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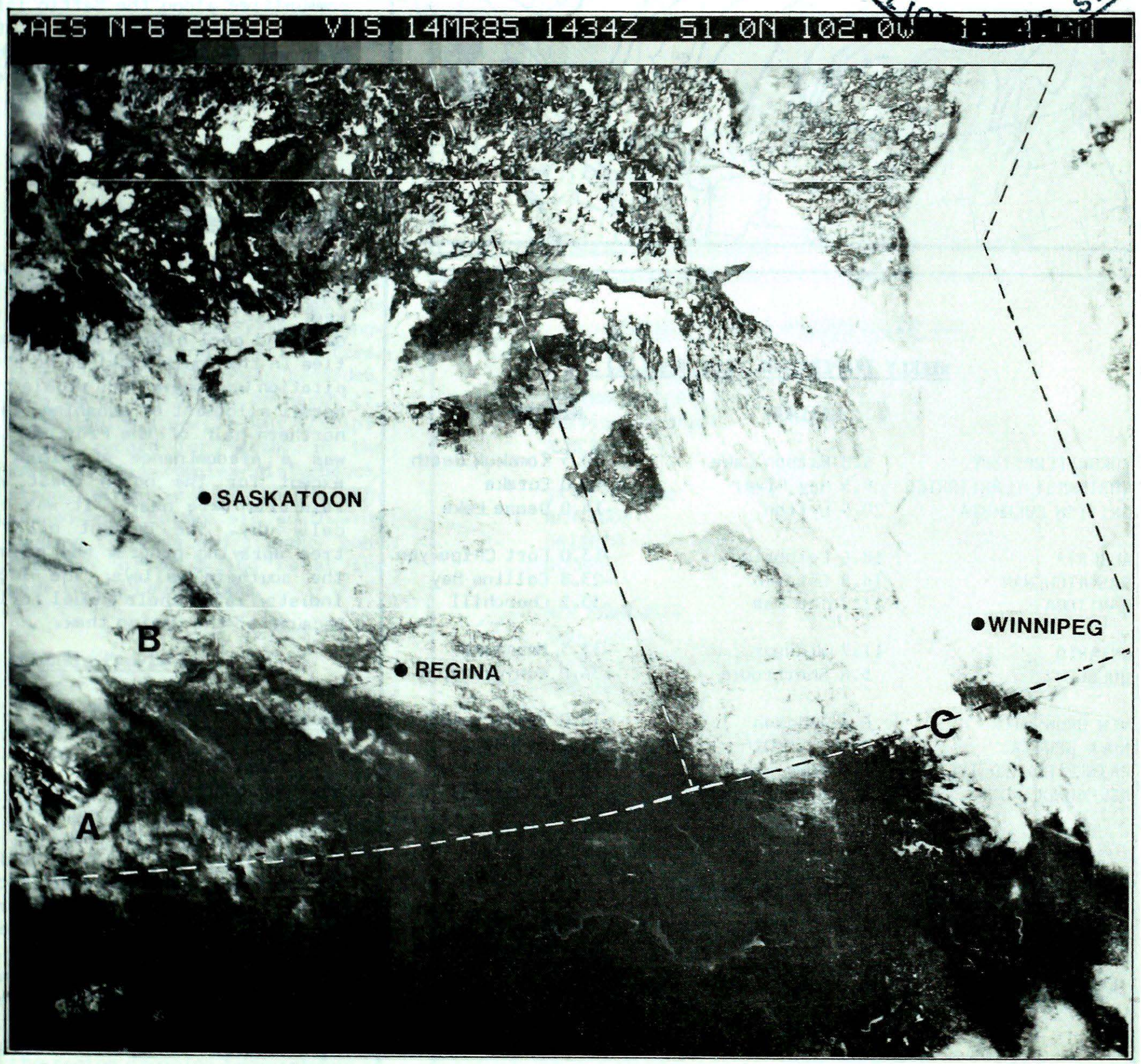
Climatic Perspectives

MONTHLY SUPPLEMENT INCLUDED

A WEEKLY REVIEW OF CANADIAN CLIMATE

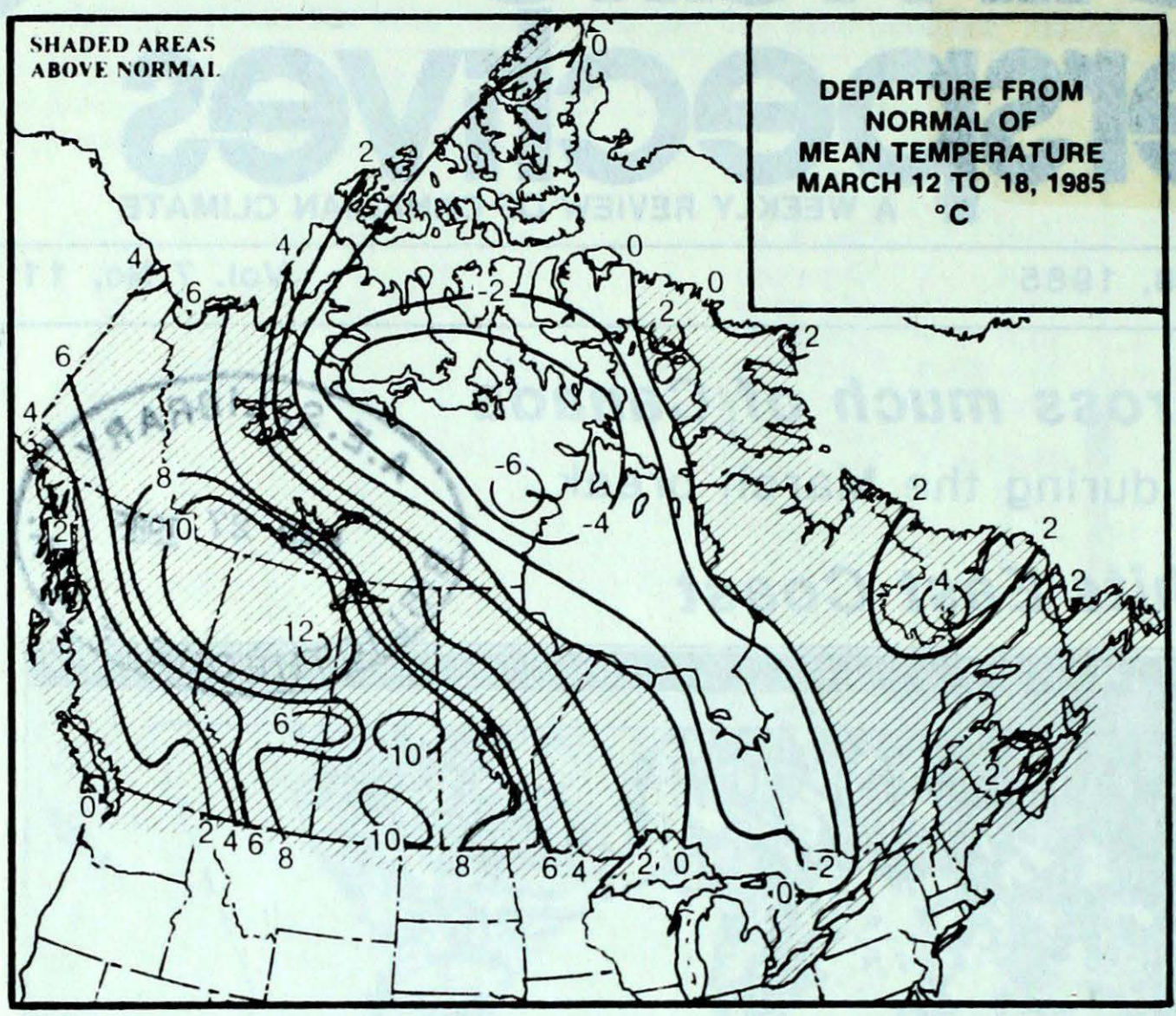
For the period March 12 to 18, 1985 | Vol. 7 No. 11

- ***Fine weather across much of Canada***
  - Good spring skiing during the March break
- ***Rain and snow hits East Coast***



Spring continues to edge northwards. This NOAA 6 satellite picture shows the receding snowline across part of the Prairies. For more detail, see page 3.

Canada



WEEKLY TEMPERATURE EXTREMES (°C)

	MAXIMUM		MINIMUM	
YUKON TERRITORY	6.0	Watson Lake	-30.5	Komakuk Beach
NORTHWEST TERRITORIES	9.5	Hay River	-46.0	Eureka
BRITISH COLUMBIA	20.5	Lytton	-14.0	Dease Lake
ALBERTA	18.6	Lethbridge	-13.0	Fort Chipewyan
SASKATCHEWAN	16.8	Estevan	-23.8	Collins Bay
MANITOBA	11.7	The Pas	-33.2	Churchill
ONTARIO	11.7	Windsor	-33.5	Moosonee
QUÉBEC	5.8	Sherbrooke	-36.0	Kuujjuarapik
NEW BRUNSWICK	6.6	Moncton	-18.0	Fredericton
NOVA SCOTIA	9.6	Yarmouth	-11.2	Sydney
PRINCE EDWARD ISLAND	5.9	Summerside	-10.1	Summerside
NEWFOUNDLAND	6.2	Stephenville	-30.2	Churchill Falls

ACROSS THE NATION

Warmest mean temperature	8.2	Lytton, B.C.
Coolest mean temperature	-38.9	Eureka, NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

Except in the central Arctic mean temperatures were well abov normal. Several daily maximum tem perature records were established i the Mackenzie District on March 16 when the thermometer at Fort Simpso and Hay River rose to 9 and 10 de grees, respectively. In contrast record low temperatures were regis tered in the Keewatin District Th minimum temperature at Baker Lake o March 14, dropped to -42°C. Coasta communities along the Baffin Islan received 20 cm of new snow. Cap Dyer was reporting a snow depth o 98 cm as compared to 235 cm of sno on the ground at Swift River in th Yukon.

British Columbia

The majority of the Provinc experienced a pleasant spring-lik week with plenty of sunshine, mil days and cool nights. Many communi ties in the South received no preci pitation whatsoever and double thei normal allotment of sunshine. In th northern half of the Province ther was a predominance of cloud, bu except for the north coast whe rainfalls were heavy, it was basi cally dry. The dormant oil fru tree spraying program has begun the southern valleys. The loggi industry is on their annual furlou because of the spring thaw.

Prairies

Pleasantly sunny and very mi weather conditions encompassed t three provinces. Except for t North, precipitation amounts we insignificant. On March 16 and 1 numerous maximum temperature recor were tied or broken. At Lethbrid on March 16, the mercury soared 19°C, while elsewhere daytime te peratures hovered between 10 and degrees. The snow line retreat rapidly northwards, and southe agricultural districts in Alber and Saskatchewan were snow free.

Ontario

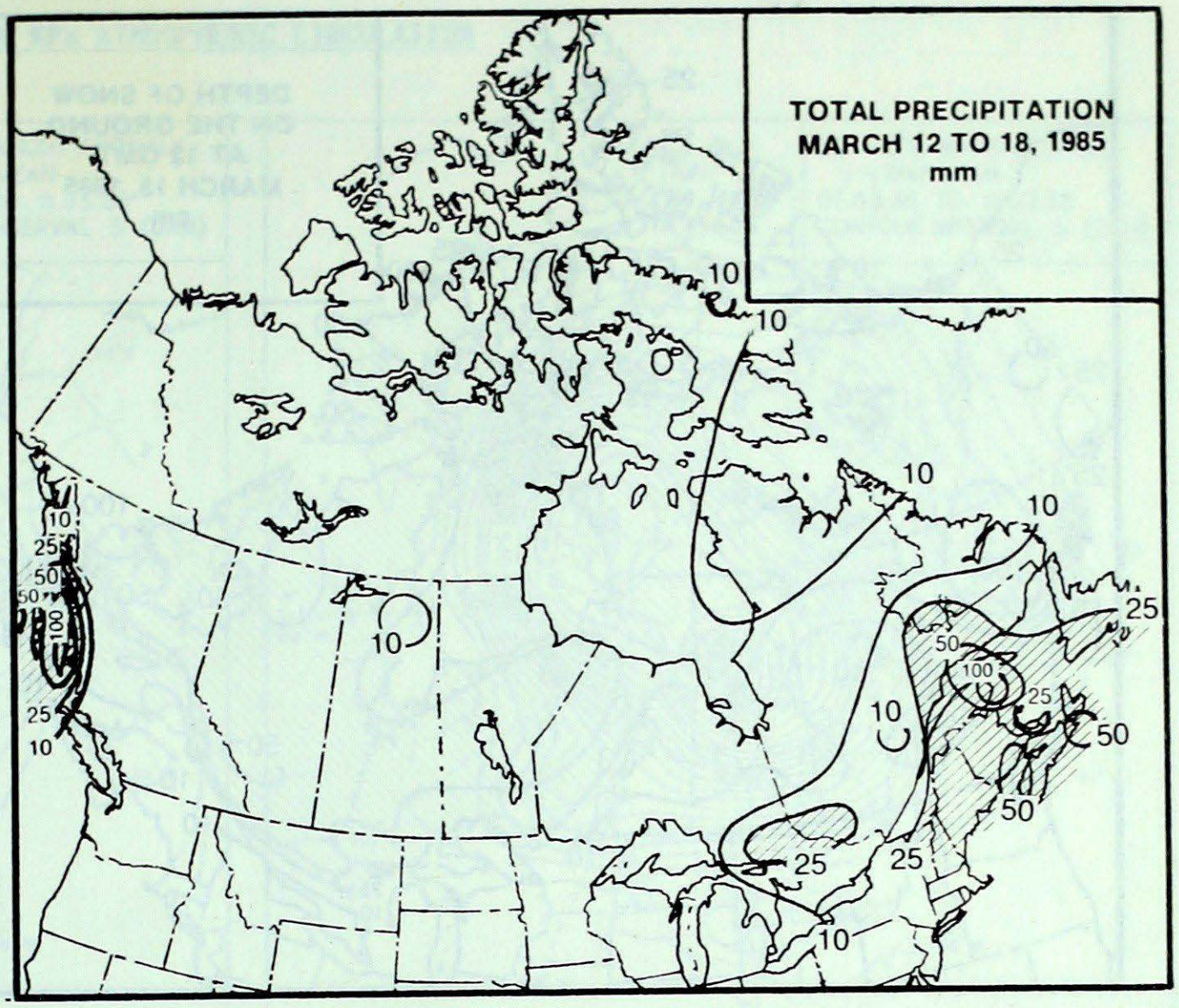
It was a typical March week, with fluctuating temperatures and varying amounts of precipitation as several weather systems moved rapidly across the Province. Heaviest amounts of precipitation, between 20 and 40 millimetres, fell in central and eastern Ontario. Several new daily maximum temperature records were set on March 14. In St. Catharines, the temperature climbed to 14°C over the weekend. Overall, mean temperatures for the week were near normal in southern and central Ontario, while above and below normal mean temperatures were evident in northwestern and northeastern Ontario, respectively.

Quebec

The early part of the week was mild and wet after which, temperatures slid to below normal values. Precipitation, a mixture of rain and snow, was heavy across the southern half of the Province ranging between 20 and 40 millimetres. In the Gaspé, 108 mm was recorded, 88.6 mm of which fell on March 13, establishing a new 24-hour precipitation record for March. In the wake of this complex disturbance, strong winds gusting to 75 km/h pushed much colder air southwards causing freezing and slippery conditions. Spring skiing is at its peak in the Laurentians.

Atlantic Provinces

A major storm associated with heavy rain, freezing rain, snow and strong winds affected the East Coast during the first half of the week. More than 60 mm of rain fell in a two-day period at Saint John and Halifax flooding basements and streets. In northern New Brunswick, heavy wet snow closed schools and downed power lines. Only light snowfalls were reported in Labrador. The temperature climbed to a record 5°C at Goose Bay on March 13. After mid-week, much colder air flooded southward across the region dropping temperatures to more seasonal values.

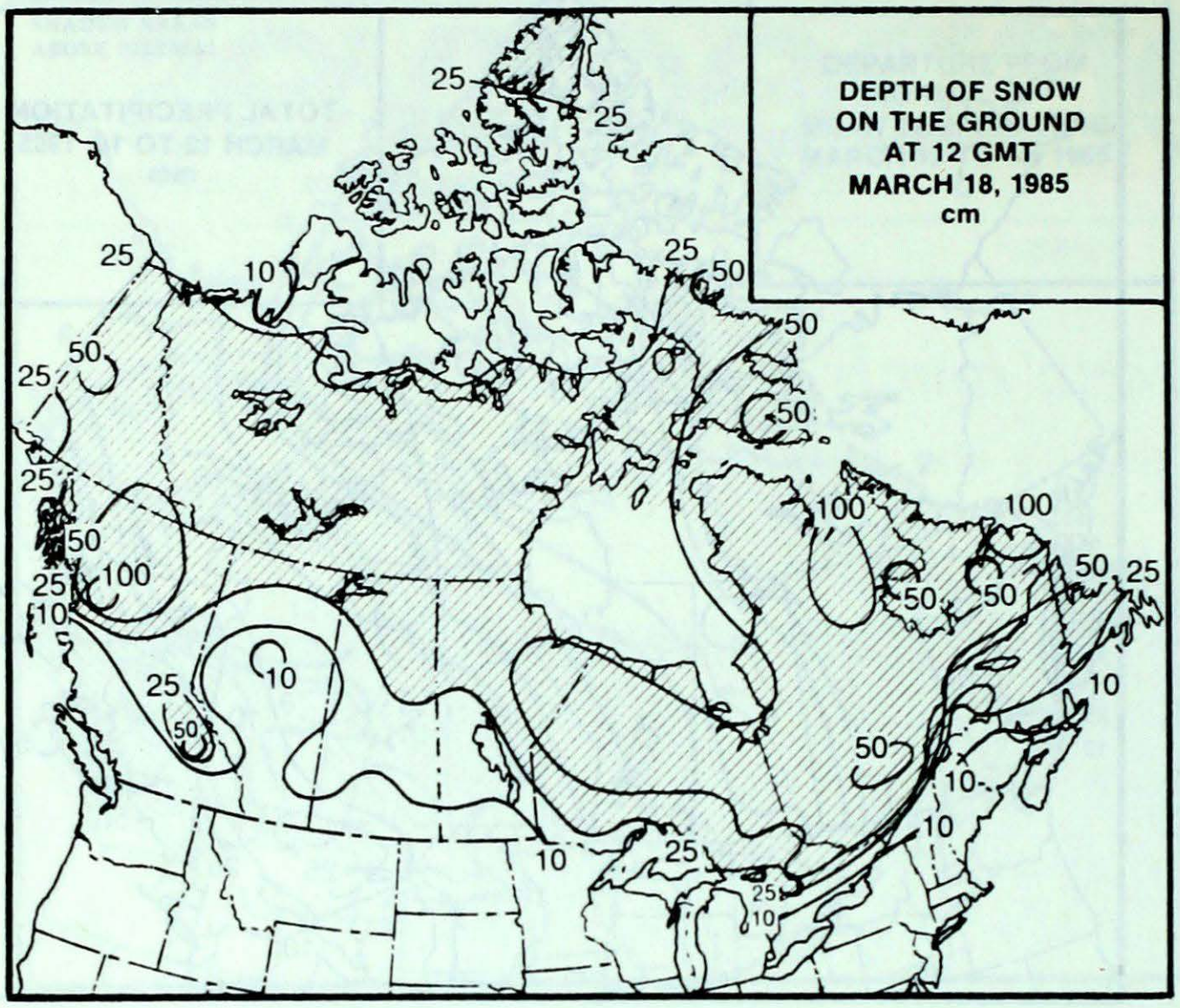


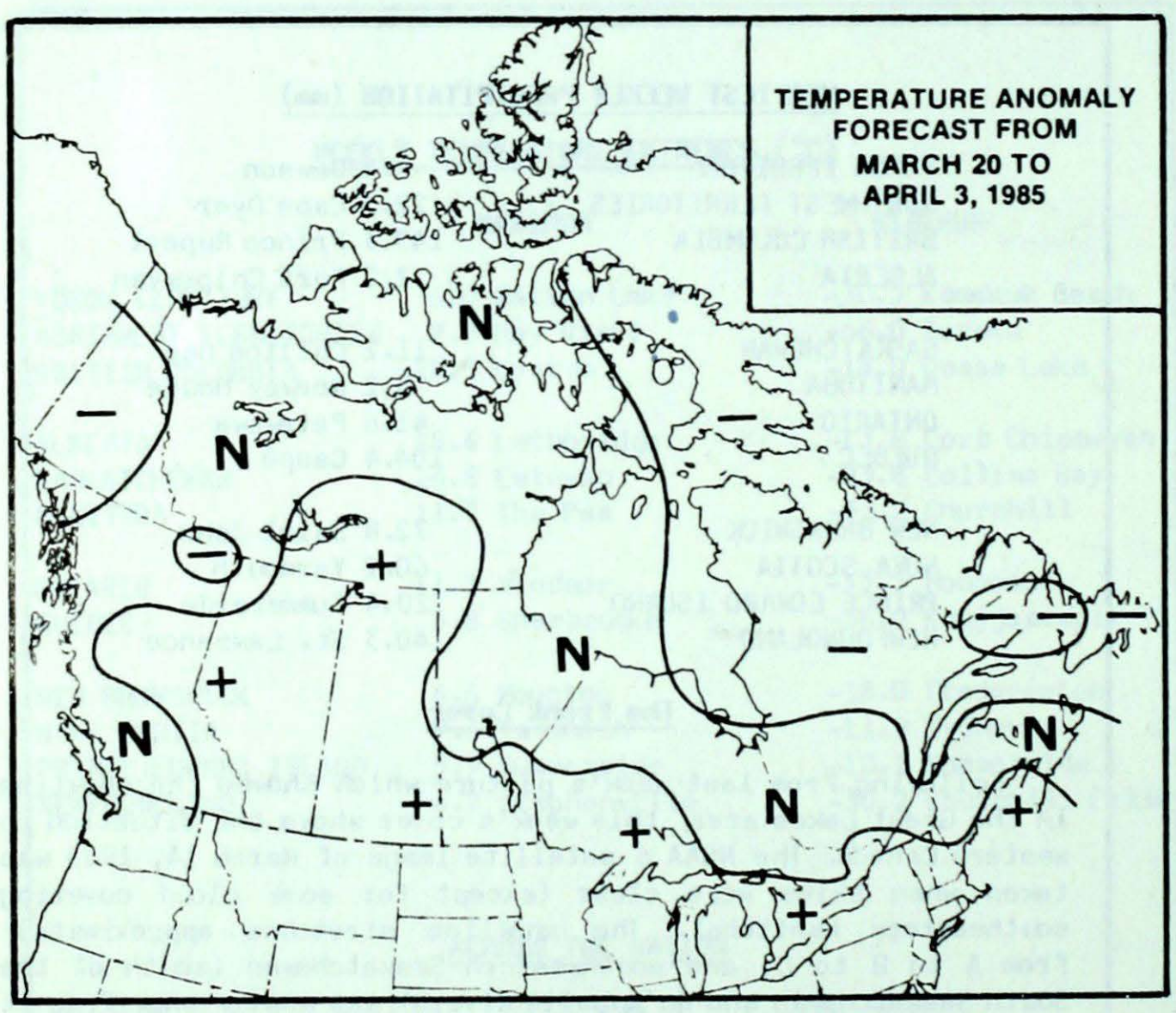
HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON TERRITORY	2.4	Dawson
NORTHWEST TERRITORIES	22.3	Cape Dyer
BRITISH COLUMBIA	149.3	Prince Rupert
ALBERTA	2.2	Fort Chipewyan
SASKATCHEWAN	11.2	Collins Bay
MANITOBA	8.2	Norway House
ONTARIO	41.6	Petawawa
QUÉBEC	104.4	Gaspé
NEW BRUNSWICK	72.8	Saint John
NOVA SCOTIA	60.2	Yarmouth
PRINCE EDWARD ISLAND	20.4	Summerside
NEWFOUNDLAND	40.3	St. Lawrence

The Front Cover

Following from last week's picture which showed the snowline in the Great Lakes area, this week's cover shows the situation in western Canada. The NOAA 6 satellite image of March 14, 1985 was taken when skies were clear (except for some cloud covering southeastern Manitoba). The snowline stretches approximately from A to B to C, and southwestern Saskatchewan (south of the South Saskatchewan and Qu'Appelle Rivers) was mostly snow free at that time. In the northern part of this picture, dark areas can also be seen, but these are forested regions where trees mask the snowcover. Although not visible, in this picture much of southern Alberta is also snow free.





Temperature Anomaly Forecast

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.

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

CLIMATIC PERSPECTIVES VOLUME 7

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It began in 1978 and in 1983 was expanded to include a monthly supplement (formerly known as the Canadian Weather Review). The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socioeconomic 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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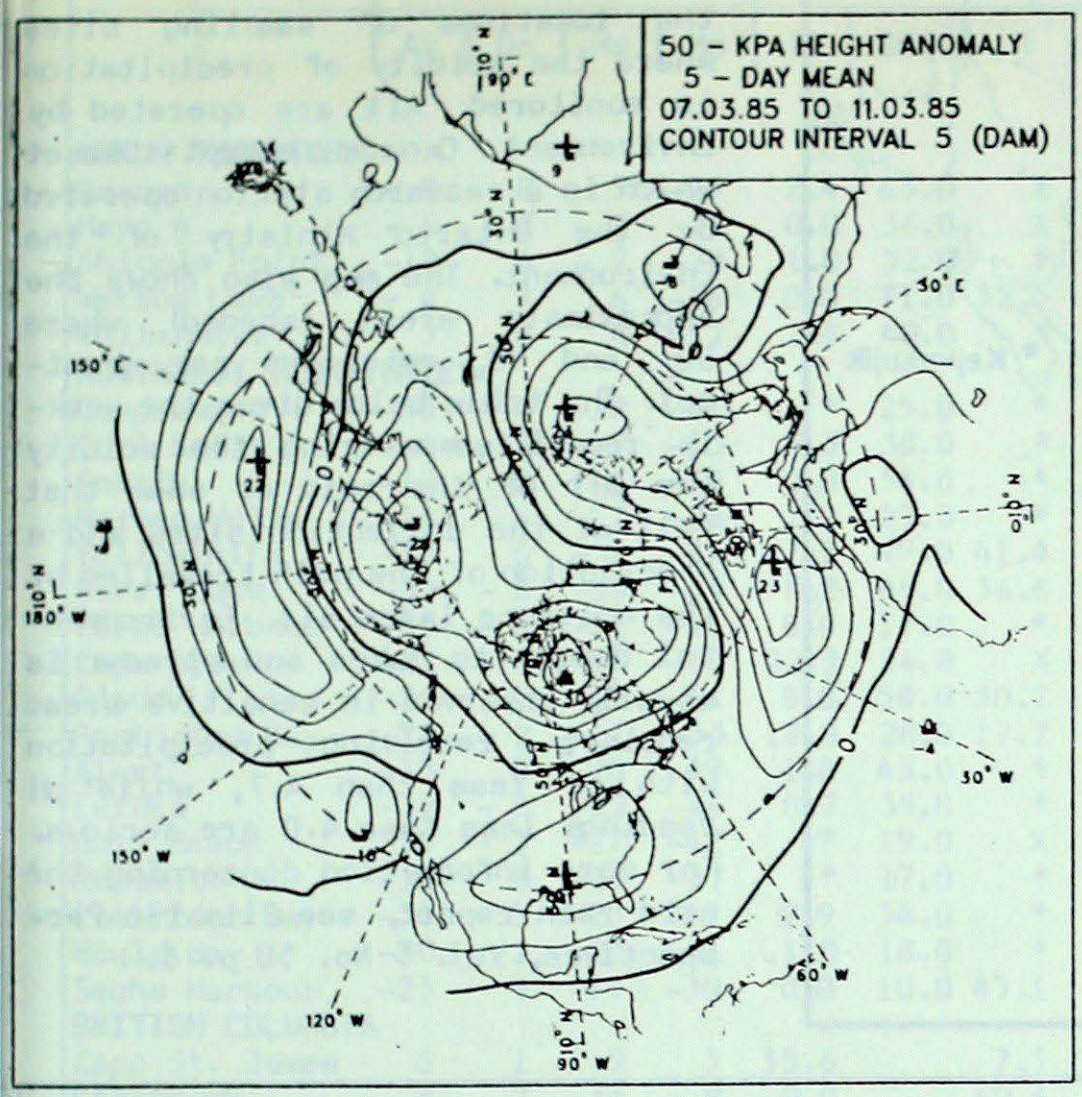
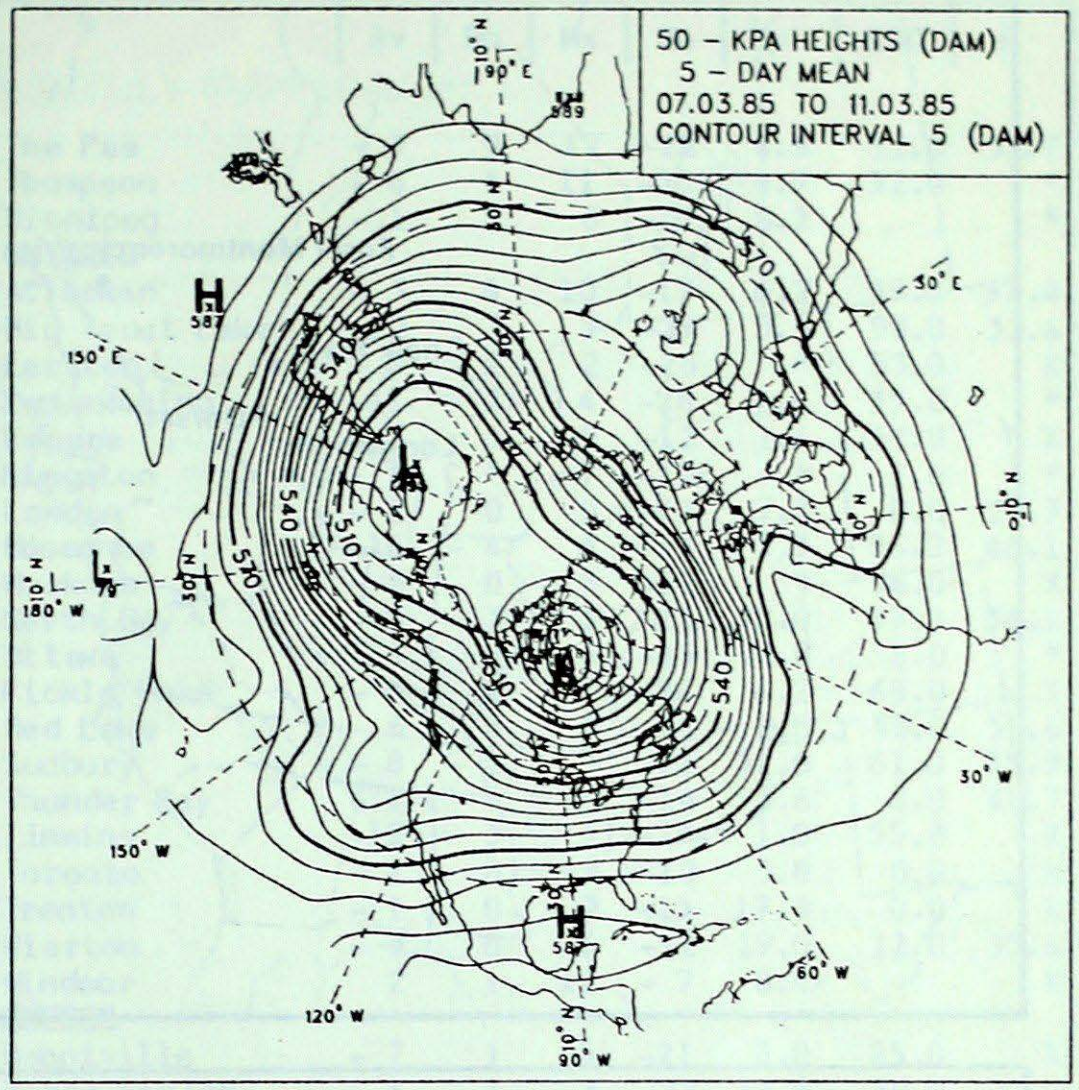
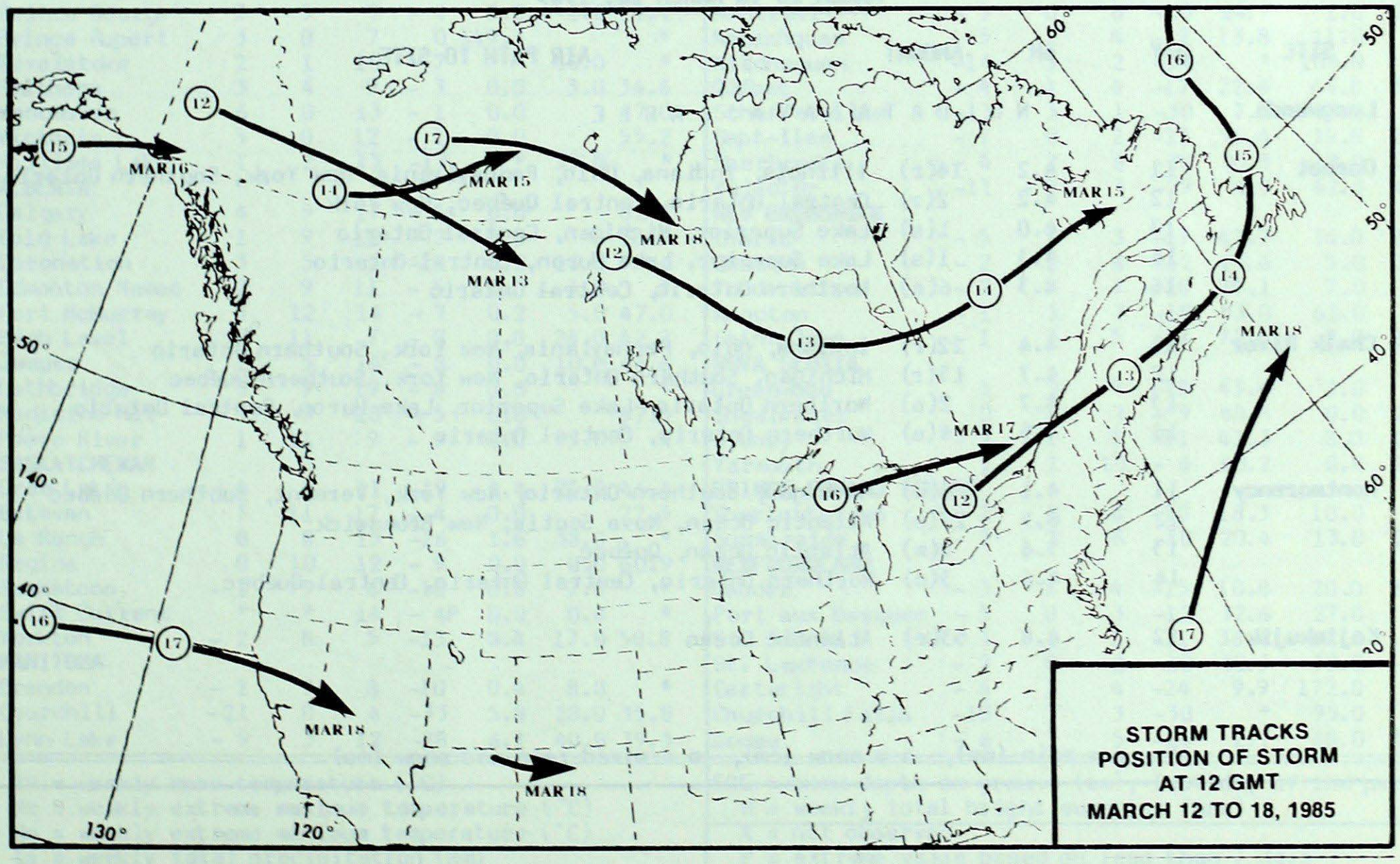
50 KPa ATMOSPHERIC CIRCULATION

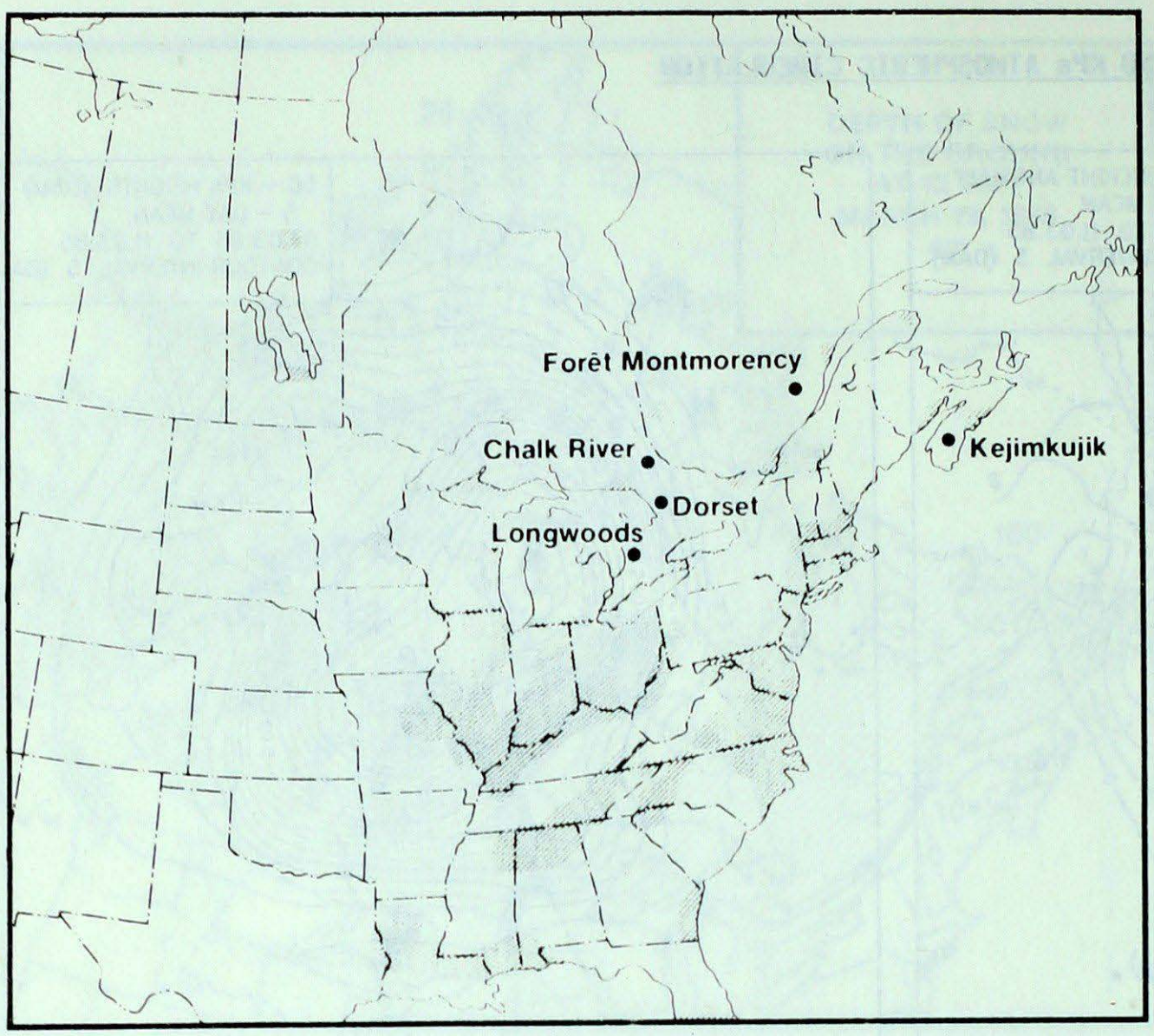


MEAN 50 KPa HEIGHT ANOMALY (dam)
March 7 to March 11, 1985



MEAN 50 KPa HEIGHTS (dam)
March 7 to March 11, 1985





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.

MARCH 10 to MARCH 16, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods		NO DATA AVAILABLE		
Dorset	11	4.2	14(r)	Illinois, Indiana, Ohio, Pennsylvania, New York, Southern Ontario
	12	4.2	2(r)	Central Ontario, Central Québec, New York
	13	4.0	1(s)	Lake Superior, Michigan, Central Ontario
	14	4.3	1(s)	Lake Superior, Lake Huron, Central Ontario
	16	4.3	6(s)	Northern Ontario, Central Ontario
Chalk River	11	4.4	22(r)	Indiana, Ohio, Pennsylania, New York, Southern Ontario
	12	4.7	13(r)	Michigan, Southern Ontario, New York, Southern Québec
	13	4.7	2(s)	Northern Ontario, Lake Superior, Lake Huron, Central Ontario
	16	4.5	4(s)	Northern Ontario, Central Ontario
Montmorency	11	4.1	6(s)	Michigan, Southern Ontario, New York, Vermont, Southern Québec
	12	6.5	27(s)	Atlantic Ocean, Nova Scotia, New Brunswick
	13	5.6	3(m)	Atlantic Ocean, Québec
	14	4.6	3(s)	Northern Ontario, Central Ontario, Central Québec
Kejimkujik	12	4.8	53(r)	Atlantic Ocean

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

TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT MARCH 19, 1985

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	- 8	8	3	-23	2.4	63.0	X
Mayo A	- 6	7	4	-22	0.0	36.0	X
Shingle Point	-19	6	- 7	-28	1.0	32.0	*
Watson Lake	- 4	7	6	-16	0.0	71.0	32.5
Whitehorse	- 3	6	4	-12	1.4	40.0	*
NORTHWEST TERRITORIES							
Coppermine	-30	- 4	-19	-41	*	25.0	*
Fort Smith	- 4	11	9	-13	3.3	38.0	*
Inuvik	-17	9	- 6	-30	0.0	34.0	*
Norman Wells	-14	6	- 7	-26	2.2	27.0	*
Yellowknife	-13	6	- 1	-27	7.2	49.0	41.4
Baker Lake	-33	- 6	-18	-44	8.2	49.0	36.6
Coral Harbour	-31	- 6	-21	-41	0.0	17.0	*
Cape Dyer	-22	3	-17	-30	22.3	94.0	X
Clyde	-26	1	-19	-36	8.0	58.0	30.2
Frobisher Bay	-22	2	- 7	-33	18.8	26.0	17.2
Alert	-33	0	-20	-39	1.8	43.0	*
Eureka	-39	- 3	-22	-46	0.7	35.0	*
Hall Beach	-34	- 3	-27	-42	*	19.0	X
Resolute	-31	0	-23	-37	*	17.0	*
Cambridge Bay	-34	- 5	-23	-43	2.9	34.0	*
Mould Bay	-30	2	-23	-41	1.0	18.0	*
Sachs Harbour	-23	5	-17	-30	0.0	10.0	43.1
BRITISH COLUMBIA							
Cape St. James	6	1	9	3	35.6		7.3
Cranbrook	4	2	16	- 8	0.0		60.6
Fort Nelson	1	12	12	- 9	*	50.0	*
Fort St. John	4	11	11	- 3	0.0		X
Kamloops	5	2	17	- 5	0.0		58.6
Penticton	4	1	15	- 6	0.0		55.6
Port Hardy	6	2	14	- 1	4.3		15.3
Prince George	3	5	9	- 4	0.0	1.0	21.1
Prince Rupert	3	0	7	0	149.3		*
Revelstoke	2	1	10	- 7	*	66.0	*
Smithers	3	4	9	- 3	0.0	3.0	34.6
Vancouver	6	0	13	- 1	0.0		47.0
Victoria	5	0	12	- 1	0.0		55.2
Williams Lake	1	2	13	-13	*	39.0	*
ALBERTA							
Calgary	4	9	17	- 5	0.0		62.2
Cold Lake	1	9	12	- 7	0.0		56.9
Coronation	- 3	5	5	-11	0.0	16.0	59.6
Edmonton Namao	2	9	11	- 5	0.0	3.0	*
Fort McMurray	3	12	14	- 7	0.2	5.0	47.0
High Level	0	11	7	- 9	0.0	24.0	42.2
Jasper	2	5	14	- 8	0.0	10.0	44.6
Lethbridge	5	9	19	- 8	0.0		*
Medicine Hat	5	9	18	- 5	0.0		57.5
Peace River	1	11	9	- 9	0.0	5.0	X
SASKATCHEWAN							
Cree Lake	- 4	X	11	-19	1.4	25.0	46.4
Estevan	3	11	17	- 4	0.0		72.5
La Ronge	0	8	15	-16	1.6	38.0	*
Regina	0	10	12	- 9	0.0	0.0	60.9
Saskatoon	- 1	9	6	-10	0.0	7.0	*
Swift Current	*	*	14	- 4P	0.0	0.0	*
Yorkton	- 2	8	5	-13	0.4	17.0	58.8
MANITOBA							
Brandon	- 2	9	8	-10	0.4	8.0	*
Churchill	-21	0	- 4	-33	5.8	28.0	35.8
Lynn Lake	- 9	3	12	-28	6.1	40.0	39.3
The Pas	- 3	9	12	-22	4.8	12.0	52.7
Thompson	- 8	4	11	-30	4.9	32.0	*
Winnipeg	- 1	8	6	- 9	0.2		*
ONTARIO							
Atikokan	- 3	4	10	-19	6.2	39.0	37.4
Big Trout Lake	-12	3	5	-29	3.5	98.0	33.6
Earlton	- 9	- 2	2	-28	*	53.0	X
Kapuskasing	-11	- 2	4	-28	1.6	35.0	*
Kenora	- 3	5	9	-12	1.6	11.0	X
Kingston	*	*	7	-13P	*	1.0	*
London	- 1	0	8	-11	7.8	0.0	27.7
Moosonee	-16	- 4	6	-33	3.3	96.0	46.1
Muskoka	- 4	0	5	-22	*	36.0	X
North Bay	- 8	- 3	3	-22	30.0	57.0	36.1
Ottawa	- 3	0	6	-15	27.8	8.0	*
Pickle Lake	- 9	2	7	-26	6.2	68.0	X
Red Lake	- 6	4	9	-21	2.0	48.0	50.6
Sudbury	- 8	- 2	3	-22	32.0	61.0	35.9
Thunder Bay	- 1	5	10	-14	5.6	8.0	48.7
Timmins	-12	- 3	3	-29	1.0	55.0	X
Toronto	- 1	0	8	-12	5.8	0.0	X
Trenton	- 1	0	7	-13	17.3	0.0	X
Wiarton	- 3	0	5	-12	19.0	11.0	35.6
Windsor	2	1	12	- 7	0.6		X
QUEBEC							
Bagotville	- 7	1	5	-21	8.0	25.0	X
Blanc-Sablon	- 6	1	3	-22	13.8	70.0	21.0
Inukjuak	-20	1	- 9	-32	6.8	61.0	33.3
Kuujjuaq	-17	1	4	-34	20.7	117.0	29.6
Kuujjuarapik	-20	- 4	0	-36	11.8	24.0	26.2
Maniwaki	- 5	1	6	-19	30.6	43.0	50.2
Mont-Joli	- 6	0	5	-16	35.6	18.0	15.4
Montréal	- 3	0	6	-13	24.7	1.0	29.2
Natashquan	- 5	2	4	-22	13.8	21.0	*
Nitchequon	-14	1	2	-34	*	105.0	*
Québec	- 4	1	4	-17	22.8	64.0	32.6
Schefferville	-13	3	1	-30	7.8	47.0	*
Sept-Iles	- 7	0	2	-27	56.4	39.0	24.4
Sherbrooke	- 4	2	6	-20	30.8	19.0	23.8
Val-d'Or	-11	- 2	3	-29	4.0	62.0	47.8
NEW BRUNSWICK							
Charlo	- 5	1	3	-17	47.7	36.0	24.6
Chatham	- 2	2	4	-12	23.6	5.0	28.9
Fredericton	- 2	2	7	-18	29.1	7.0	*
Moncton	- 1	3	7	-10	53.0	62.0	*
Saint John	- 1	3	5	-11	72.8	2.0	23.6
NOVA SCOTIA							
Greenwood	1	2	9	-10	43.6	2.0	X
Shearwater	0	1	7	- 9	48.8	0.0	29.4
Sydney	- 2	1	5	-11	47.3	8.0	15.3
Yarmouth	1	2	10	- 8	60.2	0.0	26.5
PRINCE EDWARD ISLAND							
Charlottetown	- 2	2	4	-10	18.3	10.0	*
Summerside	- 2	2	6	-10	20.4	13.0	20.9
NEWFOUNDLAND							
Gander	- 3	1	4	-15	10.8	20.0	25.6
Port aux Basques	- 3	0	3	-12	32.6	27.0	*
St. John's	- 3	1	2	-11	36.4	11.0	*
St. Lawrence	- 2	0	2	-10	40.3	32.0	X
Cartwright	- 6	3	4	-24	9.9	172.0	X
Churchill Falls	-10	3	3	-30	*	95.0	X
Goose	- 6	3	5	-24	2.7	48.0	19.2

Av = weekly mean temperature (°C)
Mx = weekly extreme maximum temperature (°C)
Mn = weekly extreme minimum temperature (°C)
Tp = weekly total precipitation (mm)
Dp = Departure of mean temperature from normal (°C)

SOG = snow depth on ground (cm), last day of the period
H = weekly total bright sunshine (hrs)

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