Hazard Risk Analysis

Earthquakes, Tsunamis and Volcanoes

Risk Analysis Resources

Seismic Risk in Canada
Tsunamis
Volcano-Ash Falls, Projectiles and Lateral Blasts, Pyroclastic Flows and Lava Flows

Risk Analysis Resources

Seismic Risk in Canada

The following map indicates areas of high to low seismic risk in Canada.

Figure 15 Seismic Risk in Canada
Areas of Past Significant Earthquakes in Canada

Figure 16 Areas of Past Significant Earthquakes in Canada
Known Major Fault Lines in Canada

More information on Seismic zones in Canada can be found on the website of Natural Resources Canada:

- Western Canada: http://www.earthquakescanada.nrcan.gc.ca/zones/westcan-eng.php

Keywords: Natural Resources Canada, earthquake, seismic zones, seismic fault lines, earthquake hazard.

Natural Resources Canada’s “The Atlas of Canada” provides a lot of information about natural hazards, including earthquakes.

http://atlas.nrcan.gc.ca/site/english/maps/geology.html

Keywords: Natural Resources of Canada, Atlas of Canada, earthquake, natural hazards
Groundwater Location Map

Figure 18 Groundwater Location Map

Percentage of people using groundwater resources in Canadian municipalities over 10,000 people:

- ▼ 0 - 25%
- ▼ 26 - 50%
- ▼ 51 - 75%
- ▼ 76 - 100%

Aquifer Areas:

Aquifers that yield greater than 0.4 liters/second
Tsunamis

Natural Resources Canada’s “The Atlas of Canada” provides a lot of information about tsunamis including historical data, tsunami run-up potential maps and information about the Cascadia Subduction zone. It also includes some information on submarine slides.

http://atlas.nrcan.gc.ca/site/english/maps/geology.html

Keywords: Natural Resources of Canada, Atlas of Canada, tsunami, natural hazards

A Native American story, Run to High Ground, about tsunamis and earthquakes can be found on www.youtube.com:

https://www.youtube.com/watch?v=IU2vOtGC2yo

Keywords: youtube, run to high ground, native american, tsunami, earthquake

A detailed Tsunami Inundation Map for British Columbia can be found on the EMB web site:

http://www.embc.gov.bc.ca/em/hazard_preparedness/Tsunami/Tsunami_Zone_Province_Final.pdf

Keywords: Tsunami Inundation Map British Columbia
Major Volcanoes in Canada

Natural Resources Canada’s “The Atlas of Canada” provides a lot of information about volcanoes, including how long it has been since a major eruption, accumulations of volcanic ash, and volcanic belts in comparison to population.

http://atlas.nrcan.gc.ca/site/english/maps/geology.html

Keywords: Natural Resources of Canada, Atlas of Canada, volcano, natural hazards

Seismic Related Resources

The Institute for Catastrophic Loss Reduction (ICLR) has a lot of information about a number of natural hazards including Earthquakes

http://www.iclr.org/resourcecentre/hazardresearchpapers.html

Keywords: Institute for Catastrophic Loss Reduction, natural hazards, earthquake
**Historical Events – General Information**

**Please Note:** See your Provincial/Territorial Risk and Resilience Information Guides for additional resources, including information regarding your community emergency manager, contact with Aboriginal Affairs and Northern Development Canada, and provincial or territorial Emergency Management Organization (EMO). EMO websites generally provide information specific to the hazards in your territory or province. Band websites or regional Aboriginal community websites can provide more information.

<table>
<thead>
<tr>
<th>Resources</th>
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<tbody>
<tr>
<td>The “Canadian Disasters - An Historical Survey” website by Robert L. Jones provides a great list of past disasters which have occurred since the 1500s in Canada and have resulted in at least 20 deaths.</td>
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<tr>
<td><a href="http://web.ncf.ca/jonesb/DisasterPaper/disasterpaper.html">http://web.ncf.ca/jonesb/DisasterPaper/disasterpaper.html</a></td>
<td>Keywords: Canadian disasters historical survey</td>
</tr>
<tr>
<td>The Public Safety Canada &quot;Canadian Disaster Database&quot; contains a list of past disasters in Canada.</td>
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<tr>
<td><a href="http://www.publicsafety.gc.ca/prg/em/cdd/srch-eng.aspx">http://www.publicsafety.gc.ca/prg/em/cdd/srch-eng.aspx</a></td>
<td>Keywords: Canada disaster database</td>
</tr>
<tr>
<td>Wikipedia has a list of disasters in Canada and links to various events; however, it does not have a lot of information about British Columbia.</td>
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</tr>
<tr>
<td>SOS! Canadian Disasters is supported by Library and Archives Canada, and provides some interesting stories on historical events and also has a great website on an education program (Grades 7 to 12) on understanding hazards and disasters in Canada.</td>
<td></td>
</tr>
<tr>
<td><a href="http://www.collectionscanada.gc.ca/sos/index-e.html">http://www.collectionscanada.gc.ca/sos/index-e.html</a></td>
<td>Keywords: sos! Canada library archives</td>
</tr>
<tr>
<td>CBC Archives have a wide variety of news clips on historical and current disasters in Canada as well as educational information on hazards for teachers. On the CBC Digital Archives webpage, search for “disaster” in their own keyword search bar.</td>
<td></td>
</tr>
<tr>
<td><a href="http://www.cbc.ca/cgi-bin/MT4/mt-search.cgi?search=disaster&amp;IncludeBlogs=777&amp;limit=20">http://www.cbc.ca/cgi-bin/MT4/mt-search.cgi?search=disaster&amp;IncludeBlogs=777&amp;limit=20</a></td>
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References


