CANADIAN DISASTERS - AN HISTORICAL SURVEY

Robert L. Jones (July 2023 Update)
The major Canadian disasters from the 1500s to date are identified by cause and type. General disaster criteria are defined. Twenty or more deaths occurring at one time is the primary criterion. The other principal criterion is to include events which have occurred within Canada, and Newfoundland before 1949, and offshore inside the 200-mile economic zone. Events such as wars, epidemics and battles between natives and European settlers during colonization have been excluded. These criteria limit the events which are discussed to a manageable number.
The results of an expanded literature search are presented and a brief description of some of the disasters is given. The weather-related factor is determined. An historical perspective is discussed with a view to illustrating the disasters which were common in early Canadian history, and those which have occurred in modern times. Conclusions are drawn as to which types of natural and man-made disasters are likely to occur in Canada in the future.
Since original publication in 1992, (<u>Table 5 ref. Nh</u>) the database (of disasters meeting the criteria) has more than doubled in size from 95 events in 1990 to 230 . The latest version of the paper is published at:
https://web.ncf.ca/jonesb/disasterpaper.pdf
or
https://tinyurl.com/bdnnn36p
KEY WORDS: disasters, Canadian disasters, weather-related disasters

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METHODOLOGY

The first task was to define a disaster for analysis purposes. This was followed by an intensive literature search. Implications of weather- and / or climate-related phenomena were also noted and recorded during the search. All disasters appeared in at least one reference, with recent events taken from newspaper coverage. Finally, conclusions were drawn about the weather-related disasters as compared to the other disasters found in the references.

In order to limit the number of events to be included in the survey, the primary disaster criteria were defined as <u>a single event</u>, <u>occurring at one</u> time (no more than the order of a few days), within Canadian (and Newfoundland, before 1949) territory out to the 200-mile economic zone <u>offshore</u>, in which loss of life was 20 or more persons. The search identified and counted all such events except wars and epidemics. The early colonization battles with indegenous and the war of 1812 with the United States were excluded. In all, 230 disasters have been identified which met these criteria.

Several major epidemics were found but not counted in the primary list. Epidemics have by far the highest death tolls of all Canadian disasters and those found in the references are listed in <u>Table 2</u>. The worst of these were the Spanish influenza epidemic which killed between at least 50,000 Canadians in the last five months of 1918; the 1862 smallpox epidemic which killed at least 20,000; and another smallpox epidemic in 1885 which killed almost 6,000 in Montreal.

In a short communication such as this, the scope cannot hope to extend to comparisons of Canadian disasters with those in other countries. Further, the scope did not include economic or property loss criteria.

DISCUSSION AND FINDINGS

Major Findings

<u>Table 1</u> lists the **230** Canadian disasters which met the above criteria and which were found in the references, listed in <u>Table 5</u> at the end of the paper. **Sixty-one** of these disasters occurred prior to Canada's Confederation in 1867. It is felt that there may be several unidentified disasters in that early period but, on the other hand, the period from 1867 to date may well include most of the events where at least 20 persons lost their lives. It is worth noting that the significant loss of life in the large number of marine disasters in the period around the time of Confederation was the catalyst which caused the federal government to found the Canadian Weather Service with a grant to Professor George T. Kingston in 1871.

<u>Table 2</u> lists **109** disasters which did not meet all the criteria, but were reported in many references. Several were just short of the 20-death criterion, but were spectacular in nature. Others happened outside the 200-mile limit, but had distinctive "Canadian" characteristics such as the 1985 Air India crash over the North Atlantic Ocean, the 2001 World Trade Centre attacks and the 2020 Ukranian Air crash in Iran, all of which killed more than 20 Canadians. Still others met the criteria, but occurred over periods of time from a few months to a decade or more. Finally, <u>Table 2</u> includes some wartime events.

Given sets of data such as Tables 1 and 2, many conclusions were inferred. Dealing with the weather-related factor first, **49**% of the disasters were found to be weather-related, whether or not they met the criteria. Of the remainder, **44**% were not weather-related and the effect of the weather could not be determined from **7**% of the disasters found. A strict definition of the weather-related factor is not possible in this examination. Based upon each event description in the references, a subjective (Y/N) decision was made on this factor, depending on the way the incident was described.

Some authors have stated that weather-related disasters have been increasing markedly in recent years, possibly due to climate change. A survey of the **34** disasters in both Tables 1 and 2 since 1990 to date (over three decades of recent data), shows that **48%** were weather-related, **52%** not weather-related and there was one disaster where the weather-related factor was uncertain. When the many updates to the original published paper are considered, the weather-related factor has remained constant with weather being involved in about half of the disasters.

Marine and Transportation Events

There were interesting findings regarding marine disasters. Over **35**% of all the disasters occurred at sea, or on the Great Lakes, and **90**% of these were weather-related. As expected, many of these marine disasters did not occur in modern times and, to a degree, land transportation and aviation disasters are beginning to replace the ship/marine disasters. Clearly, when the number of aviation, train and bus accidents are added, transportation in all forms has been, and still is, one of the most common factors in major Canadian disasters.

Dates and Frequency of Disasters Meeting Criteria

Starting with 1801-1810, the rate of change with time of the number of people dying each decade in major disasters was examined. **Figure 1** shows the total number of deaths per decade.

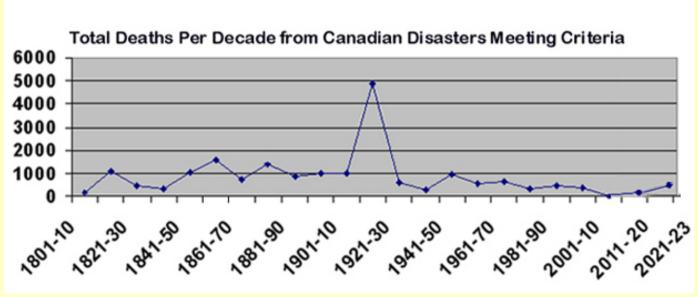
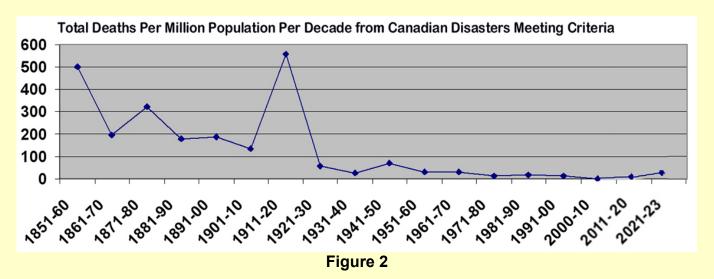


Figure 1

It is evident that, although the nation's population has been rising steadily since colonization, the number of people killed in major disasters has been

gradually dropping. The very large anomaly in the 1911-1920 decade was caused by the 1917 explosion of a munitions ship in Halifax Harbour and by the collision of two ships off Rimouski. These two events make the 1911-1920 decade Canada's deadliest by far in terms of disasters at home.

Using Statistics Canada's population data (up to census of 2021), **Figure 2** below shows the number of deaths per million population per decade. Figure 2 begins with the 1851 census, the earliest accurate census.



The same decadal data were also used to determine that, on average, there was about one major disaster per year. The rate approaches two disasters per year in the three decades from 1891 to 1920, in agreement with the above anomaly for 1911-1920.

Categories of Disasters

The Journal of Natural Hazards recognizes the following hazards: atmospheric (weather and climatological), earthquakes, erosion, floods, droughts, landslides, man-made and technological, oceanographic (waves and storm surges), snow / avalanches / ice, tsunamis and volcanoes.

It is interesting to note that Canada has experienced at least one disaster in each of the categories listed in the Journal, with two exceptions: storm surges and volcanoes, and that the two of the three most common Canadian disasters do not fall exactly into any of the classifications listed. They are shipwrecks and fires. Obviously, the shipwrecks are, in many cases, the result of marine (wave) hazards, but the fires do not seem to have a place in the hazards phenomena. Given the increase of forest wildfires in the 2020s, probably due to climate change, a classification for fire should be added. Table 3 lists the disasters by category and frequency.

Geographical Distribution

The geographic nature of the disasters was examined. <u>Table 4</u> shows their distribution by Canadian province. Of the **31** events that could not be assigned to a specific province, **11** occurred in more than one province or the whole country and the remaining **20** were <u>Table 2</u> items that occurred outside the country. Generally, the locations reflect the population density with the many disasters occurring along the East Coast and in the St. Lawrence River area. On land, they occurred near the large population centres of eastern Canada. Manitoba, Saskatchewan and Prince Edward Island are the provinces with the fewest disasters (and the Arctic territories).

Manitoba had a train wreck at Dugald in 1947 which caused 40 deaths and several Red River floods which had high economic losses but very few fatalities. PEI's only disaster was the 1851 "Yankee Gale" which sunk 70 US ships nearby and taking up to 300 lives. Major Canadian cities which have never had a disaster meeting the criteria are Ottawa, Saskatoon and Calgary.

There were only five occurrences in the Canadian Arctic found in the references:

- the Rea Point NU Pan Arctic Electra crash in 1974 in which 32 oil and gas workers lost their lives;
- the loss of the Franklin expedition in Nunavut (NU) where 129 officers and crew of "HMS Erebus" and "HMS Terror" perished over the two-year period 1847 to 1848;
- the 1991 Hercules crash near Alert NU with the loss of 18 lives;
- the crash in the Yukon, in 1950, of a U.S. military transport plane with 44 persons aboard; and
- the First Air 737 crash at Resolute Bay, NU, 20 August 2011 killing 12 of the 15 people on board.

Other Findings of Interest

- Canada's best known and worst disaster, in terms of lives lost at one time, is the Halifax Explosion of 1917. It had the highest death toll
 (nearly 2,000), was documented in the most references, and was the only Canadian disaster meeting the criteria to appear in the Guinness
 Book of Records.
- Only one other disaster, meeting the criteria, killed over 1,000 people. This was the collision of the ships "Empress of Ireland" and "Storstad" near Rimouski in 1914. A 1775 storm off Newfoundland reportedly killed 4,000, presumably in ships lost offshore (only reference was the Canadian Weather Trivia Calendar). Later, a description of this storm was found in a St. John's newspaper which indicates the approximate death toll of 300 and another researcher set the toll at 400, following detailed study.
- The 1903 Frank Slide at Turtle Mountain AB which killed 70 people is mentioned in **nine** references, the highest number, making it almost as well known as the Halifax Explosion.
- The 1918 "Spanish" influenza epidemic which claimed at least 50,000 Canadians in five months ranks as Canada's worst disaster (although epidemics were excluded from the disaster criteria here). See also update note on the Covid -19 pandemic which reports Canadian deaths in the same order of magnitude as the 1918 flu, but with much larger population, making the Canadian part of Covid-19 less serious, probably due to vaccinations and improved responses. The duration was over two years, longer than the "Spanish" flu.
- Deaths due to wars were originally excluded from the paper. Because Canada has had few major battles on home soil or in nearby seas, two
 war actions were reported in <u>Table 2</u>: The 1942 sinking of the ferry "Caribou" by a German U-boat off the Newfoundland coast, and the
 disappearance of a Newfoundland fishing schooner in 1914 which was attributed to hitting a mine.
- Several disasters recurred at the same place. There were six wrecks near Sable Island, NS; four disasters in the Crowsnest Pass border area
 of Alberta/B.C. (mines and landslide); three air crashes near Gander NL; three or more disasters at coal mines in Nanaimo and Springhill, and

in Lower Quebec City due to rock falls; two at the site of the Quebec Bridge; and two disasters of different categories in remote Mégantic County QC.

- In another coincidence, senior citizens died in almost-identical bus crashes on the same steep hill near St. Joseph de la Rive (aka Les éboulements), Quebec; 13 deaths in 1974; 43 deaths in 1997. 16 Seniors were again victims in the 2023 bus collision in MB.
- Twenty-eight people were killed in 1929 when a tsunami struck Newfoundland's Burin Peninsula following an earthquake in the Grand Banks area. This event was Canada's only tsunami or earthquake disaster.
- The 1912 Regina Tornado which killed between 28 and 30 people, and the 1987 Edmonton Tornado which resulted in 27 deaths, are the two deadliest Canadian tornado events.
- While there have been many lightning strikes which kill one or two people at a time, there was only one major disaster directly caused by lightning (not including forest fires). The Weather Trivia Calendar reports that a freighter, "The John B. King", loaded with explosives, was struck by lightning in the St. Lawrence River in 1930. Thirty crewmen died in the resulting explosion.
- No mine disasters have been placed in the weather-related category. However, following the Westray NS accident in 1992, studies of ambient atmospheric pressure in the areas of mine entrances indicate changing atmospheric pressure may be a contributing factor involved in the build-up of methane gas in mines. Methane gas is believed to be the major cause of several coal mine disasters reported in this paper.
- Many disasters are reported in several of the references. They are the most familiar "household word" disasters. In order of date, the ones found in **eight or more** references are:
 - The Frank Slide, Turtle Mountain, Alberta (1903)
 - "Empress of Ireland" and "Storstad" Collision near Rimouski (1914)
 - Halifax Explosion (1917)
 - o Burin Peninsula Tsunami (1929)
 - Hurricane Hazel (1954)
 - Ste. Thérèse TCA DC8 Air Crash (1963)
 - Toronto Air Canada DC8 Crash (1970)
 - "Ocean Ranger" Sinking (1982)
 - o "Arrow" DC8 Crash at Gander, Newfoundland (1985)
 - Ice Storm in Eastern Canada (1998)

- o BC Heatwave (2021)
- Canada did not have a disaster meeting the criteria between 1998 and 2013. The 2013 Lac Mégantic train derailment and the 2013 L'Îsle
 Verte Seniors' Home Fire were our first disasters meeting the criteria in 15 years! Further, they both occurred in Quebec within months of
 each other in 2013 and 2014.
- Since 1950, Canada has averaged about one disaster per year (more than one per year before 1950). The fact that there were no disasters meeting the criteria between 1998 until the two Quebec events suggests that mitigation efforts by public and private agencies are working.
- The above finding may be stated another way: No decade in Canadian history has been free of 20-death disasters going back to 1711 until the decade 2001 2010. 20-death disasters resumed in the following decade but not in the numbers prior to the Millennium.

SUMMARY

Despite the various events uncovered during this research, it is evident from comparisons to other countries that Canada gets off rather lightly in major disasters. Canada has not been subject to the disastrous earthquakes, volcanic eruptions, cyclones, typhoons and floods which still regularly take thousands of lives in countries like China, Bangladesh and Indonesia. The United States has more weather-related disasters because its larger population is subjected to far more hurricanes than Canada, and the USA is the most tornado-prone country in the world.

Update Notes

- 1. Since the final acceptance for publication of this paper in 1991, **136** new disasters meeting the criteria have been added to <u>Table 1</u> and **80** new disasters have been added to <u>Table 2</u>. As well, about **50** new References have been added to <u>Table 5</u>.
- 2. The Ice Storm of January 1998, which affected Ontario, Quebec and the Maritime provinces, has been identified by media and other commentators as the worst Canadian **natural disaster**. Abley (Reference Ic, p. 11) reports that the Ice Storm, a once-in-a-lifetime event, was the most destructive weather disaster in Canada's recorded history. In the first 10 days following the storm, which deposited from 50 to 100 mm. of ice on hydro wires, trees and outdoor structures, 35 persons died directly as a result of the storm (22 in Quebec; four in Ontario; six in New York state; and three in Maine). Most of these deaths were caused by effects of long periods without electricity, such as carbon monoxide poisoning from heaters, or hypothermia.
- 3. World Wide Web (WWW) sites are increasingly quoted as references. Several are now linked to this Web version of the paper. By **2007**, *Wikipedia* and other Web databases became sufficiently complete that most, if not all, the disasters listed may be easily found. As well, *Google* searches will yield additional information on almost every disaster. Further, many of the search results from both sources are referenced and linked back to this paper. *Wikipedia* has been added as <u>Reference Wi</u> in <u>Table 5</u> but it has not be shown in all the references columns of the tables. Old digitized newspapers are now appearing on the Web constituting a vast number of new references.
- 4. The author is aware of the transient nature and unreliability of material found on the Web, therefore as much care as possible is being taken before accepting Web references. As well many of the Web lists of disasters now cross-reference each other, suggesting that more care is now needed to ensure correct information is found. With each update of the paper, Web site references are verified to ensure they are still active. In 2009, a "last accessed date" has been added to the web references, further ensuring the sites are still reachable.

- 5. Although the paper has been reorganized since being published, no major changes in abstract, findings or conclusions have been made. It is hoped that the latest available information will ensure that the Web version of the paper is as complete as possible.
- 6. **Robert C. Parsons** of Grand Bank NL has authored several books detailing many East Coast marine losses. In 1999, twelve new items from his books were added, eleven of which met the criteria (**Reference Pa**). In 2002, six new items from a Web database of pre-Confederation shipwrecks by **Gilbert Bossé** of Little Métis (near Rimouski) QC were added.
- 7. Many other additions to the tables have been due to work by colleague, <u>Dr. John D. Reid</u>, who is studying historical meteorological events. Dr. Reid's additions include marine events that met the criteria and occurred mainly in the 19th century.
- 8. Following a Canadian Meteorological and Oceanographic Society Congress in Winnipeg in May 2001, which had a theme of "Extreme Weather", three major new sources emerged which contributed to the significant update in July 2001. It is now thought that a greater percentage than before of all Canadian disasters are now listed in the tables. Considerable cross references, cross checks and additional items were added with thanks to:
 - Public Safety and Emergency Preparedness Canada **Disaster Database** (Reference O);
 - A book published in 2000, *Disaster Canada* by Janet Looker (Reference L); and
 - Web database by *Richard Kebabjian*, covering the world's plane crashes from 1908 to date (Reference K).
- 9. In Categories of Disasters, above, it was stated that the category of Fire should be added to The Journal of Natural Hazards disaster categories. Now that Wikipedia Reference Wi Is well established, this communication has perhaps outlived its usefulness, except that it is focused on Canada and has a narrow criteria. On Wikipedia, very complete tables of all world disasters, natural and man-made can be browsed with ease. It is interesting that, among Wikipedia's lists of disasters, the only table where Canada appears is Fires, where four of the forest fire events in Table 1 are listed.
- 10. The 2023 update includes the decadal data for 2011-2020 in Figures 1 and 2. Two massively-reported events occurred at the end of this decade and in 2021. They have been added to <u>Table 1</u> The BC Heatwave and to <u>Table 2</u> The Global Covid-19 Pandemic. Although Canadian mortality from the Covid-19 pandemic is similar to the Spanish Flu pandemic of 1918-1919, our much larger population a century after the Spanish Flu, tells us that Covid-19 was not as serious. Figures 1 and 2 show a declining number of deaths from disasters meeting the criteria, even reaching zero during the decade 2001-2010. In the period from 2011 to 2023 both graphs show a small increase. Besides a few new disasters which met the criteria between 2011 and 2020, the BC Heatwave in 2022 with its reported 600 deaths added an extra point on the graphs even though the current decade is not over. It may be that the increase in serious weather or climate related disasters reflected on the upturns in Figures 1 and 2 are a result of climate change. In Note 2 above, the 1998 Ice Storm was said to be the Canada's most destructive disaster. It is too early to say where the destruction of the 2023 nation-wide wildfire outbreak will rate.

1998; December 1998; September 1999; March 2000; July 2000; January 2001; July/August 2001; (minor updates) October and December 2001; February 2002; May 2003; August 2003; April 2004; December 2004; October 2005; January and July 2007; January 2008, February and October 2009, July 2013, June 2014, April 2018, May 2020, July 2021, July 2023.

Table 1a: Canadian Disasters Meeting Criteria (before 1900)

Go to Table 1b: Canadian Disasters Meeting Criteria (1900 - 1949)

Go to Table 1c: Canadian Disasters Meeting Criteria (1950 to date)

Go to Table 2: Canadian Disasters Which Do Not Meet Criteria

#	DESCRIPTION OF DISASTER	REFERENCES	CAT	YEAR	DEATHS	WEATHER FACTOR
1	Wreck of "Delight" off Sable Island NS	HATBL	S	1583	85	yes
2	First Nations Village of Kwalate BC Destroyed by a Rock Avalanche- generated Tsunami	Ao	Е	late 1500s	100+	no
3	Fleet of Ships Run Aground in Fog at "lle-aux-Oeufs", Quebec City QC	HATL	S	1711	884	yes
4	French Warship "Le Chameau" Wrecked in Storm off Louisbourg NS	LaL	S	1725	316	yes
5	Wreck of "Catherine" off Sable I. NS	CaL	S	1737	98	yes
6	Four French Warships Sink near Sable I. NS	BL	S	1746	200-300	yes
7	"Violet" and "Duke William" Sink in Storms off E. Coast with Expelled Acadians	Wa	S	1758	700	yes
8	"Auguste de Bordeaux" Wrecked near Dingwall, Cape Breton, NS	CbCi	S	1761	114	yes
9	Hurricane Hits Grand Banks Area, NL	TLTeRuWi	S	1775	4,000	yes
10	British Royal Navy Sloop "HMS Ontario" Sinks in E. Lake Ontario, November	GkTLSwM	S	1780	120-172	yes
11	Snow Avalanche Buries Aboriginal (Eskimo) Winter House near Nain, Labrador	MiLi	AV	1782	22	yes
12	HMS "La Tribune" Wrecked, 16 November, after Hitting Thrum Shoal Outside Halifax Harbour	LWi	S	1797	238	yes
13	"Francis" Sinks in Storm off Sable I. NS	В	S	1799	40	yes
14	Schooner HMS "Speedy" lost Between Presqu'ile and Newcastle ON	USw	S	1804	20-39	yes
15	Brig "Rambler of Leith", Enroute Scotland-Pictou NS Wrecked at Bay Bulls, NL	WiSc	S	1807	138	yes
16	"General Hamilton" and "Scourge" Sink, 8 August, in L. Ontario	CTSw	S	1813	40-53	yes
17	Wreck of "Sovereign" on St. Paul's I. NS	CL	S	1814	799	yes
18	HMS "Penelope" Lost in Snowstorm, 30 April, near Madeleine R., Gaspé QC	Во	S	1815	40	yes

19	"Harpooner" Aground, November, at St. Shotts NL	PaGmLBoPa	S	1816	208	yes
	Sealer "Brothers" Lost, 18 March, in Baccalieu Tickle NL	Pa	S	1823	28	yes*
21	Roof of Sea-Cave at Ferryland NL Collapses Crushing Fishermen Sheltering from Storm	Li	L	1823	42	yes
22	Miramichi, N.B. Fire in Hot, Dry Summer	HATLWi	FE	1825	200-500	yes
23	"Rob Roy" Wrecked, 28 April at L'Islet, QC	Во	S	1827	24	yes
24	Brig "Dispatch" Runs Aground S. of Newfoundland	W	S	1828	50	yes
25	"Lady Sherbrooke" Scuttled Near Port Aux Basques NL	GmLPa	S	1831	268	no
26	Irish Immigrant Bark "Astrea" Founders off Louisbourg, NS	CbmCbKo	S	1834	237-271	yes
27	"Fidelity Clark" from Dublin; Founders off Cape Breton; crew and passengers saved; 29 died of fatigue	Ko	S	1834	29	no
28		Ko	S	1834	250	yes
29	Unnamed brig from W of England lost near Arichat NS, with 180 passengers; only 7 saved	Ko	S	1834	173	yes
30	Two Rafts Sink in Gale on Lac St-Pierre QC	Ga	S	1836	25	yes
31	Wreck of the Bark "Colborne", 15 October, near Port Daniel QC	Во	S	1838	43	yes
32	Rockslide onto Champlain St./Cap Diamant Area of Lower Quebec City - I	HAL	L	1841	32	no
33	"Minstrel" Runs Aground, 21 April, on Reef at Île Rouge, St. Lawrence R. near Mouth of Saguenay R. QC	Во	S	1841	148	yes
34	Bark "Amanda" Wrecked, 26 September, at Metis Point QC	Во	S	1841	41	yes
35	Boiler Explodes on Schooner "Shamrock" Near Lachine QC	Не	FE	1842	58	no
	Wreck of the "Reindeer", 21 October, off Sable point, MI, USA, or Sable Point, ON	GkSw	S	1842	21	yes
37	Hurricane-force Winds on Lake Ontario & Lake Erie	TL	S	1844	200	yes
38	Irish Brig "Carricks" Wrecked, May, near Cap des Rosiers, Gaspé QC	Во	S	1847	120	yes
39	Hurricane Hits Newfoundland	TL	S	1847	300	yes
40	Sealer "Bickley" Lost off Fogo I. NL	Pa	S	1847	70	*
	Steamer "Commerce" Collision in the Dark with Steamer "Despatch", 6 May, Lake Erie Near Pt. Maitland ON	BySw	S	1850	37-41	no
42	"Yankee Gale" off PEI Sinks 70 U.S. Fishing Vessels	TWaL	S	1851	150-300	yes
	Steam boat (paddlewheel) "Atlantic" Collides, 20 August, with "Ogdensburgh" S. of Long Point, Lake Erie (# passenger list lost in collision)	MLSw	S	1852	150-250#	no
44	"Ocean Wave" Burns, 30 April, Near False Duck Island, Lake Ontario	Sw	S	1853	23-36	no
45	"Arctic" Collides with "Vesta" Grand Banks off C. Race NL	ALPa	S	1854	285-370	no
46	Trains Collide at Baptiste Creek Near Chatham ON	HAWL	Т	1854	52	no
47	Irish Ship "Pallas "Runs Aground, St. Paul's I. NS	CTr	S	1856	82	yes

	"Northern Indiana" Burns 5 mi. off Point Pelee ON (# passenger list lost in fire)	Sw	FE	1856	30-56#	no
49	"Lord Ashburton" Sinks in Bay of Fundy	LoM	S	1857	21	yes
50	"Welsford" Wrecked off Cape Race NL	MPa	S	1857	27	yes
51	Steamer "Montreal" Fire, 26 June, at Cap Rouge Near Quebec City	HLBo	FE	1857	253	no
52	Des Jardines Canal Train Bridge Collapse, Hamilton ON	SL	В	1857	60	no
53	Sinking of "Monasco" with Passengers Locked in Cabins, Corbin (Burin) NL	Pa	MM	1857	50	no
54	Wreck of U.S. Brig "Argo" off Sable I. NS	В	S	1860	30	yes
55	Wreck of "Hungarian" off Cape Sable NS	TPaL	S	1860	205	yes
56	Sealer "Hibernia" Sinks off Fogo I. NL	Pa	S	1861	40	*
57	Wreck of "Anglo-Saxon" near Clam Cove, Cape Race NL	APaGmLPa	S	1863	238	yes
58	"Water Witch" Founders, 11 November, in SW Gale off Pt. Au Sable MI, USA in Lake Huron	Sw	S	1863	28	yes
59	Train Runs off Bridge over Richelieu River near St. Hilaire QC, 29 June	HAWL	Т	1864	99	no
60	St-Lawrence R. Floods, Sorel & Trois-Rivières QC	Т	F	1865	45	yes
61	22 September Gale off SW NS Sinks "Elvira", "Robert Hopkins", "Veloz", "Wideawake", and "JP Nickerson"	Mm	S	1866	38	yes
62	"Great Labrador Gale", 9 October Sinks 27 Vessels	CoWiT	S	1867	37	yes
63	"Saxby" Gale Hits New Brunswick - Maine Border, 4-5 October	Ru	S	1869	21	yes
64	"City of Boston" Disappears in Storm off NS	TL	S	1870	191	yes
65	"Imperial" Grounded on Moira Rocks, Bay of Fundy	Fi	S	1870	23	yes
66	Schooner "Dove" Lost in Gale, 31 May, Conception Bay NL	Pa	S	1871	23	yes
67	Brig "Huntsman" Lost, 23 April, in Northern NL Icefields	Pa	S	1872	44	yes
68	"24 August Gale" (aka "Great Nova Scotia Cyclone") Sinks 330 Ships in the Atlantic Provinces	TEWaLWi	S	1873	500	yes
69	Wreck of SS "Atlantic" in Fog off Prospect NS	HALC	S	1873	562	yes
70	Drummond Coal Mine Explosion & Fire, 13 May, Westville, Pictou Co. NS	HAL	М	1873	60-70	no
71	Steamer "George S. Wright" Lost in Snowstorm, Queen Charlotte Sound BC	Fi	S	1873	30	yes
72	"Calcutta" Sinks in Heavy Weather North of Grindstone Island QC	Fi	S	1875	23	yes
73	S.S. "Pacific" Sinks near Victoria BC	PAL	S	1875	236	no
74	Schooner "Rose" Disappears in mid-October, Enroute from Labrador to Carbonear NL	Pa	S	1877	47	*
75	Steamer "Waubino" Sinks, 22 November, in Georgian Bay Gale near Parry Sound ON	ArSw	S	1879	24	yes
76	Drummond Coal Mine Explosion, Stellarton NS	Н	М	1880	44	no

77	Ferry "Victoria" Flips Over Near London ON	SHATLWi	S	1881	182	no
78	"Jane Miller" Disappears in Gale, 25 November in Colpoy's Bay, Georgian Bay ON	SwMCi	S	1881	25-30	yes
79	Passenger Vessel SS "Lion" Explodes, 6 January, Enroute St. John's to Trinity NL	Pa	S	1882	43-60	no
80	"Asia" Sinks in Gale, 14 September, Near Byng Inlet, Georgian Bay	TMLSw	S	1882	123	yes
81	Remnants of Tropical Storm Cross the Grand Banks Sinking Many Fishing Boats, 26 August	TWi	М	1883	70-80	yes
82	Schooner "Mary Ann Hulbert" Sinks Under Tow in Lake Superior, 14 December, Near Thunder Bay ON	Sw	S	1883	20	yes
83	CPR Ship "Algoma" Sinks in Storm, 7 November, Lake Superior near Isle Royale, MI USA	TSw	S	1885	37-48	yes
84	Gale Sinks 89 Ships off Labrador, 12 October	МсСо	S	1885	300	yes
85	Great Fire of Vancouver	SHPL	FE	1886	30-40	yes
86	Nanaimo Mine Disaster - I	PL	М	1887	148-153	no
87	Nanaimo Mine Disaster - II (#5 Mine)	PL	М	1888	75-77	no
88	Rockslide onto Champlain St./Cap Diamant Area Lower Quebec City - III	HAL	L	1889	45-47	no
89	Asylum Fire, Longue Pointe QC (Montreal suburb)	Ga	F	1890	86	no
90	Springhill Mine Disaster - I	SHAL	М	1891	125	no
91	Schooners "Maggie Foote", "George Foote" and "Reason" Lost in August Gale, S. Coast NL	Pa	S	1892	32	yes
92	Loss of "Dorcas" and Towed Barge "Etta Stewart" off Halifax in Second <i>Great August Gale</i> , 21-22 August	CbmCb	S	1893	25	yes
93	Streetcar Falls from Point Ellice Bridge, Victoria BC	HAPL	Т	1896	55	no
94	"La Bourgogne"/"Cromartyshire" Collision off NS	ABL	S	1898	527-545	yes
95	"City of Monticello" Founders off Yarmouth NS	Υ	S	1899	36	yes

^{*} Weather-related factor uncertain from description

Table 1b: Canadian Disasters Meeting Criteria (1900 - 1949)

Go to Table 1a: Canadian Disasters Meeting Criteria (before 1900)

Go to Table 1c: Canadian Disasters Meeting Criteria (1950 to date)

Go to Table 2: Canadian Disasters Which Do Not Meet Criteria

#	DESCRIPTION OF DISASTER	REFERENCES	CAT	YEAR	DEATHS	WEATHER FACTOR
96	"Planet Mercury" Disappears off NS Coast	Υ	S	1900	45	yes*
97	Tanker "Heligoland" Aground St. Shotts NL	Pa	S	1900	35	yes
98	Remains of the "Galveston Hurricane" Sinks Many Ships in Atlantic Provinces**	Re	S	1900	86**	yes
99	"St. Olaf" Sinks in Snowstorm near Sept-Îles QC	MFi	S	1900	27	yes
100	Union Mine Explosion, Grand Forks BC	0	M	1901	64	no
101	Coal Creek Mine Explosion, Fernie BC (Crowsnest Pass area) - I	CrO	М	1902	128	no
102	Grand Trunk Railway Collision, Wanstead ON	Ra	Т	1902	28	no
103	Explosion in Extension Colliery Mine, Cranberry BC	0	М	1902	32	no
104	Frank Slide, Turtle Mtn., April 29, Frank AB	SHATRFMOL	L	1903	70	no
105	Great Lakes Gales Sink Ships	L	S	1905	70	yes
106	Wreck of "Valencia" near Cape Beale, Vancouver I., 26 January	TC	S	1906	136	yes
107	Quebec Bridge Collapse - I, 29 August	SHAROL	В	1907	75	no
108	Sealers from "Greenland" Freeze on Ice off NL	Мс	l	1908	48	yes
109	Leda Clay Landslide into du Lièvre R., 26 April, Notre-Dame-de-la-Salette QC	OCi	L	1908	34	no*
110	Kootenay Valley Fire, Elk River BC, towns of Fernie & Michel Destroyed, 1-3 August	OL	FE	1908	70-100	yes*
111	Steamship "Hestia" Lost off Grand Manan I. NB	Gi	S	1909	34	yes
112	Landslide, Burnaby & New Westminster BC, 28 November. Train Derailed.	0	L	1909	22	yes*
113	Avalanche in Rogers Pass BC (5 March)	HACTMOL	AV	1910	62	yes
114	CPR Derailment, (Spanish R.) Sudbury ON	HMWOL	Т	1910	43	no
115	Bellevue Mine Explosion, Crowsnest Pass AB	FCrL	М	1910	30	no
116	Montreal Herald Building Collapses (June 14)	Ga	С	1910	32	no

117	"SS Regulos" Lost in Motion Bay NL (near Petty Harbour, 15 km S of St. John's)	Со	S	1910	20	yes
118	Forest Fire 14 July, South Porcupine ON	RTOLTWi	FE	1911	73-100	yes
119	Regina SK Tornado (called "Cyclone" in some reports)	STROL	WX	1912	28-30	yes
120	"SS Florence" Hits Cliffs near Mariner's Cove NL	Pa	S	1912	20	yes
121	38 Ships Sink in Great Lakes Storm (7-13 November)	STMOL	S	1913	244	yes
122	Coal Dust Explosion, Hillcrest AB (Crowsnest Pass area)	HAFCrOL	М	1914	189	no
123	Four Seal Ships Caught in Ice (April 1) off NL	HSTML	l	1914x	77	yes
124	"Southern Cross" Vanishes in Same Storm off NL	HLPa	S	1914x	173-178	yes
125	"Empress of Ireland"/"Storstad" Collision off Rimouski QC	SHATRMOL	S	1914	1,014	yes
126	Britannia Mine Avalanche, Howe Sound BC	CO	AV	1915	57	yes
127	Western Fuel Co. Mine Explodes BC	0	М	1915	22	no
128	Forest Fire Ignited by Lightning, 29 July, Cochrane / Matheson ON	SHAMOLWi	FE	1916	223	yes
129	St. Ferdinand d'Halifax Insane Asylum Fire, 31 December, Saint Ferdinand QC	WgGo	FE	1916	45	no
130	Halifax Explosion, 6 December	SHATGROLRu	FE	1917	1,963	no
131	Dominion Co. Coal Mine Explosion, New Waterford NS	НО	М	1917	65	no
132	Coal Dust Explosion, Coal Creek Mines (#3 Michel Mine E.), Fernie BC - II	CrO	М	1917	34	no
133	Schooner "Mina Swim" Disappears Enroute from Burin to Grand Banks NL	Pa	S	1917	21-23	no*
134	HMCS "Galiano" Sinks in Heavy Seas off Queen Charlotte Islands BC	Wi	S	1918	36	yes
135	"SS Florizel" Aground, 26 February, N. of Cape Race NL	Ра	S	1918	94	yes
136	Allan Mine Explosion, Stellarton NS	НО	М	1918	88	no
137	"Inkermann", Newly-built French Minesweeper Sinks in Storm in mid-Lake Superior	Sw	S	1918	38	yes
138	Fire at Grey Nunnery, Montreal QC	L	FE	1918	53	no
139	Landslide, Dam Burst and Flood, Britannia Beach BC, 28 October	0	L	1921	37	yes
140	Forest Fire, Haileybury ON	ROWi	FE	1922	44	yes
141	Colliery Explosion, Comox BC - II	0	M	1923	33	no
142	"Sylvia Mosher" and "Sadie A. Knickle" Sink in Gale, 8 August, off Sable I. NS	BMm	S	1926	49	yes
143	"Laurier Palace" Theatre Fire in Montreal QC	SHAROL	FE	1927	77	no
144	Nine Schooners (including "Joyce M. Smith"; "Clayton Walters"; "Mahala"; "Columbia"; "Vienna"; "Loretta"; "Valena"; "Una Corkum") lost off NL and NS in 24-25 August Gale	PaBOMm	S	1927	87	yes
145	School Fire, Quebec City QC	L	FE	1927	40	no

146	Naval Sloop "Acorn" Sinks off Halifax NS	AOL	S	1928	115	no*
147	Tsunami Hits Burin Peninsula, NL (all deaths in NL except one drowning in Cape Breton NS),18 November	SHATOLRuT	Е	1929	28	no
148	John B. King" Explodes and Sinks in St. Lawrence R. after Lightning Strike	TOL	WX	1930	30	yes
149	Explosion in the Colliery, Coalmont BC	0	М	1930	45	no
150	Sealing Ship "Viking" Explodes, 15 March, off St. Barbe Island NL	MoLCi	FE	1931	27	no
151	Schooners "Alsatian" and "Arthur D. Strong" Disappear in March Storm, Grand Banks NL	Pa	S	1935	23	yes
152	Storm Destroys Villages in NL, 25 August	0	WX	1935	50	yes
153	Train hits Farm Truck at Level Crossing, Louiseville QC	HCiO	Т	1936	22	no
154	Schooner "Partanna" Wrecked near St. Shotts NL	Pa	S	1936	25	yes
155	Cable Breaks in Mine Shaft, Sydney Mines, Cape Breton NS, 6 December	0	М	1938	20	no
156	Sacred Heart Residential School Fire, St. Hyacinthe QC, 18 January	L	FE	1938	46	no
157	Three Great Lakes Ships Wrecked in Storm	T	S	1940	69	yes
158	Bell Island Ferries "W Garland" and "Little Golden Dawn" Collide, 10 November, Conception Bay NL	СоРа	S	1940	22-24	no
159	Prairie Blizzard, 14 March, Causes Deaths in Three Provinces and USA	0	WX	1941	76	yes
160	American Airlines DC3 Crashes, 30 October, near St. Thomas ON	K	Α	1941	20	no*
161	Arsonist Sets Knights of Columbus Hostel Fire, St. John's NL	HARMcOL	MM	1942	99	no
162	Troop Train Hits Stopped Passenger Train, Almonte ON	WO	Т	1942	36	no
163	"Truxton" & "Pollux" Aground off NL	ATMcOPa	S	1942	204	yes
164	Yacht "Wawinet" Sinks 21 September, After Turn in Calm Water off Penetanguishene, Georgian Bay ON	MSw	S	1942	25	no
165	Great Lakes Gales Sink Ships	L	S	1942	50	yes
166	"Fanad Head" & "Flora Alberta" Collide, April, off S. Shore NS	PrMm	S	1943	21	no
167	RCAF Liberator Bomber (B24) Crash, 19 October, Saint-Donat QC (airmen travelling on leave)	HOK	А	1943	24	no
168	December 11 Snowstorm in Southern Ontario	StTO	WX	1944	21	yes
169	RCAF Transport Plane (C-47 Dakota) Crashes, 15 September, near Estevan SK	OK	А	1946	20	no
170	Belgian Sabena DC4 Crashes, 18 September, SW of Gander Lake NL	NK	Α	1946	27	yes
171	American Overseas Airlines Douglas C54E Crashes, 3 October, at Stephenville NL	KCo	А	1946	39	yes
172	Passenger Trains Collide at Dugald, E. of Winnipeg MB	SOL	Т	1947	31-40	no
173	Rimouski Air DC3 Crashes in Fog, 24 July, at Cap des Rosiers, Gaspé QC	K	Α	1948	26	yes
174	RCAF Canso Crashes, 21 August, in Thunderstorms near Bigstone Lake	KSt	А	1949	21	yes

	(about 200 km NE of Lake Winnipeg) MB.					
175	"Noronic" Burns, 17 September, in Toronto Harbour	SHAOLSw	FE	1949	118	no
176	Bomb Explodes, 9 September, 40 Miles East of Québec City on Québec	HAOK	MM	1949	23	no
	Air DC3 (see Note, Table 3)					

x The same storm

^{*} Weather-related factor uncertain from description

^{**} An additional 120 fishermen from St. Pierre et Miquelon reportedly died in this storm

Table 1c: Canadian Disasters Meeting Criteria (1950 to date)

Go to Table 1a: Canadian Disasters Meeting Criteria (before 1900)

Go to Table 1b: Canadian Disasters Meeting Criteria (1900-1949)

Go to Table 2: Canadian Disasters Which Do Not Meet Criteria

#	DESCRIPTION OF DISASTER	REFERENCES	CAT	YEAR	DEATHS	WEATHER FACTOR
177	US Military Transport Plane Lost, 26 January, near Snag YK	MLK	Α	1950	44	no*
178	Trains Collide, Canoe River BC	НО	Т	1950	21	no
179	Queen Charlotte Air Catalina Crashes, 17 October, into Mt. Benson, near Nanaimo BC	K	А	1951	23	yes
180	Northwest Orient Airlines DC4 Crashes, 19 January, off Sandspit BC	K	Α	1952	36	yes
181	Bus Plunges into Williamsburg Canal, Morrisburg ON	HCiO	Т	1953	20	no
182	Lancashire Aircraft Corporation (Skyways) Avro 685 York 1 Disappears, 2 February, about 200 miles east of NL	K	А	1953	39	no*
183	Hurricane Hazel, 15 October, Southern ON	SHATRMOL	WX	1954	83	yes
184	Trans-Canada Airliner Collides with RCAF "Harvard" Trainer, 8 April, near Moose Jaw SK (includes one death on the ground)	OLKCi	А	1954	37	no
185	TCA Northstar Crashes onto Mt. Slesse, near Hope BC, 9 December	DMLK	Α	1956	62	yes
186	Springhill NS Mine Disaster - II	SHARL	М	1956	39	no
187	Maritime Central Airways DC4 Crashes, 11 August, at Issoudun QC (40 km SW of Quebec City)	MLK	Α	1957	79	yes
188	Springhill NS Mine Disaster - III	SHAROL	М	1958	75	no
189	50 Salmon and Lobster Fishing Boats Sink in Storm, 19-20 June, near Escuminac NB	HRO	S	1959	32-35	yes
190	Northwest Orient DC7 Crash, 3 June, NW of Queen Charlotte Is. BC	AOK	Α	1963	101	no*
191	TCA DC8 Crash, 29 November, Sainte-Thérèse QC	SHATDMOLK	Α	1963	118	no*
192	Severe Winter Storm Hits Maritimes	T	WX	1964	23	yes
193	Apartment Explosion and Fire, LaSalle QC	AO	FE	1965	28	no
194	Granduc Mountain Avalanche, Stewart BC	CTOL	AV	1965	26	yes
195	CP Air DC6B Explodes and Crashes, 8 July, at Dog Creek W of 100-	MLK	MM	1965	52	no

	Mile House BC (Saboteur on Board) (see Note, Table 3)					
196	St. Lawrence R. Flood and Ice Jam Downstream from Montréal	0	F	1965	20	yes
197	Level (Train) Crossing Accident, Dorion QC (19 teenagers and bus driver killed)	Ci	Т	1966	20	no
198	Ore Carrier "D.J. Morrell" Sinks in Lake Huron	Т	S	1966	28	yes
199	Czechoslovakian Ilyushin Turboprop Crashes on Takeoff, 5 September, Gander NL	DNLK	А	1967	37	no
200	"Cape Bonnie", "Polly & Robbie" and "Iceland II" Sink in Storm, 21-24 February, off NS and PEI	PaMm	S	1967	35	yes
201	Nursing Home Fire, Notre-Dame-du-Lac QC	AOL	FE	1969	54	no
202	Air Canada DC8 Crash, 5 July, at Toronto Airport	SHADMOLK	А	1970	109	no
203	Leda Clay Landslide Opens Crater after Rainstorm, 4 May, St-Jean-Vianney QC	HAOLCi	L	1971	31	yes
204	"Blue Bird" Bar Fire in Montreal	AOL	FE	1972	37	no
205	Pan Arctic Electra Crash, 30 October, Rea Point NU	HMOLK	А	1974	32	no*
206	"Edmund Fitzgerald" Founders and Sinks, 10 November, off Whitefish Point, Lake Superior	SATOLSW	S	1975	29	yes
207	Nursing Home Fire at Petty Harbour, near St. John's NL, 26 December	0	FE	1976	21	no
208	Cell Block Fire, Saint John NB	AL	FE	1977	20	no
209	Bus Plunges into Lac d'Argent, Eastman, Eastern Townships QC	HACiOL	Т	1978	41	no
210	PWA 737 Crash, 11 February, Cranbrook BC	DOLK	А	1978	42	yes
211	Social Club Fire, Chapais QC	HAOL	FE	1980	44	no
212	Tanker Truck/Bus Collision at Webb SK near Alberta / Saskatchewan Border	CiO	Т	1980	22	no
213	Nursing Home Fire, Mississauga ON, 14 July	0	FE	1980	21	no
214	Drilling Rig "Ocean Ranger" Sinks off NL, 15 February	SHATMOL	S	1982	84	yes
215	Charter "Arrow" DC8 Crash, 12 December, Gander NL	SHATDMNOLK	Α	1985	256	no*
216	VIA/CN Trains Collide, Hinton AB	SHAOL	Т	1986	26	no
217	Edmonton Tornado	SHAOL	WX	1987	27	yes
218	Air Ontario Fokker F-28 Crash, 10 March, Dryden ON	DAMOLK	Α	1989	24	yes
219	"Johanna B" & "Capitaine Torres" Sink in Gulf of St. Lawrence	MCiWa	S	1989	39	yes
220	Westray Coal Mine Explosion, Plymouth NS	SMCiOL	M	1992	26	no
221	Truck/Bus Crash Lac Bouchette QC	MCiL	Т	1993	20	no
222	"Gold Bond Conveyor" Sinks off Yarmouth NS	MCiO	S	1993	33	yes
223	Bus Plunges into Ravine, St. Joseph de la Rive QC - II	SMCiSuOL	Т	1997	44	no

224	Ice Storm Ravages Eastern Canada (27 deaths in Canada; 19 deaths in USA)	SCMCiSuTIcOL	WX	1998	27	yes
225	Freighter "Flare" sinks Southwest of Newfoundland	MCiO	S	1998	21	yes
226	Swissair MD11 Crashes, 2 September, off Peggy's Cove NS (Flight 111)	SMCiSuOLK	Α	1998	229	no
227	Train Derailment and Petroleum Explosions, Lac Mégantic QC, 7 July	MCiGa	Т	2013	47	no
228	Fire in Seniors' Home, L'Îsle Verte QC	MCIGa	F	2014	33	no
229	Mass Shooting and Arson in Nova Scotia, 19 April	MCiSuSt	MM	2020	23	no
230	BC Heat Wave, 29 June – 3 July	MCiSuSt	WX	2021	600	yes

^{*} Weather-related factor uncertain from description

Table 2: Canadian Disasters Which Do Not Meet Criteria

Go to Table 1: Canadian Disasters Which Meet Criteria

#	DESCRIPTION OF DISASTER	REFERENCES	CAT	YEAR	DEATHS	WEATHER FACTOR
1	Genocide of Newfoundland Aboriginals (Beothuk aboriginals)	S	MM	1600-1829	1,000-2,000	no
	Storm	BL	D	1746	1,000+	no
3	Royal Navy Warship, "HMS Ontario", Lost in Storm E. Lake Ontario off Oswego NY	Sw	S	1780	172-350	yes
4	Montreal Cholera Epidemic	L	D	1832	947	no
5	Two Quebec City Fires, May and June	Н	FE	1845	23	yes
6	Cholera and Typhoid Fever Kills Irish Immigrants on Grosse Île QC	Pk	D	1847	5,200	no
7	Typhoid Fever Kills Irish Immigrants on Partridge Island Quarantine Station Near Saint John NB	SjL	D	1847	600	no
8	Loss of Franklin Expedition, Nunavut	HL	I	1847-48	129	yes
9	Rockslide onto Champlain St./Cap Diamant Area of Lr. Quebec City - II	L	L	1852	7	no
10	Cholera Epidemic in Saint John NB	Sj	D	1854	1,500	no
11	Canada-wide Smallpox Epidemic	L	D	1862	20,000	no
12	Near Extinction by Smallpox of Haida of Queen Charlotte Is. BC	Su	D	1862-1872	9,400	no
13	"Bavarian" Sinks, 5 November, off Bowmanville ON	FiSw	S	1873	14	no
14	Schooner "Kittie" Flounders, about 4 April, Enroute Mulgrave NS to Boston	Fi	S	1876	63	yes
15	Great Fire of Saint John NB	ATL	FE	1877	11-100	yes
16	Lake Ontario Flash Flood	Т	F	1883	18	yes
17	Thames River Flood of West London ON	Wi	F	1883	17	yes
18	Smallpox Outbreak, Montreal	HL	D	1885	5,864	no
19	Great Fire of Ottawa / Hull QC, 26 April	Wi	FE	1900	7	yes
20	Collapse of #2 Mine Slope, (Wellington) Nanaimo BC - III	0	М	1901	16	no
21	Canadian Pacific Steamer "Islander" Hits Iceberg and Sinks, 15 August, near Juneau, Alaska	St	S	1901	45	no
22	CPR Trains Collide in Eastern Ontario	Rc	Т	1904	13	no
23	Convent Fire, Ste. Genevieve QC (West Montreal Island, 20 April	Ga	FE	1905	15	no

24	Landslide into River at Spence's Bridge BC	0	L	1905	15	no*
25	Hochelaga School Fire, Montreal, 26 February	GaSt	FE	1907	17	no
26	"Titanic" Hits Iceberg About 370 Miles SE of NL	SATGRu		1912	1,522	no
27	"SS Erna"Disappears Enroute Glasgow to St. John's NL	Pa	S	1912	51	no*
28	NL Steamer "Sharon" Lost Enroute to Ireland (possibly struck mine)	Pa	W	1914	30	no
29	Mine Accident Drowns Miners, (Wellington) Nanaimo BC - IV	0	M	1915	19	no
30	Second Quebec Bridge Collapse	SHAOL	В	1916	13	no
31	Spanish Influenza Epidemic	SBaOL	D	1918	30,000- 50,000	no
32	"Princess Sophia" Runs Aground in Inside Passage, Alaska (Vanderbilt Reef), 24 October	SHATBML	S	1918	343	yes
33	Colliery Explosion-I, Comox BC		M	1922	18	no
	Severe Summer Heat Wave in MB & ON (incl. 400 drownings while trying to cool off)	ТО	WX	1936	1,180	yes
35	Runaway Mine Tractor, Sydney NS	M	М	1938	16	no
36	Forest Fire Started by Settlers' Brush Fires, Dance Township ON, 10-15 October	0	FE	1938	17	no*
37	"Dirty Thirties" in Prairie Provinces	SOL	WX	1930-39	780	yes
38	Trans Canada Airlines Lockheed Electra Crashes near Armstrong ON, 6 February	K	Α	1941	12	no*
39	Ferry "Caribou" Torpedoed 20 miles off NL coast (Cabot Strait), 14 October	HoLPa	W	1942	136-137	no
40	HMCS Valleyfield Torpedoed 90 miles E of NL	CiGr	W	1944	125	no
41	Lake St. Clair Tornado	TO	WX	1946	17	yes
42	Trans Canada Air Lines Lockheed Lodestar Crashes, 28 April, near Vancouver BC	K	A	1947	15	yes*
43	Red River Flood MB	HTRL	F	1950	1	yes
44	MacGregor Mine Explosion, Stellarton NS	CiO	М	1952	19	no
45	Freighter Sinks in High Winds in L. Superior	Т	S	1953	17	yes
46	Polio Outbreaks Prior to Salk Vaccine	HOL	D	1953-54	638	no
47	Bus Truck Collision, Yamachiche QC	SuCi	Т	1954	15	no*
48	CF100 Crashes, 15 May, into Convent near Ottawa	CiMK	Α	1956	15	no
49	Queen Charlotte Air DC3 Crashes on Takeoff from Port Hardy BC, 23 June	K	Α	1957	14	no
50	Radiation Sickness from NL Fluorspar Mine	S	M	1957-78	75	no
51	Second Narrows Bridge Collapse, Vancouver	SHAROL	В	1958	18	no
52	Fire at Olfields Apartments, 7 November, Montreal QC	0	FE	1958	18	no
53	Gas Explosion in Store, Windsor ON	А	FE	1960	11	no
54	Bus - Station Wagon Collision, Templeton (E. of Hull) QC, 6 November	Ci	Т	1960	11	no

55	Students Die in School Bus -Train Level Crossing Crash, Lamont AB	SuCi	Т	1960	17	no
	Three Fishing Boats, "Muriel Eileen"; "Jimmie and Sisters"; "Marjorie Beryl" Lost in Storm off Lockeport NS	Mm	S	1961	17	yes
57	Chemical Plant Fire, La Salle QC	A	FE	1966	11	no
58	CP Air DC8 Crashes, 4 March, on Seawall, Tokyo Japan	DK	Α	1966	64	yes
	Heron Road Bridge Collapse, Ottawa, 10 August			1966	9	
59	Victoria Hotel Fire, Dunnville ON	A	FE	1969	13	no
60	60-hour Snowstorm Dumps 70 cm. on Montreal	T	WX	1969	15	yes
61	Bus - Truck Collision During Blizzard, Hwy 400, Barrie ON	SuCiO	Т	1973	12	yes
62	Bus Plunges into Ravine, St. Joseph de la Rive, QC - I	SMCi	Т	1974	13	no
63	"Go" Train - Bus Collision, Toronto ON	MCi	Т	1975	10	no*
64	Transport Truck - Bus - Pickup Collision, Nanaimo BC	MCi	Т	1977	11	no
65	12 Students and one Teacher from St. John's School Die of Hypothermia in L. Temiskaming while Canoeing, 11 June	J	WX	1978	13	yes
66	Bus Crashes into Overpass, St. Hyacinthe QC	MSuCi	Т	1979	11	yes
67	Quebec Air Fairchild F27 Crashes, on Take-off, 29 March, from Quebec City	OK	Α	1979	17	no
68	Mississauga Derailment, Toronto	SL	Т	1979	0	no
69	"Arctic Explorer" Hits Iceberg and Sinks off N Coast of NL, 3 July	0	l	1981	13	yes
70	Fire Aboard Air Canada DC9, 2 June, Cincinnati Ohio	DOK	Α	1983	23	no
71	Barrie / Central Ontario Tornadoes	SHATMOL	WX	1985	12	yes
72	Air India 747 Crash, 23 June, off Ireland (280 Canadians aboard) (see <u>Note</u> , Table 3)	SHAOK	MM	1985	329	no
73	Trawler "Hosanna" Sinks 400 km off C. Race	Т	S	1987	34	yes
74	"Athenian Venture" Burns 600 km off C. Race	MCi	S	1988	29	no
75	Heat Wave, Central and Southern ON, 5-11 July	0	WX	1988	14	yes
	Logging Truck Hits Hayride in NB	MCi	Т	1989	13	no
77	Gunman Kills Women at École Polytechnique, Montreal	MCiO	MM	1989	15	no
78	Cold Wave from Yukon to Ontario, 30 January	0	WX	1989	13	yes
	Faucett Air Boeing 727, Enroute Reykjavík-Gander, Runs out of Fuel and Disappears off NL, 11 September	K	А	1990	18	no*
80	"Protektor" Disappears 400 km E. of NL	MCiO	S	1991	33	yes
81	Collision of Transport Truck and Van, Cobalt ON	MCi	Т	1991	11	no
82	Hercules Aircraft Crashes Near Alert NU, 30 October	OK	Α	1991	5-18	yes
83	"Salvador Allende" Sinks 900 km S. of NL	MCi	S	1994	29	yes
84	"Marika 7" from Sept-Îles QC Sinks 1400 km E. of St. John's NL	0	S	1994	36	yes

Gunman Kills Family & Self, Vernon BC	MCi	MM	1996	10	no
Saguenay Floods QC	MCiOL	F	1996	10	yes
Propair Metroliner Crashes at Mirabel, Montreal QC, 18 June	K	Α	1998	11	no
Avalanche, Kangiqsualujjuaq QC, Jan. 1	OL	ΑV	1999	9	yes
Egypt Air Flt. 990 Crash off Nantucket, USA, 31 October (21 Canadians of 217 killed)	M	A	1999	21	no
E-Coli in Water Supply, Walkerton ON	SMCiL	D	2000	7	yes
Pine Lake AB Tornado, July 14	SMCiL	WX	2000	12	yes
September 11 Terror Attacks in USA (23 Canadians died in WTC; two on hijacked aircraft)	MCiSuSt	MM	2001	25	no
Back-to-back Avalanches, January and February, near Revelstoke BC Bury Skiers (seven each)	MCiSu	AV	2003	14	yes
SARS (Severe Acute Respiratory Syndrome) Outbreak, Toronto ON, March - July	SMCiSu	D	2003	44	no
Category 2 Hurricane "Juan" hits Halifax, 29 September	SMCiSuSt	WX	2003	8	yes
Canadians Dead or Missing in South Asian Tsunami which Killed 226,000, 26 December	MCiSuSt	E	2004	26	no
Legionnaires' Disease Outbreak in Toronto ON, October	MCiSuSt	D	2005	21	no
Listeriosis Outbreak from Contaminated Food, Maple Leaf Foods, Toronto ON	MCiSuSt	D	2008	20	no
Cougar Helicopter Crashes off St. John's NL, 12 March	MCiSuSt	Α	2009	17	no
Haiti Earthquake Kills Many Canadians, 12 January	MCiSuSt	Q	2010	58	no
First Air 737 Crashes at Resolute Bay, NU, 20 August	MCiSuSt	Α	2011	12	yes
Legionnaires' Disease Outbreak, Quebec City	MCiSuSt	D	2012	11	no
Flooding in Southern Alberta, June	MCiSuSt	F	2013	4	yes
Public Transit Double Decker Bus Crashes into Slow Moving Train, Ottawa 18 September	MCiSuSt	Т	2013	6	no
Humboldt Broncos Hockey Team Members Die in Bus-Transport Truck Crash, Near Tisdale SK, 6 April	MCiSuSt	Т	2018	16	no
Canadians Die in Ethiopian Air 737 Crash Near Addis Ababa, 10 March	MCiSuSt	Α	2019	18	no
Canadians Die in Ukranian Air Crash Near Tehran, Iran 8 Jan	MCiSuSt	MM	2020	57	no
Global COVID-19 Pandemic – Canadian Deaths	all	D	2020-2022	30,000	no
Transport Truck-Bus Collision, Carberry MB, 16 June	all	Т	2023	16	no
	Saguenay Floods QC Propair Metroliner Crashes at Mirabel, Montreal QC, 18 June Avalanche, Kangiqsualujjuaq QC, Jan. 1 Egypt Air Flt. 990 Crash off Nantucket, USA, 31 October (21 Canadians of 217 killed) E-Coli in Water Supply, Walkerton ON Pine Lake AB Tornado, July 14 September 11 Terror Attacks in USA (23 Canadians died in WTC; two on hijacked aircraft) Back-to-back Avalanches, January and February, near Revelstoke BC Bury Skiers (seven each) SARS (Severe Acute Respiratory Syndrome) Outbreak, Toronto ON, March - July Category 2 Hurricane "Juan" hits Halifax, 29 September Canadians Dead or Missing in South Asian Tsunami which Killed 226,000, 26 December Legionnaires' Disease Outbreak in Toronto ON, October Listeriosis Outbreak from Contaminated Food, Maple Leaf Foods, Toronto ON Cougar Helicopter Crashes off St. John's NL, 12 March Haiti Earthquake Kills Many Canadians, 12 January First Air 737 Crashes at Resolute Bay, NU, 20 August Legionnaires' Disease Outbreak, Quebec City Flooding in Southern Alberta, June Public Transit Double Decker Bus Crashes into Slow Moving Train, Ottawa 18 September Humbolt Broncos Hockey Team Members Die in Bus-Transport Truck Crash, Near Tisdale SK, 6 April Canadians Die in Ethiopian Air 737 Crash Near Addis Ababa, 10 March Canadians Die in Ukranian Air Crash Near Tehran, Iran 8 Jan Global COVID-19 Pandemic – Canadian Deaths	Saguenay Floods QC Propair Metroliner Crashes at Mirabel, Montreal QC, 18 June K Avalanche, Kangiqsualujjuaq QC, Jan. 1 Egypt Air Flt. 990 Crash off Nantucket, USA, 31 October (21 Canadians of 217 killed) Eypt Air Flt. 990 Crash off Nantucket, USA, 31 October (21 Canadians of 217 M killed) SMCiL Fine Lake AB Tornado, July 14 SMCiL September 11 Terror Attacks in USA (23 Canadians died in WTC; 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^{*} Weather-related factor uncertain from description

Table 3: All Canadian disasters by Category and Frequency

Disaster Category	Category Code	Occurrences: Tables 1 & 2
Shipwrecks / Sea Waves	S	121
Fires / Explosions	FE	36
Air Transportation *	А	35
Land Transportation	Т	31
Mines	M	26
Weather / Climate	WX	20
Disease/Epidemics (Table 2)	D	17
Mass Murders *	MM	12
Landslides	L	9
Snow Avalanches	AV	7
Floods	F	7
Icebergs / Sea Ice	I	6
Bridge Collapses	В	4
Tsunami	E	3
Wars (<u>Table 2</u>)	W	3
Building Collapses	С	1
Earthquakes	Q	1
Storm Surges	SS	0
Volcanoes	V	0
TOTAL:	-	339

^{* &}lt;u>Note</u>: Canada's first bombing of a passenger airliner (Quebec Air, 1949), while earlier considered as an Air Transportation disaster, has been moved to the Mass Murders category, given that the bomber was convicted and executed. Three other airliner crashes in the Tables have also been similarly identified. The 2020 Ukranian jetliner which was accidentally shot down by Iran is also in the MM category, considered as second degree murder.

Table 4 - Distribution of All Disasters by Canadian Province / Territory

Newfoundland and Labrador	NL	60
Nova Scotia	NS	44
Prince Edward Island	PEI	1
New Brunswick	NB	11
Quebec	QC	66
Ontario	ON	63
Manitoba	MB	4
Saskatchewan	SK	4
Alberta	AB	8
British Columbia	ВС	42
Northwest Territory	NWT	1
Nunavut	NU	3
Yukon Territory	ΥK	1
More Than One Province or Outside 200-Mile Limit in Table 2		31
TOTAL (Tables 1 & 2)		339

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