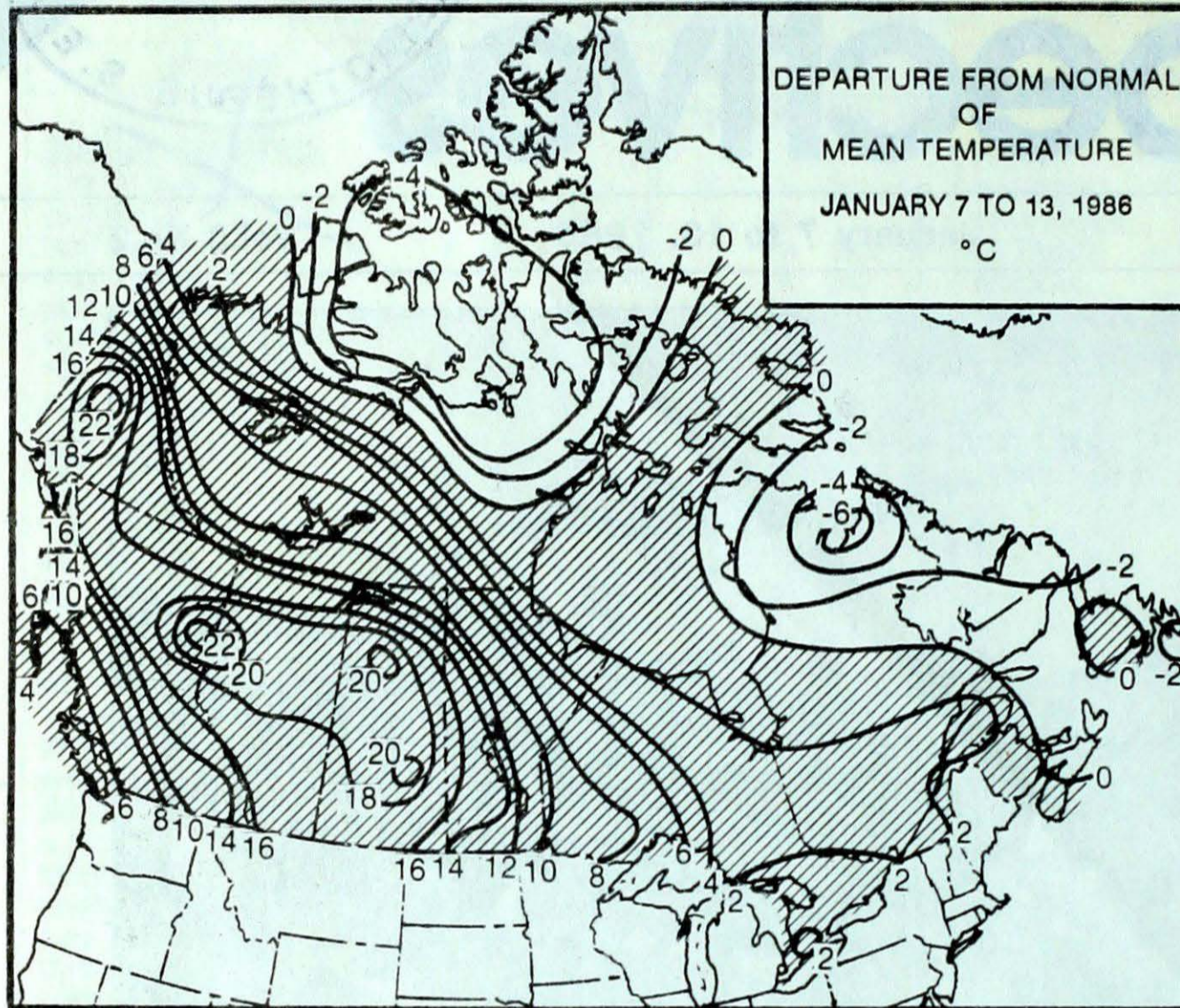


Halifax was founded in 1749 as a base for the British Navy to oppose the French at nearby Louisbourg. The present fortress was built in 1830 and was the last of four built on Citadel Hill over the years. The military began regular daily weather observations at the Halifax Citadel in 1863, but observations were also taken from time to time as early as 1769. For more information see page 3. Photo courtesy of Parks Canada.

● **Major thaw continues over much of Western Canada**

- heavy rain and record high temperatures north B.C. coast
- snowpack disappears in southern Alberta

TEMPERATURE



ACROSS THE COUNTRY...

Yukon and Northwest Territories

For four consecutive weeks much above normal temperatures have prevailed in the Yukon. In the Northwest Territories it was cloudy, but relatively mild. The mild weather has caused problems with ice-roads crossing lakes and rivers. Blizzards occurred in the Keewatin district early in the week, but snowfalls were light. In the eastern Arctic, temperatures dropped to below normal values at long last. Maximum temperatures in the high Arctic have been hovering near the minus forties.

British Columbia

A southwesterly flow pumped mild Pacific air across the province. Temperatures at many locations reached the double digits. On January 13, both Port Hardy and Prince Rupert established new monthly temperature records of 14 and 18 degrees, respectively. Strong winds buffeted the coast, causing minor power outages in Victoria. While the south and most of the interior experienced cloudy, but relatively dry weather conditions, the north coast and the Queen Charlotte Islands were deluged with between 100 and 200 millimetres of precipitation. Heavy snowfalls were reported at higher elevations, causing treacherous driving conditions further inland.

Prairie Provinces

A strong ridge of high pressure dominated the weather scene. Under mainly sunny skies, temperatures soared to record values, averaging 10 to 20 degrees above normal. Numerous daily maximum temperature records were broken. In southern Alberta, temperatures soared into the teens. In fact, almost all locations in the province reported above freezing temperatures. In Manitoba, temperatures moderated rapidly after the start of the period. At Dauphin, the mercury reached 9.6°C on January 11, the warmest ever recorded during January. The mild readings were accompanied by strong winds gusting to 100 km/h on January 11 and 12. Precipitation was very light; some rain was reported in Winnipeg.

WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM		MINIMUM	
BRITISH COLUMBIA	ABBOTSFORD	18	PUNTZI MOUNTAIN	-18
YUKON TERRITORY	WHITEHORSE	3	SHINGLE POINT A	-34
NORTHWEST TERRITORIES	HAY RIVER	-5	SHEPHERD BAY A	-47
ALBERTA	CALGARY INT'L	13	FORT CHIPEWYAN	-24
SASKATCHEWAN	MOOSE JAW	8	URANIUM CITY	-27
MANITOBA	DAUPHIN	10	CHURCHILL	-36
ONTARIO	LONDON	19	ATIKOKAN	-38
QUEBEC	MONTREAL INT'L	5	KUUJUAQ	-40
NEW BRUNSWICK	MISCOU ISLAND	7	ST STEPHEN	-27
NOVA SCOTIA	SHELBURNE	10	GREENWOOD	-18
PRINCE EDWARD ISLAND	SUMMERSIDE	4	CHARLOTTETOWN	-16
NEWFOUNDLAND	DEER LAKE	5	CHURCHILL FALLS	-40

ACROSS THE NATION

WARMEST MEAN TEMPERATURE	9	SATURNA ISLAND BC
COOLEST MEAN TEMPERATURE	-40	EUREKA NWT

Ontario

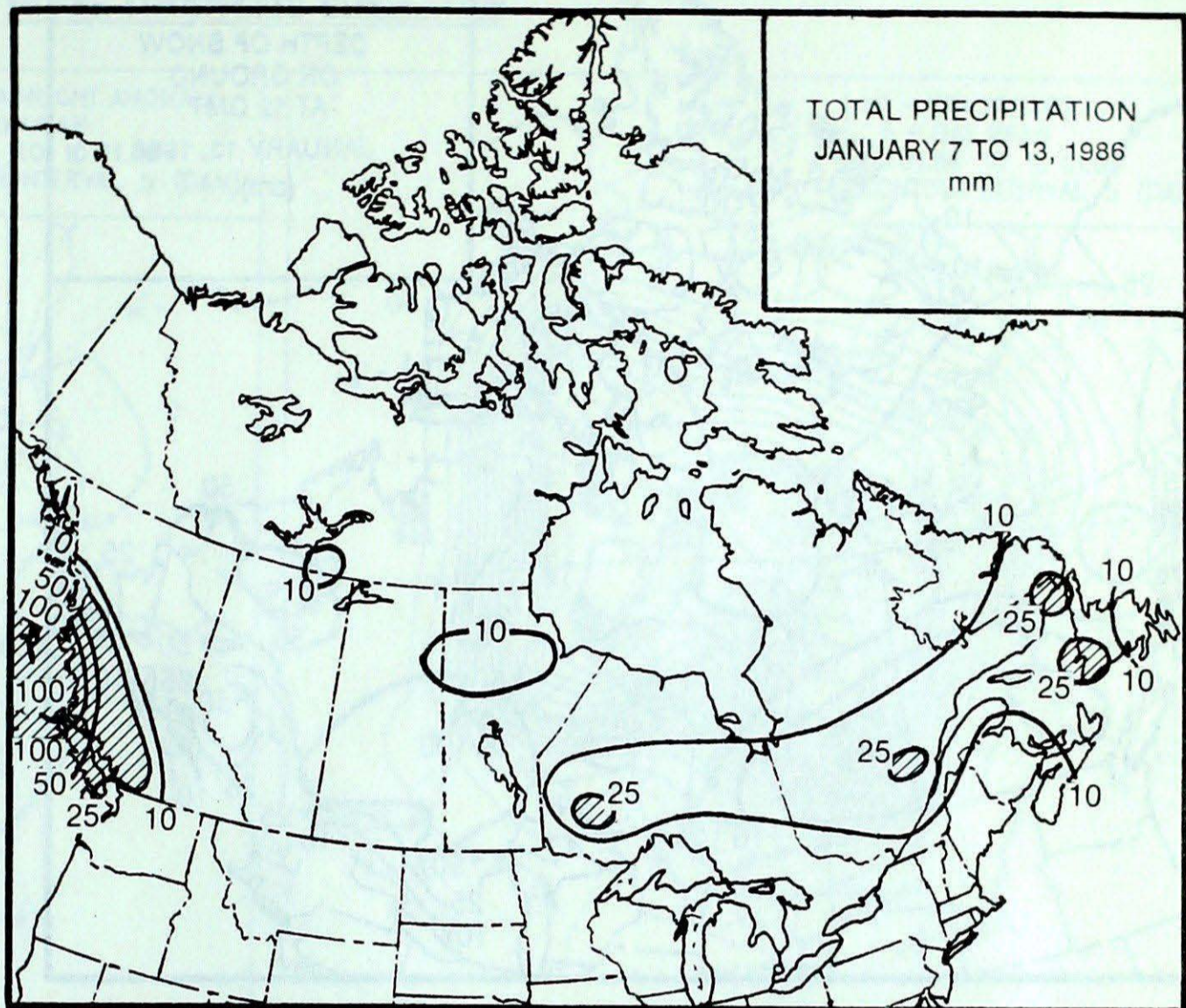
Temperatures gradually moderated from the west, but not before southern Ontario experienced the coldest night-time readings of the season. Snow squalls once again developed to the lee of the Great Lakes. Two strong weather systems tracked across northern Ontario, resulting in strong westerly winds and milder temperature readings by mid-week. There was heavy blowing snow in rural areas, and some highways had to be closed. Temperatures in most areas climbed above freezing over the weekend, and daily temperature records were broken in southern and central Ontario. By the end of the period, another cold Arctic outbreak infiltrated the province. With several metres of snow in some places, cottagers in the Muskokas have been warned to clear their roofs.

Quebec

After an initial cold start, temperatures in the southern half of the province moderated to above normal values. On January 12, readings in the south climbed above freezing and daily maximum temperature records were broken. The week was windy, especially near the St. Lawrence and along the North Coast, where winds were gusting to 78 km/h. In central and eastern parts of the province, snowfalls ranged between 10 and 30 centimetres. Snow conditions for winter sports continue to be at their best.

Atlantic

In the Maritimes, the week began generally sunny, windy and cold, while in Newfoundland snow and blowing snow was reported. On the Island, Port-aux-Basques recorded wind gusts to 115 km/h on January 7. During the latter part of the week, temperatures fluctuated, as several weak disturbances crossed the districts. Temperatures in the Maritimes returned to more seasonal values just before the weekend; light rain fell on January 13. An Arctic high pressure cell brought clear skies and cold temperatures to Newfoundland and Labrador over the weekend.

**HEAVIEST WEEKLY PRECIPITATION (mm)**

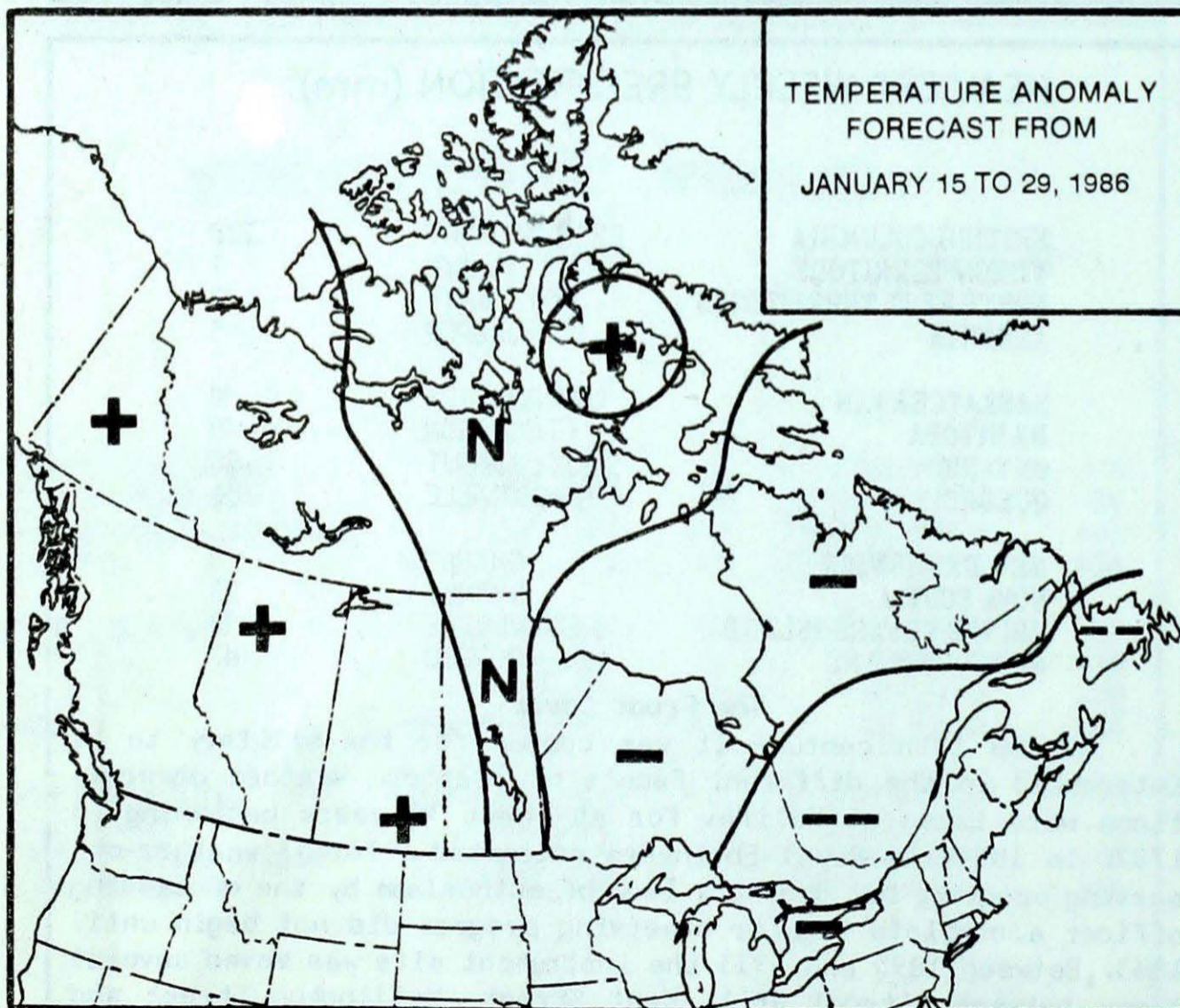
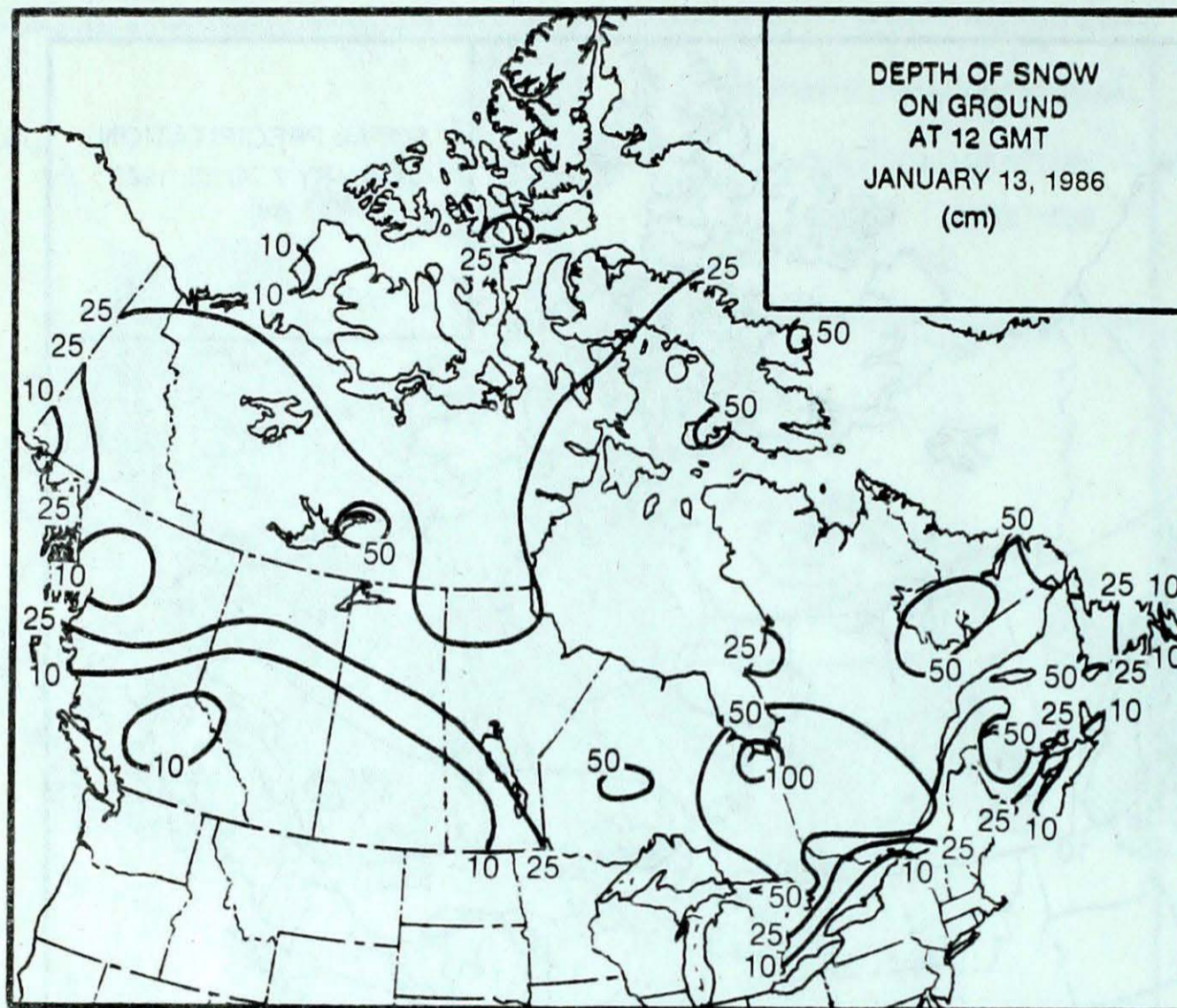
BRITISH COLUMBIA	ESTEVAN POINT	238
YUKON TERRITORY	MAYO	7
NORTHWEST TERRITORIES	FORT SMITH	13
ALBERTA	JASPER	5
SASKATCHEWAN	URANIUM CITY	10
MANITOBA	THOMPSON	18
ONTARIO	SIOUX LOOKOUT	28
QUEBEC	BAGOTVILLE	34
NEW BRUNSWICK	CHARLO	8
NOVA SCOTIA	SYDNEY	23
PRINCE EDWARD ISLAND	SUMMERSIDE	10
NEWFOUNDLAND	BURGEO	47

The Front Cover

In the 19th century it was common for the military to be interested in the different facets of weather. Weather observations were taken at Halifax for at least 30 years beginning in 1787. In 1851 the Royal Engineers attempted a formal weather observing program, but due to a lack of enthusiasm by the commanding officer a complete regular observing program did not begin until 1863. Between 1895 and 1933 the instrument site was moved several times between Citadel Hill, Kent Street, Wellington Street and Tower Road, depending upon who was the official observer. While at the Citadel, the meteorological instruments were in the care of the military. From 1933 the official observing site, and later the climatological station, remained at the Citadel. The East Coast Marine Radio staff was responsible for the observation until July 1940; the Corps of Commission have been responsible till present.

Climatic Perspectives wishes to thank J.F. Amirault and M.K. Thomas with the historical aspects of this article.

FORECAST



Temperature Anomaly Forecast

- ++ much above normal
- + above normal
- N normal
- below normal
- much below normal

This forecast is prepared by searching historical weather maps to find cases similar to the present. The historical outcome during the 15 days subsequent to the chosen analogues is assumed to be a forecast for the next 15 days from now.

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Managing Editor M.J. Newark
 Editor (English) A. Radomski
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 Staff Writer M. Skarpathiotakis
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 Word Processing U. Ellis, P. Hare

Regional Correspondents

Atl.: F. Amirault; Que.: J. Miron
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 Western: W. Prusak; Pac.: N. Penny
 Yukon Weather Centre; Yellowknife
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 AES Satellite Data Lab
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The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socio-economic impact.

Unsolicited articles are welcome but should be at maximum about 1500 words in length. They will be subject to editorial change without notice due to publishing time constraints. Black and white photographs can be used, but not colour. The contents may be reprinted freely with proper credit.

The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment Service.

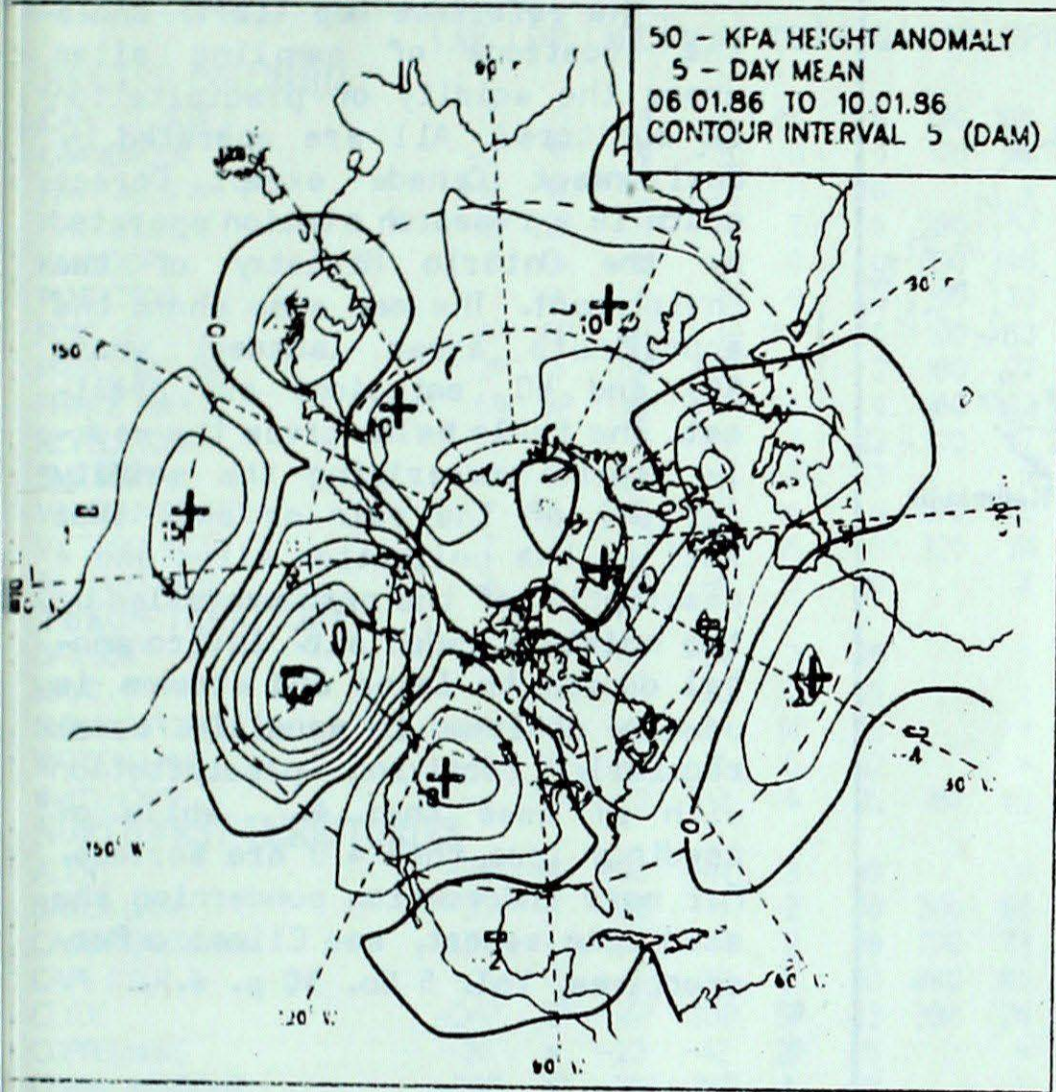
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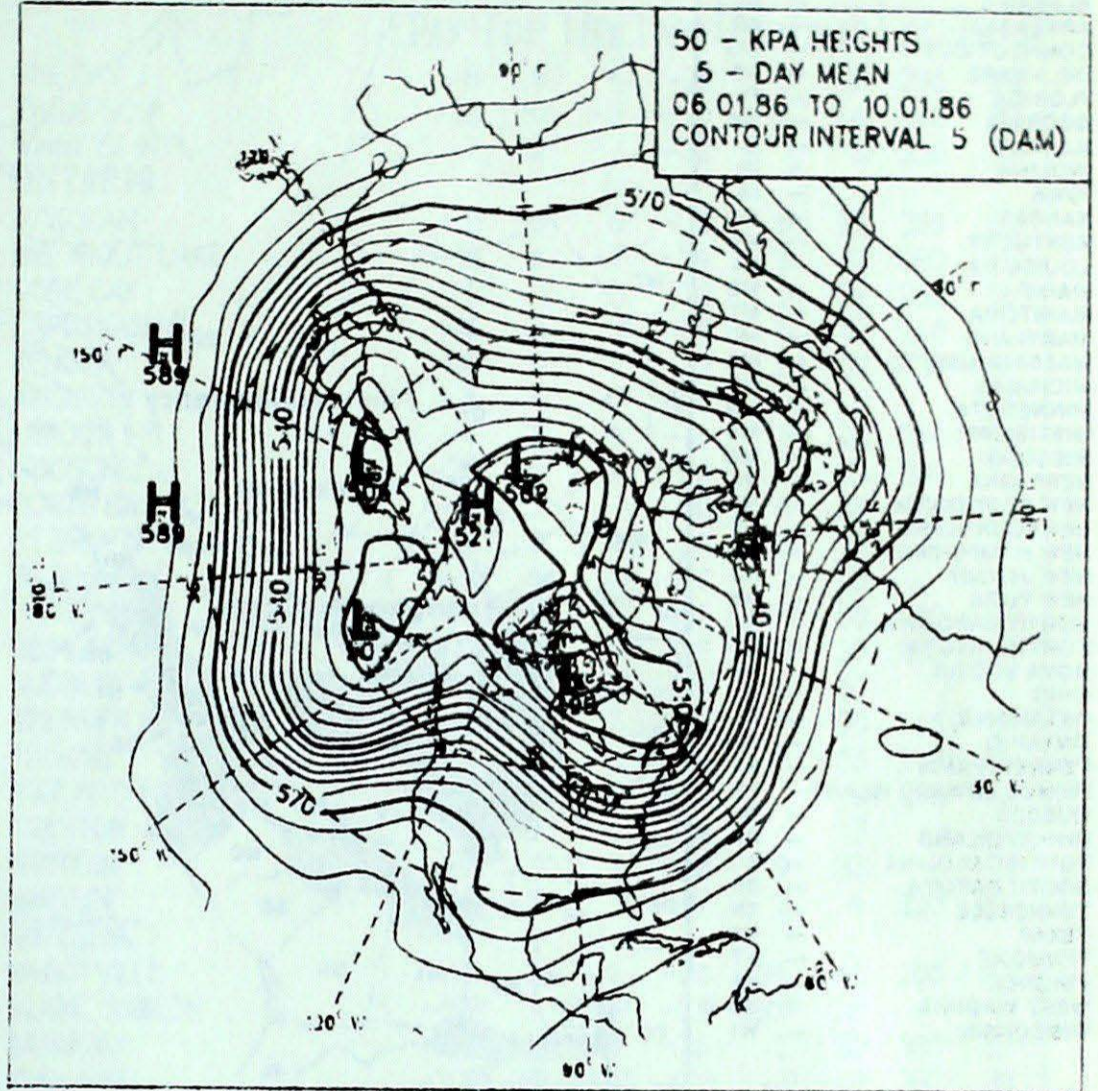
50 KPa ATMOSPHERIC CIRCULATION

50 - KPa HEIGHT ANOMALY
5 - DAY MEAN
06 01.86 TO 10.01.86
CONTOUR INTERVAL 5 (DAM)

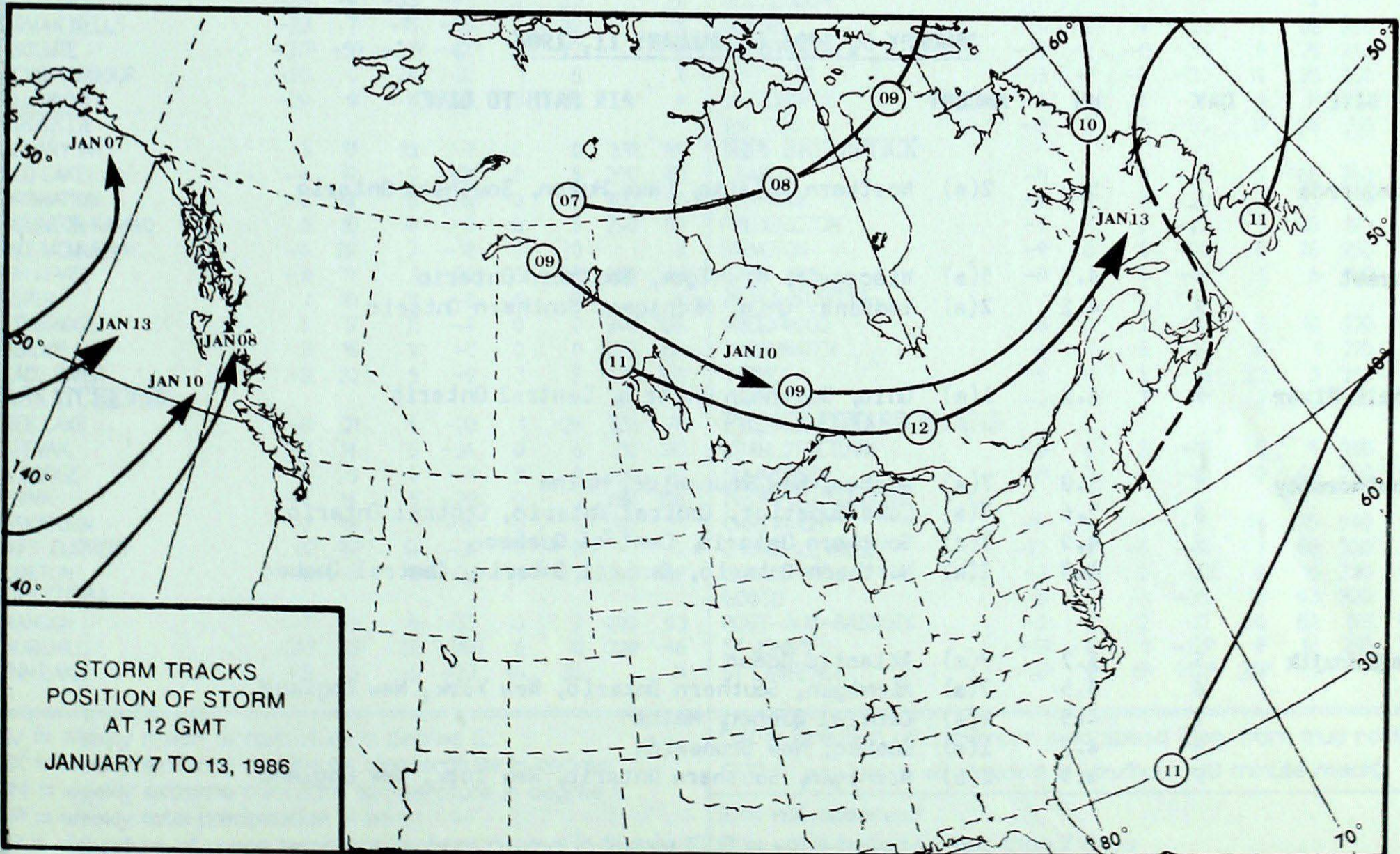


MEAN 50 KPa HEIGHT ANOMALY (dam)
January 6 to January 10, 1986

50 - KPa HEIGHTS
5 - DAY MEAN
06 01.86 TO 10.01.86
CONTOUR INTERVAL 5 (DAM)



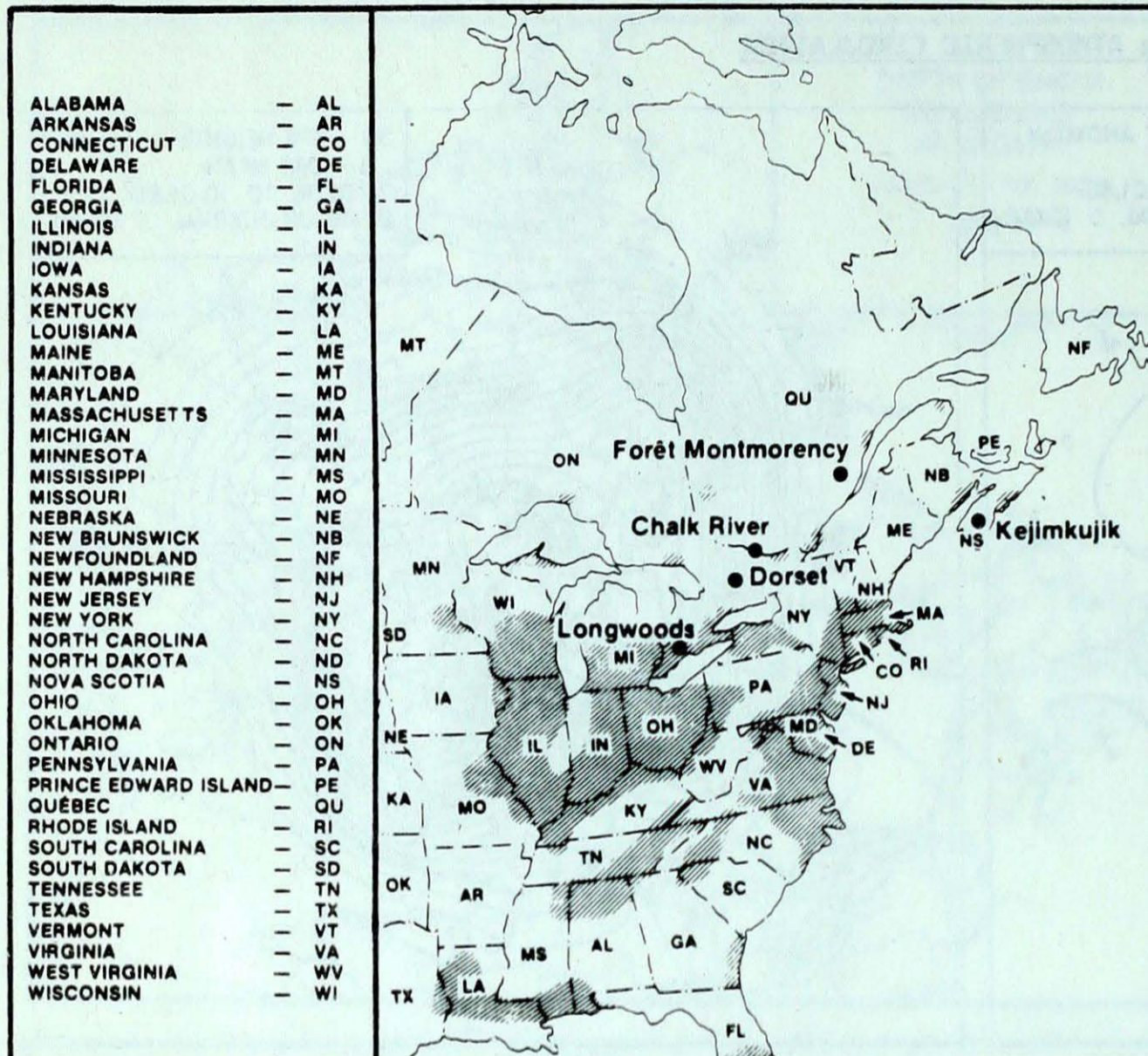
MEAN 50 KPa HEIGHTS (dam)
January 6 to January 10, 1986



STORM TRACKS
POSITION OF STORM
AT 12 GMT
JANUARY 7 TO 13, 1986

ACID RAIN

ACID RAIN REPORT



The reference map (left) shows the locations of sampling sites where the acidity of precipitation is monitored. All are operated by Environment Canada except Dorset which is a research station operated by the Ontario Ministry of the Environment. The map also shows the approximate areas (shaded) where SO_2 and NO_x emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the rain or snow that fell at the collection sites and a description of the path travelled by the moisture laden air. Environmental damage to lakes and streams is usually observed in sensitive areas regularly receiving precipitation with pH less than 4.7, while pH readings less than 4.0 are serious. For more information concerning the acid rain report, see Climatic Perspectives, Vol. 5 No. 50 p. 6.

JANUARY 5, 1986 to JANUARY 11, 1986

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	7	5.0	2(s)	Northern Ontario, Lake Huron, Southern Ontario
Dorset	5	4.7	5(s)	Wisconsin, Michigan, Southern Ontario
	9	4.2	2(s)	Indiana, Ohio, Michigan, Southern Ontario
Chalk River	9	4.2	1(s)	Ohio, Southern Ontario, Central Ontario
Montmorency	5	5.0	7(s)	Quebec, New Brunswick, Maine
	8	5.6	7(s)	Lake Superior, Central Ontario, Central Ontario
	9	4.5	7(s)	Southern Ontario, Central Quebec
	11	4.3	2(s)	Northern Ontario, Central Ontario, Central Quebec
Kejimikujik	5	5.2	9(m)	Atlantic Ocean
	6	5.5	7(s)	Michigan, Southern Ontario, New York, New England
	7	4.5	2(s)	Central Quebec, Maine
	8	4.7	1(s)	Quebec, New Brunswick
	9	4.3	2(s)	Michigan, Southern Ontario, New York, New England

r = rain (mm), s = snow (cm), m = mixed rain and snow (mm).

TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0800 GMT JANUARY 14, 1988

STATION	TEMPERATURE				PRECIP.		WIND MX		STATION	TEMPERATURE				PRECIP.		WIND MX	
	AV	DP	MX	MN	TP	SOG	DIR	SPD		AV	DP	MX	MN	TP	SOG	DIR	SPD
BRITISH COLUMBIA									THE PAS	-8	*	4	-27	3	16	290	89
CAPE ST. JAMES	7	3	8	4	65	0	130	104	THOMPSON	-18	10	-5	-29	18	44	340	39
CRANBROOK	-2	11	9	-15	0	9	170	54	WINNIPEG INT'L	-7	12	7	-32	1	8	330	91
FORT NELSON	-10	16	-3	-18	0	40		*	ONTARIO								
FORT ST. JOHN	1P	22P	7P	-3P	2	0	280	67	ATIKOKAN	-11	10	8	-38	6	35	260	59
KAMLOOPS	3	9	11	-3	0	0	090	48	BIG TROUT LAKE	-19	*	-7	-34	9	42	080	46
PENTICTON	1	4	8	-5	0	0	190	70	GORE BAY	-9	1	3	-28	2	34	260	56
PORT HARDY	8P	6P	14P	3P	181P	0	100	83	KAPUSKASING	-16	3	1	-29	11	67	340	61
PRINCE GEORGE	2P	*	9P	-8P	5	2	180	72	KENORA	-10	9	7	-33	6	39	330	85
PRINCE RUPERT	6P	8P	16P	0P	114	0	160	102	KINGSTON	*	*	4P	-25P	0	0		X
REVELSTOKE	1	12	7	-9	7	22	100	57	LONDON	-4	3	19	-16	5	22	240	70
SMITHERS	-1	12	4	-7	168	13		*	MOOSONEE	-20	0	-3	-33	22	101	360	57
VANCOUVER INT'L	7	5	13	-1	14	0	140	52	NORTH BAY	-12	2	1	-28	6	39	010	56
VICTORIA INT'L	7	4	13	2	16	0	220	61	OTTAWA INT'L	-9	3	4	-24	3	22		X
WILLIAMS LAKE	3	*	9	-4	0	20		X	PETAWAWA	-11	4	4	-30	2	22		X
YUKON TERRITORY									PICKLE LAKE	-15	7	0	-35	10P	50	220	54
DAWSON	-14	*	-2	-24	3	49		*	RED LAKE	-12	9	5	-38	11	37	320	54
MAYO	-9	24	1	-23	7	25		X	SUDBURY	-13P	2P	2P	-28P	3	57		X
SHINGLE POINT A	-24	2	-19	-34	5P	21		*	THUNDER BAY	-9	6	7	-29	4	20	340	91
WATSON LAKE	-14	16	-2	-26	5	32		*	TIMMINS	-15	3	1	-30	8	55	340	56
WHITEHORSE	-4	20	3	-13	4	15	150	65	TORONTO INT'L	-6	1	4	-22	1	3	250	69
NORTHWEST TERRITORIES									TRENTON	-7	2	5	-24	1	7		X
ALERT	-36	-4	-30	-41	3	19		*	WIARTON	-7	1	3	-22	9	33		X
BAKER LAKE	-35	-3	-28	-40	2	18	300	56	WINDSOR	-5	0	5	-17	3	4	220	59
CAMBRIDGE BAY	-37	-4	-34	-41	2	10	270	33	QUEBEC								
CAPE DYER	-21	1	-15	-33	7	61	040	85	BAGOTVILLE	-14	2	2	-30	34	40	290	63
CLYDE	-24P	1P	-16P	-38P	5P	33	330	76	BLANC SABLON	-10P	*	0P	-21P	30P	28		X
COPPERMINE	-36	*	-23	-42	2P	15		*	INUKJUAQ	-27	-2	-16	-36	2	32	180	57
CORAL HARBOUR	-29P	1P	-21P	-35P	4	32		X	KUUJUAQ	-30P	-6P	-17P	-40P	4P	48	260	39
EUREKA	-40	-4	-32	-44	2	13		*	KUUJUARAPIK	-22P	1P	-14P	-36P	6P	23	160	59
FORT SMITH	-15	12	-7	-25	13	48		X	MANIWAKI	-12	3	4	-32	2	25	350	41
FROBISHER BAY	-27P	-2P	-20P	-34P	6	26	310	63	MONT JOLI	-10	2	3	-20	13	23	260	81
HALL BEACH	-33	-2	-25	-38	*	23	310	54	MONTREAL INT'L	-9	2	5	-23	3	4	230	76
INUVIK	-24	7	-19	-32	4	25		X	NATASHQUAN	-13	0	0	-31	20	31	180	72
MOULD BAY	-38	-4	-33	-43	2	20		X	NITCHEQUON								*
NORMAN WELLS	-23	7	-18	-30	3	32		X	QUEBEC	-11	2	4	-22	19	62	260	61
RESOLUTE	-37P	-5P	-31P	-42P	2	27		*	SCHEFFERVILLE	-25	-2	-11	-38	11	26	340	74
SACHS HARBOUR	-30	0	-24	-37	1	8		X	SEPT-ILES	-15	-1	-7	-30	19	35	300	56
YELLOWKNIFE	-20	9	-11	-29	3	42		*	SHERBROOKE	-11	2	5	-25	5	31	270	44
ALBERTA									VAL D'OR	-15	2	0	-35	17	56	210	54
CALGARY INT'L	3	17	13	-7	0	0	270	85	NEW BRUNSWICK								
COLD LAKE	-4	17	7	-21	0	5	280	43	CHARLO	-11	4	3	-20	8	66	260	63
CORONATION	-2	17	6	-15	0	0	300	76	CHATHAM	-9	1	5	-20	1	53	210	69
EDMONTON NAMAQ	0	18	8	-7	0	6	290	59	FREDERICTON	-9	1	6	-22	1	45	190	70
FORT MCMURRAY	-4	20	7	-18	5	20		X	MONCTON	-9	0	5	-20	6	76	250	78
HIGH LEVEL	-11	17	1	-23	3	33	350	41	SAINT JOHN	-8	1	6	-19	1	6	190	76
JASPER	1	16	11	-8	5	18		X	NOVA SCOTIA								
LETHBRIDGE	5	17	11	-4	0	0	240	104	GREENWOOD	-6	0	7	-18	7	10	270	89
MEDICINE HAT	3	16	9	-7	0	0	240	85	SHEARWATER	-4	1	6	-14	18	1	270	70
PEACE RIVER	-2	20	5	-9	3	8	270	100	SYDNEY	-5	-1	5	-15	23	3	250	78
SASKATCHEWAN									YARMOUTH	-2	1	7	-11	2	0	300	65
CREE LAKE	-8	21	4	-20	1	26	320	78	PRINCE EDWARD ISLAND								
ESTEVAN	-3	14	6	-24	0	6	310	80	CHARLOTTETOWN	-8	0	3	-16	5	6	250	70
LA RONGE	-6	19	6	-21	3	9	290	87	SUMMERSIDE	-8	0	4	-16	10	40	260	96
REGINA	-4	14	5	-20	0	1	290	106	NEWFOUNDLAND								
SASKATOON	-2	18	7	-16	0	0	290	111	CARTWRIGHT	-17	-4	-4	-31	14	75	340	65
SWIFT CURRENT	0P	16P	6P	-3P	0	0		X	CHURCHILL FALLS	-23	0	-5	-40	7	68	320	85
YORKTON	-4	16	6	-27	0	2	290	98	GANDER INT'L	-7	-1	3	-17	8	16	230	94
MANITOBA									GOOSE	-19	-1	-1	-35	10	43	320	74
BRANDON	-7	13	6	-32	0	2	290	93	PORT-AUX-BASQUES	-5	-1	2	-15	30	60	170	94
CHURCHILL	-25P	2P	-15P	-36P	6	11	220	46	ST JOHN'S	-5P	-1P	1	-13P	8	10	250	74
LYNN LAKE	-15	13	-5	-23	16	36		*	ST LAWRENCE	-4P	1P	5P	-12P	25P	13		X

AV = weekly mean temperature in degree C
 MX = weekly extreme maximum temperature in degree C
 MN = weekly extreme minimum temperature in degree C
 TP = weekly total precipitation in mm
 DP = departure of mean temperature from normal in degree C
 SOG = snow depth on ground in cm, last day of the period

DIR = direction of maximum wind speed (deg. from true north)
 SPD = maximum wind speed in km/hour (10 minute mean)

X = not observed
 P = value based on less than 7 days
 * = missing



In this 1964 photo looking northeast, the weather instrument site is located to the left on the north ravelin, a grassy protrusion constructed just outside the main fortification of the Citadel.

