

Significant Earthquakes and Seismic Hazard

An earthquake is the rapid shaking of the Earth's surface that follows the sudden release of energy within the Earth. They are most commonly caused by movements along the edges of the plates that make up the Earth's crust. Each year, more than 3500 mostly small earthquakes are recorded in or near Canada, 50 of which can be felt. More than half of all the earthquakes in Canada occur along the west coast. There is also scattered activity in southeastern Canada and in the Arctic. The size of an earthquake is measured on a magnitude scale, and its intensity is measured on the Modified Mercalli Scale. This map shows the most significant earthquakes recorded in Canada to 2006.



Lambert Conformal Conic Projection, Standard Parallels 49°N and 77°N

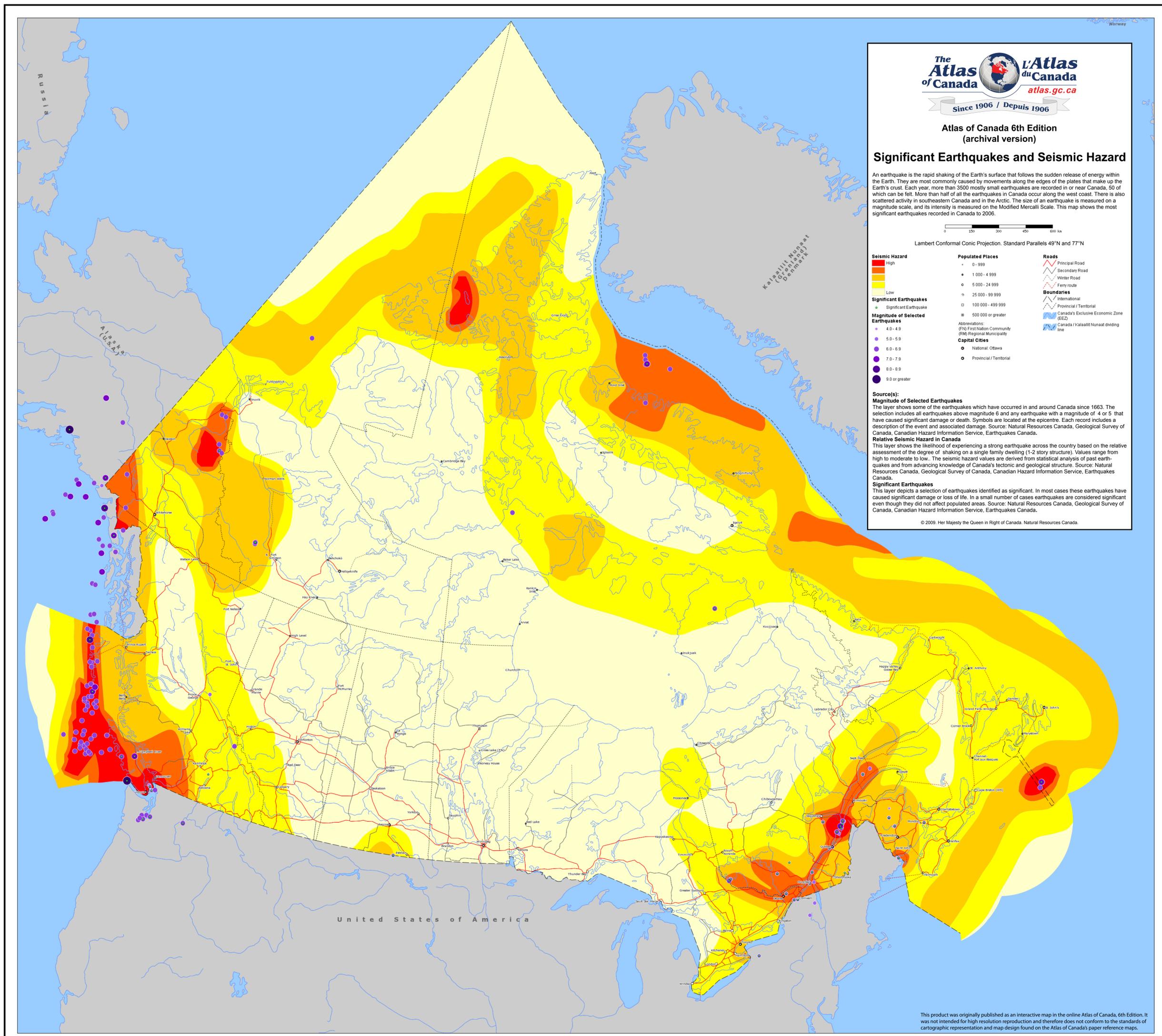
<p>Seismic Hazard</p> <ul style="list-style-type: none"> High Medium Low <p>Significant Earthquakes</p> <ul style="list-style-type: none"> Significant Earthquake <p>Magnitude of Selected Earthquakes</p> <ul style="list-style-type: none"> 4.0 - 4.9 5.0 - 5.9 6.0 - 6.9 7.0 - 7.9 8.0 - 8.9 9.0 or greater 	<p>Populated Places</p> <ul style="list-style-type: none"> 0 - 999 1 000 - 4 999 5 000 - 24 999 25 000 - 99 999 100 000 - 499 999 500 000 or greater <p>Abbreviations: (FN) First Nation Community (RM) Regional Municipality</p> <p>Capital Cities</p> <ul style="list-style-type: none"> National: Ottawa Provincial / Territorial 	<p>Roads</p> <ul style="list-style-type: none"> Principal Road Secondary Road Winter Road Ferry route <p>Boundaries</p> <ul style="list-style-type: none"> International Provincial / Territorial Canada's Exclusive Economic Zone (EEZ) Canada / Kalaallit Nunaat dividing line
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Source(s):
Magnitude of Selected Earthquakes
 The layer shows some of the earthquakes which have occurred in and around Canada since 1663. The selection includes all earthquakes above magnitude 6 and any earthquake with a magnitude of 4 or 5 that have caused significant damage or death. Symbols are located at the epicentre. Each record includes a description of the event and associated damage. Source: Natural Resources Canada, Geological Survey of Canada, Canadian Hazard Information Service, Earthquakes Canada.

Relative Seismic Hazard in Canada
 This layer shows the likelihood of experiencing a strong earthquake across the country based on the relative assessment of the degree of shaking on a single family dwelling (1-2 story structure). Values range from high to moderate to low. The seismic hazard values are derived from statistical analysis of past earthquakes and from advancing knowledge of Canada's tectonic and geological structure. Source: Natural Resources Canada, Geological Survey of Canada, Canadian Hazard Information Service, Earthquakes Canada.

Significant Earthquakes
 This layer depicts a selection of earthquakes identified as significant. In most cases these earthquakes have caused significant damage or loss of life. In a small number of cases earthquakes are considered significant even though they did not affect populated areas. Source: Natural Resources Canada, Geological Survey of Canada, Canadian Hazard Information Service, Earthquakes Canada.

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