchantment Bay felt over 50 shocks on September 10, two of which were strong. Two of the many shocks felt that day were also described as severe by residents at Yakutat village. Ten or more earthquakes were felt at the Coast and Geodetic Survey

camp near the Copper River delta in Alaska, and several of them were violent. Several shocks were also felt on September 10 in the Chugach Mountains near Prince William Sound; five were reported about km to the northeast on the Yukon River; and several were felt to the southeast at Juneau and Skagway. Details on this earthquake sequence are provided by Plafker and Thatcher. The shaking was so severe on the Queen Charlotte Islands that cows were knocked off their feet, and a geologist working on the north end of Graham Island could not stand up. Chimneys toppled, and an oil tank at Cumshewa Inlet collapsed. In Prince Rupert, windows were shattered and buildings swayed. The earthquake was felt from the Yukon Territory to Washington State. Based largely on the distribution of hundreds of aftershocks that occurred in the months after the earthquake, the rupture zone is estimated to have extended along a km long section of the fault Fig. Structures designed according to code provisions can resist moderate earthquakes without significant damage, and major earthquakes without collapse. Earthquake research provides the fundamental building blocks that are used to develop and improve seismic-hazard models, which are then included in seismic codes and standards. Significant updates to these seismic-hazard maps were made in , , and , and some changes will be made in the code. The map Milne and Davenport was the first national-scale probabilistic seismic hazard map. The maps Basham et al. It was found that the megathrust event dominates the seismic hazard for communities along the west coast of Vancouver Island. Simplified seismic hazard map for small 1â€”2 storey structures. Display large image of Figure 11 41 Updates to the seismic hazard maps, and ultimately to the seismic provisions in the NBCC, are driven by earthquake monitoring and research results e. Hyndman and Wang ; Mazzotti et al. Atkinson ; Atkinson and Boore ; Atkinson and Macias ; Crustal deformation monitoring using Global Positioning Systems, which provides critical new information to identify zones of strain accumulation that indicate probable locations of future earthquakes Mazzotti et al. Cassidy and Rogers ; Atkinson and Cassidy Sources of Seismic Risk 44 Here we briefly outline some of the key aspects of seismic risk in Canada, as illustrated by historic Canadian earthquakes. For additional details on the geological and human effects of large earthquakes in southwestern BC, see Clague For additional details on significant earthquakes in eastern Canada, see Lamontagne Pre-Building Code Buildings 45 As demonstrated by large, historic earthquakes in both eastern and western Canada, many older, un-reinforced masonry structures built prior to modern building codes are extremely vulnerable to earthquake shaking Fig. Some specific examples are provided in Bruneau and Lamontagne and a summary in Lamontagne Seismically triggered Landslides 46 Seismically triggered landslides pose a significant threat and can hamper recovery efforts after a major earthquake by blocking transportation links. In the mountainous areas of western Canada, strong ground shaking can trigger widespread landslide activity. The Vancouver Island earthquake Mathews ; Rogers triggered more than landslides at distances exceeding km from the epicentre. The Nahanni earthquakes triggered massive landslides, as illustrated in Figure 9. Lawrence and Ottawa river valleys Aylsworth Liquefaction 47 Liquefaction caused by historic and prehistoric earthquakes in Canada has been observed on the Fraser River delta of Vancouver Clague et al. Liquefaction effects have also been observed for some earthquakes in eastern Canada see Lamontagne , including the deep 29 km beneath the surface Saguenay earthquake, which caused extensive liquefaction-related damage to local houses Lefebvre et al. Tsunamis and Seiches 48 Tsunamis triggered by both distant and local earthquakes have affected Canada, as demonstrated by the Newfoundland tsunami, the tsunami in Alberni Inlet on Vancouver Island generated by the M 9. For details, see Clague Seiches standing waves set up in bodies of water such as lakes, rivers, bays, or even swimming pools can be generated when seismic waves from an earthquake including waves from a very distant earthquake that cannot be felt pass through a region. Several good examples of seiches generated in western Canada by the M 6. Variation in Ground Shaking 49 Soft soils and deep sedimentary basins such as the Fraser River delta near Vancouver can significantly alter ground shaking. Examples of clear variations in ground shaking across greater Vancouver are described in Cassidy and Rogers and Atkinson and Cassidy Similarly, in eastern Canada, amplification of ground shaking associated with thicknesses of soft Leda Clay has resulted in enhanced damage during past earthquakes Hodgson ; Lamontagne Research on variations in earthquake ground shaking is currently underway in a number of urban centres in eastern Canada, including Ottawa e. Motazedian and Hunter For a summary of some recent site response studies across Canada see

Cassidy and Molnar We cannot predict earthquakes at this time, and therefore our best defense against earthquakes is to have modern earthquake codes and standards, based on the latest earthquake research. In addition, scientists need to continue to work with emergency response organizations, planners, and the public to maintain and raise awareness of earthquake hazards and their potential impacts in Canada, and help prepare for future earthquakes through improved monitoring, mitigation of effects, and emergency plans. We thank Richard Franklin for his assistance with some of the graphics in this article. This is GSC contribution number

Evidence from turbidites off the Oregon-Washington margin: *Canadian Journal of Civil Engineering*, v. Geological Survey of Canada Open File , p. Crustal, in-slab, and offshore events: *Bulletin of the Seismological Society of America*, v. Near-surface thrust faulting in the northern Appalachians: *Canadian Journal of Earth Sciences*, v. A complex intraplate event: Strike-slip faulting along the northeastern Canadian passive margin: *Geophysical Journal International*, v. Spectral ratios from moderate earthquakes: *Canadian Geotechnical Journal*, v. Felt reports and unusual effects across Western Canada:

Chapter 4 : 4 Earthquakes Hit in Quick Succession Off Canadian Coast | calendrierdelascience.com

The major Canadian earthquakes of the 20th century are denoted with numbers 1 to 10. Seismic zoning maps for Canada are derived from the analysis of past earthquakes, and from advancing knowledge of Canada's tectonic and geological structure.

Resources Seismicity of Canada Seismologists locate an average of 1, earthquakes each year in Canada. Only about of these measure more than magnitude 3 on the Richter scale or are felt by humans. Earthquakes of magnitude 6 or greater are strong enough to cause a significant damage. In the past, some parts of Canada have experienced more and larger earthquakes than others. Western Canada, and particularly the territory of British Columbia, is considered to be the most seismically prone area of Canada. These active seismic zones have generated earthquakes with Richter magnitudes greater than 8. Because earthquakes always occur along faults, the seismic hazard is greater for the population centres located close to active fault zones. In the eastern part of Canada and the United States, the cause of earthquakes is less well understood. There is no plate boundary and very few locations of faults are known. In the past, several earthquakes have occurred in the eastern USA, e. Smaller but still damaging earthquakes, up to Richter magnitude 7, have occurred near St. Lawrence. Because of regional geologic differences, eastern and central North America earthquakes are felt at much greater distances than those in the western part, sometimes up to km away. In the central part of Canada, no significant earthquake risk exists, while in the Arctic regions some moderate seismic activity is predicted. The largest earthquake in Canada this century magnitude 8. In 1949, 27 people drowned in a tsunami large ocean wave generated by an offshore earthquake of magnitude 7. A magnitude 6 earthquake in the Saguenay region of Quebec in November caused tens of millions of dollars in damage. A map of Canada, showing Canadian earthquakes of magnitude 3 and higher that occurred in the 20th Century, is shown below. The major Canadian earthquakes of the 20th century are denoted with numbers 1 to 10. Depending on the expected seismic hazard and intensity of ground shaking expressed in terms of ground acceleration expressed as a fraction of the acceleration of gravity g , the territory of Canada is divided into 7 seismic zones. Zone 0 is characterized with a very low seismic hazard, whereas zone 6 is characterized with the highest seismic hazard in Canada. Two seismic zoning maps, one based on the Z_a factor, and the other based on the Z_v factor, are included in the National Building Code of Canada. The two maps are shown on the figures below. Note that the areas of the highest seismic hazard in Canada are in the west. One of the maps shows maximum horizontal ground velocity i . The other map shows maximum horizontal ground acceleration i . Z_a factor and is appropriate for seismic design of low-rise and rigid structures; the acceleration map shows shaking centered at about 5 Hz corresponding to the fundamental period of 0. It is important to have two different maps showing the maximum shaking at two different frequencies because different buildings are susceptible to different frequencies of earth motion. A high-rise of stories or more will sway with a natural period of 1 or 2 seconds, whereas a bungalow will vibrate at about 10 Hz. Note that the Appendix C of the National Building Code of Canada lists Z_a and Z_v values for most localities in Canada; in total, 12 different localities are identified for the Greater Vancouver area. In the offshore region to the west of Vancouver Island, more than earthquakes of magnitude 5 or greater large enough to cause damage had they been closer to land have occurred during the past 70 years. The west coast of Canada is one of the few areas in the world where four tectonic plates meet and interact, and three different types of plate movements take place, resulting in significant earthquake activity. Plates move towards each other at converging, apart at diverging and past each other at transform boundaries. All three of these boundary types occur in offshore B. About kilometers off the west coast of Vancouver island, the Juan de Fuca plate and Pacific plate are diverging or spreading apart along the Juan de Fuca ridge. This region is called the Cascadia subduction zone; it is located about 45 km beneath Victoria, and about 70 km beneath Vancouver. Another small plate, the Explorer, is also sliding underneath the North American plate, and at the same time the Juan de Fuca plate is sliding along the Nootka fault. In the north, there is a major transform fault boundary between the Pacific and the North American plates called the Queen Charlotte fault. The tectonic plates meeting off the B. The ocean plate is not always moving though. It is this squeezing of the crust

that causes the or so small earthquakes that are located in southwestern British Columbia each year, and the less frequent once per decade, on average , damaging crustal earthquakes e. At some time in the future, these plates will snap loose, generating a huge offshore "subduction" earthquake - one similar to the M 9. Current crustal deformation movements in this area provide evidence for this model. There is also a geological evidence indicating that huge subduction earthquakes have struck this coast every years. To read a detailed paper on subduction earthquakes in British Columbia click [here](#). Several major earthquakes that happened in the Washington - B.

Chapter 5 : Unit1: Earthquakes/The Seismicity of Canada

Seismologists locate more than earthquakes every year in Canada and the surrounding areas. Most of these earthquakes are smaller than magnitude 3 (M3) and are not felt.

Professional wrestling career[edit] All-Japan Pro Wrestling “ [edit] After leaving sumo, he quickly signed up for puroresu Japanese pro wrestling under the tutelage of Shohei "Giant" Baba. World Wrestling Federation[edit] Various feuds “ [edit] After making two dark-match appearances under his real name in March , [15] Tenta joined the WWF full-time in September In his first match after signing on, a dark match on September 21, , he portrayed a lumberjack character named Earthquake Evans that was billed as being from the "Northern Yukon Territory" who was managed by Slick , and defeated Paul Roma. In order to demonstrate, Bravo and manager Jimmy Hart suggested that they pick a random audience member to come into the ring and sit on the backs of Bravo and the Ultimate Warrior as they did push-ups to see who could do the most. The Ultimate Warrior agreed, and Hart, after pretending to look around the audience, centered his attention on the very large Tenta who was sitting in the audience in casual clothing and appearing surprised. Bravo and Tenta then beat and unleashed multiple big splashes on the prone Warrior. Tenta was pushed as The Canadian Earthquake “ and by WrestleMania VI , simply Earthquake “ an unstoppable monster heel who often sent his opponents out on a stretcher after repeatedly hitting them with his sitdown splash. Earthquake eliminated Hercules and survived the match, along with Savage and Dino Bravo. Kitao and Tenta broke kayfabe by being uncooperative with each other. The match ended when Kitao was disqualified for kicking the referee. After the match, Kitao immediately grabbed a microphone and began telling the audience that wrestling is fake and that Tenta never could really beat him, as other Japanese wrestlers attempted to restrain him. The incident led to Kitao being fired from SWS. Heenan had already eaten three or four of the Burgers and Hayes was curious about the meat. Earthquake mentioned the animal from which the meat was taken rhymed with quake and Hayes said they were snake burgers. Hayes got sick and nearly threw up. Roberts and Earthquake feuded throughout most of late spring and into the summer. Natural Disasters “ [edit] Main article: He also had a brief stint in CMLL in late Tenta won the sumo match. Earthquake was scheduled to face Owen Hart in a King of the Ring qualifying match. Footage of Yokozuna hitting a Banzai Drop at the show was televised before the qualifying match to explain his absence in which Doink the Clown was his replacement. T as the special referee but lost the match. At Starrcade , Avalanche lost to Sting by disqualification. At Uncensored , Avalanche faced Randy Savage but lost by disqualification. Tenta returned under the ringname The Shark and joined the Dungeon of Doom faction. He believed this could be the beginning of a long term gimmick and even changed the tattoo on his arm of an LSU Tiger to that of a shark, a process that took 24 hours. Rumors were that WCW management forced him to do that, but in reality, it was Tenta himself that brought the idea up. During this time, Tenta began using "One Crazy Anarchist" as his entrance theme , which would later be adopted by Chris Jericho. He would get the mail and his neighbors were laughing. In the spring of , Tenta joined Roddy Piper as a member of his "family. In Your House , The Oddities Golga and Kurrigan faced The Headbangers Mosh and Thrasher in a losing effort, at the Royal Rumble , Golga competed in the wrestler Royal Rumble match entering number 3 but got quickly eliminated by Steve Austin , the Oddities disappeared in the beginning of with all the members released. He did however return to the WWF with the Earthquake gimmick for a pair of appearances in During his November 18, interview on WrestleCrap Radio , Tenta announced that a recent radiation dosage did not go as planned, and had no effect on the tumor. He also announced that multiple tumors had spread to his lungs. In , the Japanese video game developer Spike released King of Colosseum II, a puroresu -wrestling game for PlayStation 2 that featured Tenta as a playable character; it was a Japan-only release. Raw which was released April 16,

Chapter 6 : “Earthquake on the App Store

This earthquake was felt west to Thunder Bay, ON, east to the Bay of Fundy, across the northeastern United States,

and south to Kentucky and Virginia (more than km from the epicentre). In TÃ©miscaming, about 80% of all chimneys were damaged.

Chapter 7 : List of earthquakes in Canada - Wikipedia

Four earthquakes -- measuring , , and magnitude -- struck in quick succession off Canada's west coast late Sunday, the US Geological Survey reported. The epicenter of the first tremor, at p.m., was located miles southwest of Port Hardy -- a small municipality on the.

Chapter 8 : Earthquakes Canada

Worldwide, there are about 1, earthquakes of magnitude 5 or higher every year. Major earthquakes release far more energy than any man-made explosion.

Chapter 9 : Canadaâ€™s Earthquakes: â€™The Good, the Bad, and the Uglyâ€™ | Cassidy | Geoscience

Several powerful earthquakes have been reported near Vancouver Island, Canada, including a magnitude The U.S. Geological Survey says several powerful quakes were reported Sunday evening. The.