



Atlas of Canada 6th Edition
(archival version)
Storm Surge

Storm surges occur in coastal areas when strong onshore winds and low atmospheric pressure during passing storms raise water levels along the shore above predicted levels. Storm surges occur on all four Canadian coasts (Pacific, Arctic, Atlantic and Great Lakes). The most severe known surges in Canada have been 2 to 3 metres high (well over the head of the average person). Severe storm surges that occur on high tides or during high lake levels can result in flood damage, evacuation of communities and loss of life. This map shows that a qualitative estimate of storm-surge hazards for selected representative locations varies in severity and frequency in different areas of coastal Canada. On this map, a low frequency means one surge every few years, a medium frequency indicates one surge every year and a high frequency represents several surges every year. Low severity corresponds to some flooding or erosion during large surges, with minor resulting damage. Medium severity indicates moderate flooding or erosion during large surges, with moderate damage. High severity means extensive flooding or severe erosion during large surges, with significant damage.



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

Frequency and Severity of Storm Surges for Selected Locations

● Low Severity Low Frequency	International
● Low Severity Medium Frequency	Provincial / Territorial
● Low Severity High Frequency	Canada's Exclusive Economic Zone (EEZ)
● Medium Severity Low Frequency	Canada / Kalaallit Nunaat dividing line
● Medium Severity Medium Frequency	
● Medium Severity High Frequency	
● High Severity Low Frequency	
● High Severity Medium Frequency	
● High Severity High Frequency	

Source(s):
Frequency and Severity of Storm Surges for Selected Locations
 Each dot symbol on the map indicates a representative storm-surge site. The site may represent a few to several hundred kilometres of shoreline. The size of the dots reflects frequency, not area covered. The data shown are for illustrative purposes only and should not be used for local storm-surge hazard management. Atlantic Marine Environmental Geosciences, Geological Survey of Canada, 2006.

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