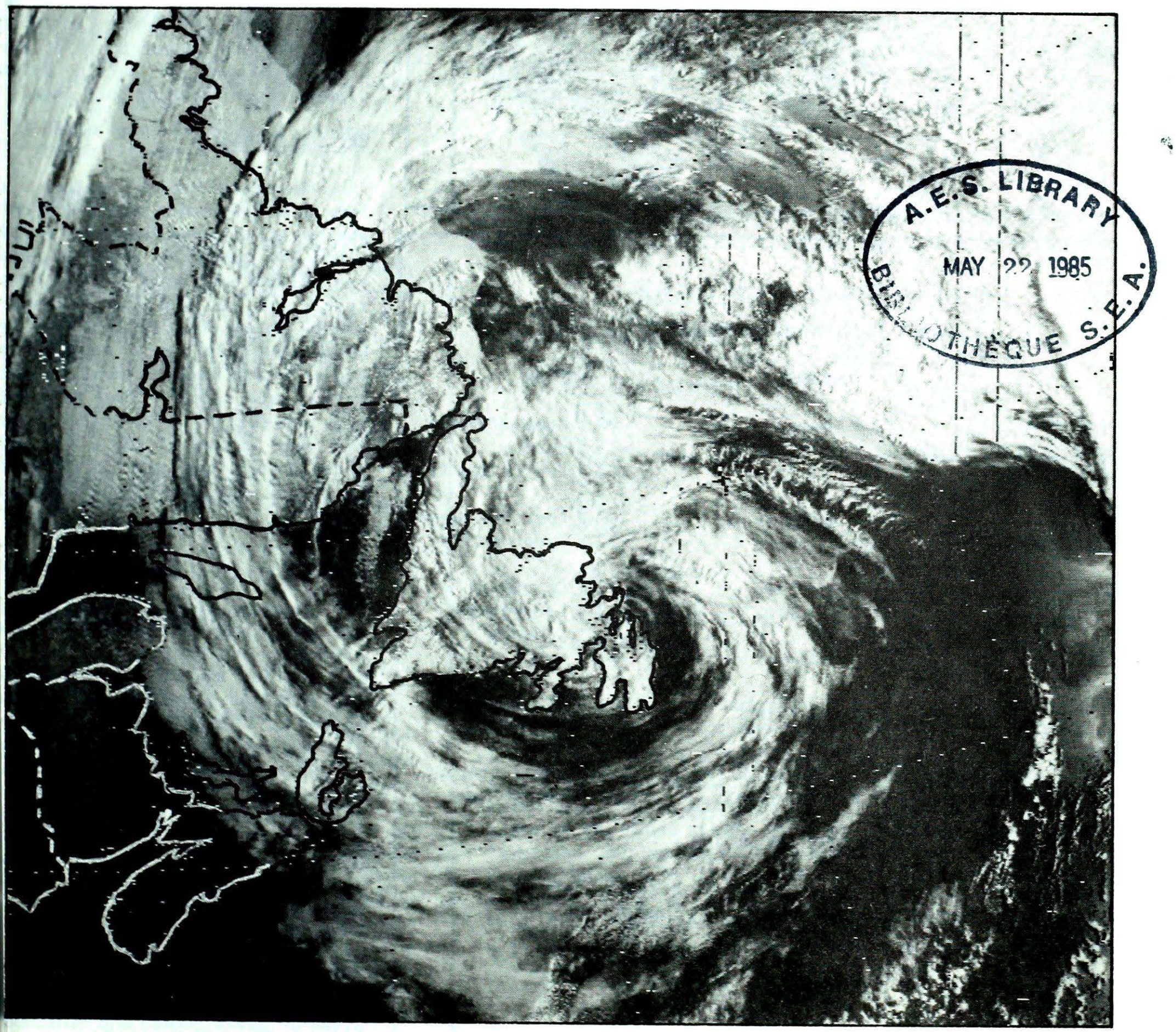
Environment Canada Environnement Canada

Climatic Perspectives

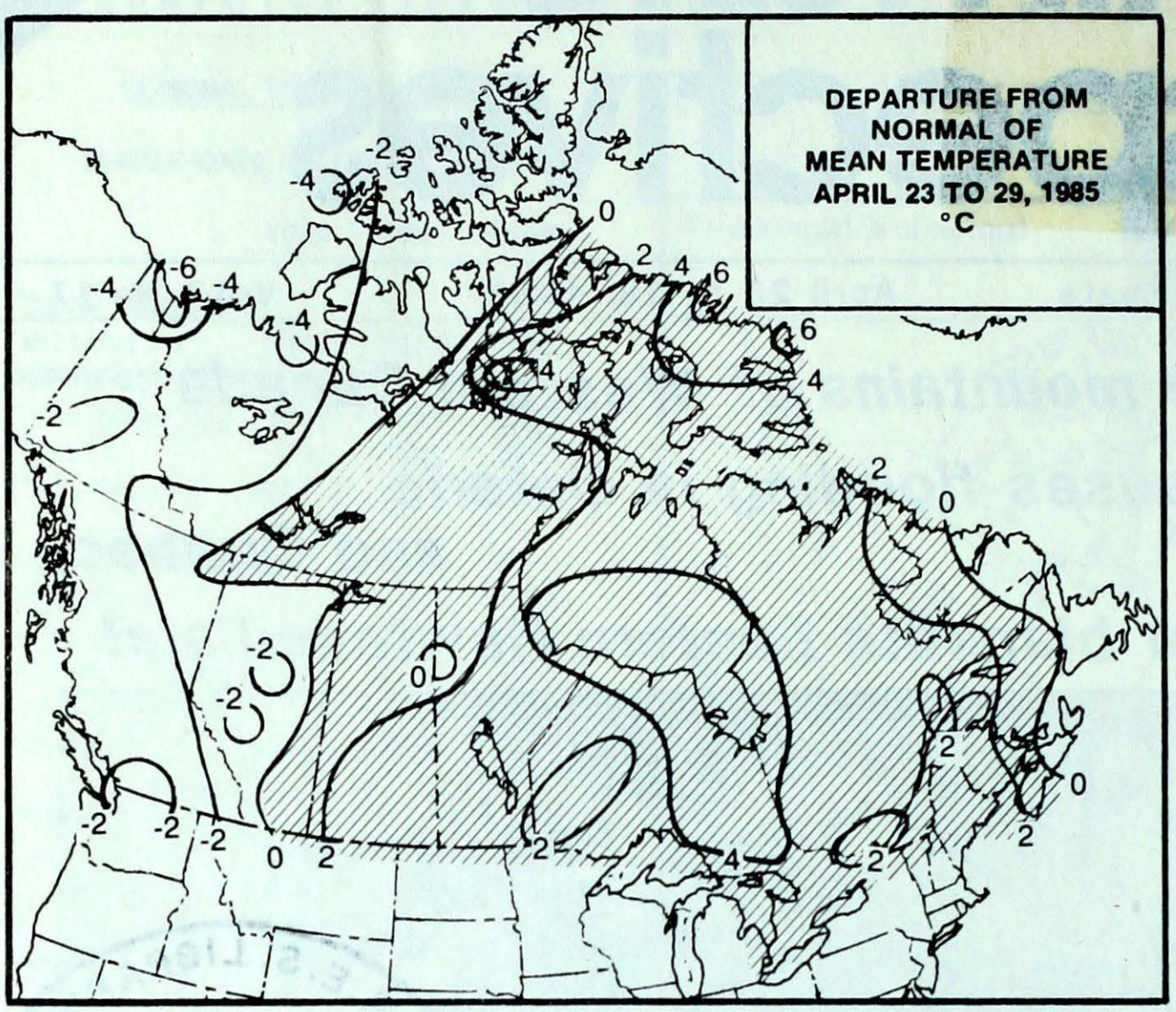
A weekly review of Canadian climate April 23 to 29, 1985 Vol.7 No.17

- ***Heavy snow in the mountains of Western Canada***
- ***Record warmth causes flooding in Ontario and Quebec***
- ***Spring snowstorm blankets Eastern Newfoundland***



This NOAA 6 satellite image of April 25, 1985 shows Newfoundland in the eye of a cyclone. For more detail see page 3.

Canada



WEEKLY TEMPERATURE EXTREMES (°C)

	MAXIMUM	MINIMUM
YUKON TERRITORY	10.4 Dawson	-26.2 Komakuk Beach
NORTHWEST TERRITORIES	11.7 Fort Smith	-33.5 Eureka
BRITISH COLUMBIA	19.5 Penticton	-10.7 Puntzi Mountain
ALBERTA	22.2 Medicine Hat	-9.0 Fort Chipewyan
SASKATCHEWAN	28.9 Estevan	-10.9 Uranium City
MANITOBA	31.6 Winnipeg	-12.0 Churchill
ONTARIO	29.2 Windsor	-12.4 Landsdowne House
QUÉBEC	21.6 Maniwaki	-18.2 Quaqtaq
NEW BRUNSWICK	22.8 Fredericton	-6.0 St. Stephen
NOVA SCOTIA	18.6 Greenwood Truro	-4.9 Greenwood
PRINCE EDWARD ISLAND	16.9 Summerside	-2.3 Charlottetown
NEWFOUNDLAND	15.8 Stephenville	-12.0 Wabush Lake

ACROSS THE NATION

Warmest mean temperature	14.6	Windsor, ONT
Coolest mean temperature	-24.2	Eureka, NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

A series of weather systems gave substantial amounts of new snow to some districts. Snowfalls generally ranged between 5 and 10 cm, but as much as 10 to 30 cm of new snow fell in the southern Yukon and on Baffin island, further increasing the already deep snow pack. Travellers advisories were issued for the Dempster Highway due to blowing and drifting snow. The Alaska Highway was impassable between Teslin and Burwash, because of a 30 cm snowfall. In a 2-day period, Whitehorse received more snow than the normal snowfall for the whole month of April. Daytime temperatures at several locations on Baffin Island climbed above freezing this week.

British Columbia

Recurring Pacific weather systems gave frequently cloudy and cool weather conditions. Heavy rains fell along the coast. On April 27, Hope was deluged with more than 95 mm of rain, and in addition tallied a weekly total of more than 200 mm. Heavy snowfalls were reported at higher elevations. Several mountain passes were closed. Crews were kept busy controlling avalanches. Concern has been expressed about the well above normal snow-pack in the mountains and subsequent heavy mountain runoff.

Prairies

Temperatures in Alberta were on the cool side, but readings in Saskatchewan and Manitoba reached the mid to high twenties by the end of the week. At Winnipeg, the mercury soared to 32°C on April 28. Several low temperature records were broken in the north. During the first half of the week, heavy wet snow fell in the foothills and southern portions of Alberta. The Jasper and Edson districts received 15 to 20 cm of new snow, while snowfalls in the south ranged between 10-20 cm over a 2-day period. Even though field work was delayed, the precipitation was beneficial and welcomed. Spring seeding has started in southern areas of Saskatchewan and Manitoba.

Ontario

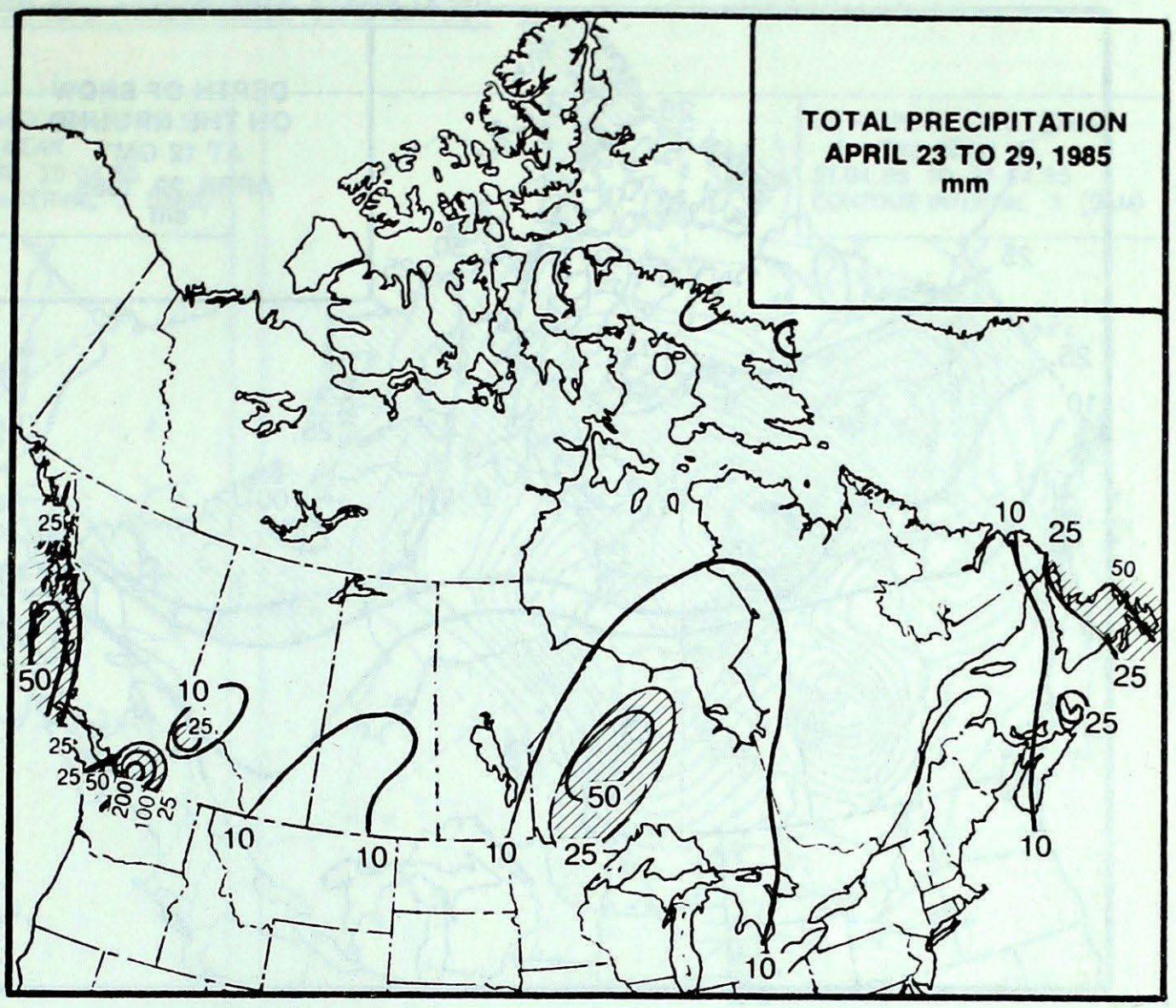
Many new high temperature records were established during the early part of the week. In the south, under mainly sunny skies, maximum temperatures reached 25 to 30 degrees. The record heat wave rapidly melted the remaining snow-pack in central and northern Ontario, causing rivers and streams to swell. Rivers in Muskoka were at an all-time peak levels. Haliburton was one of several communities covered by flood waters. In northern Ontario, where plenty of snow still remains in the bush, rivers were still on the rise. The Albany river rose more than one metre, forcing the helicopter evacuation of several Indian communities near James Bay. Communities near Sudbury, North Bay and Sault Ste. Marie were also hard hit because of flash flooding.

Québec

Some flooding was experienced near rivers and streams as mild temperatures and sunny days caused rapid snow melt, and resulted in a heavy run off. The Ottawa river overflowed its banks in the lower valley and near Montreal. By the end of the week most of southern Quebec was snow-free. Precipitation was light, mainly in the form of showers around mid-week. Only parts of western Quebec received more than 10 mm rain, while the Gaspé and the lower north coast received no measurable precipitation.

Atlantic Provinces

The Maritimes were predominantly sunny and dry, but parts of Nova Scotia did receive much needed rain, up to 36 mm, the last two days of the period. Newfoundland was unsettled and wet as two major storms affected the Island. On April 24 and 25, 15 to 30 cm of fresh snow blanketed the eastern half of the province. St. John's and Bonavista received 22 and 33 cm of snow, respectively. In addition, at Cape Race, northerly winds were clocked gusting over 100 km/h. During the last two days of the period, a second weather system gave an additional 10 to 25 mm of rain.

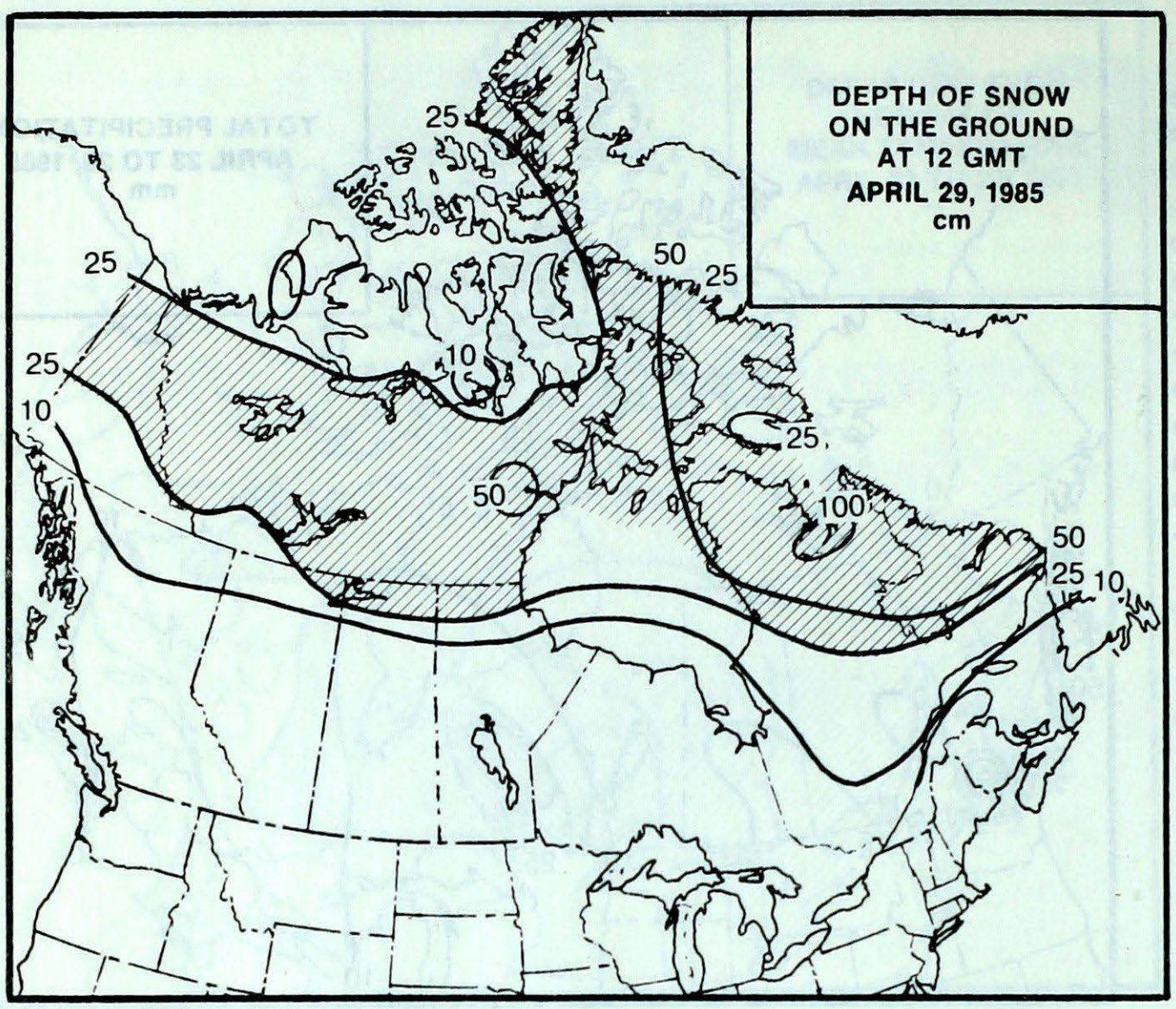


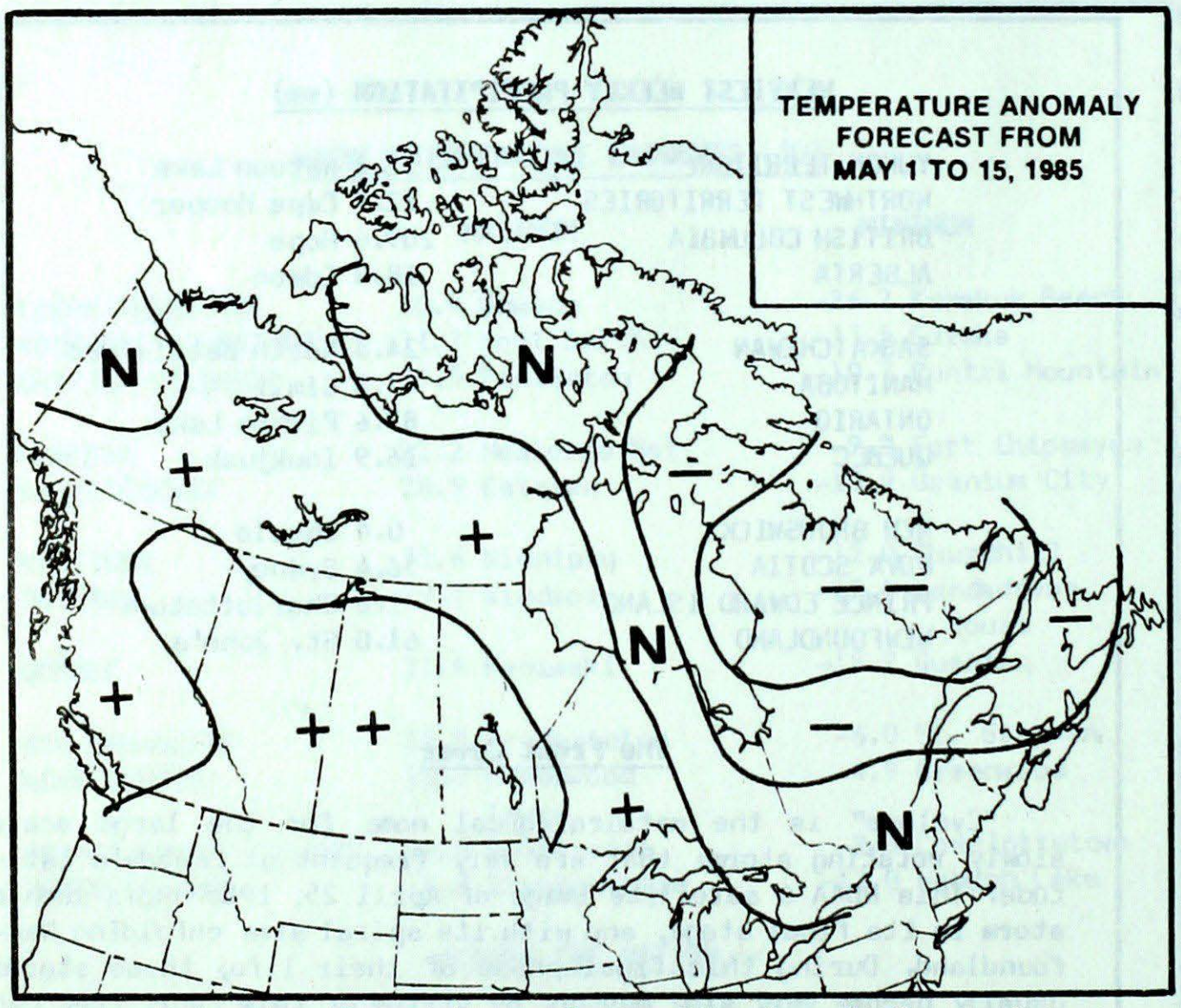
HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON TERRITORY	11.2	Watson Lake
NORTHWEST TERRITORIES	22.2	Cape Hooper
BRITISH COLUMBIA	209.6	Hope
ALBERTA	18.8	Edson
SASKATCHEWAN	24.8	North Battleford
MANITOBA	7.8	Gimli
ONTARIO	87.6	Pickle Lake
QUÉBEC	16.9	Inukjuak
NEW BRUNSWICK	0.4	Charlo
NOVA SCOTIA	36.4	Sydney
PRINCE EDWARD ISLAND	1.6	Charlottetown
NEWFOUNDLAND	61.0	St. John's

The Front Cover

"Cyclone" is the meteorological name for the large scale slowly rotating storms that are very frequent at Canada's latitude. This NOAA 6 satellite image of April 25, 1985 shows such a storm in its final stage, and with its spiral arms enfolding Newfoundland. During this final phase of their life, these storms usually become very slow moving. By virtue of this fact, they can prolong periods of inclement weather in a particular area. In this case, unsettled weather affected Newfoundland for a week, with snow falling during the three day period from April 24-26.





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.

CLIMATIC PERSPECTIVES VOLUME 7

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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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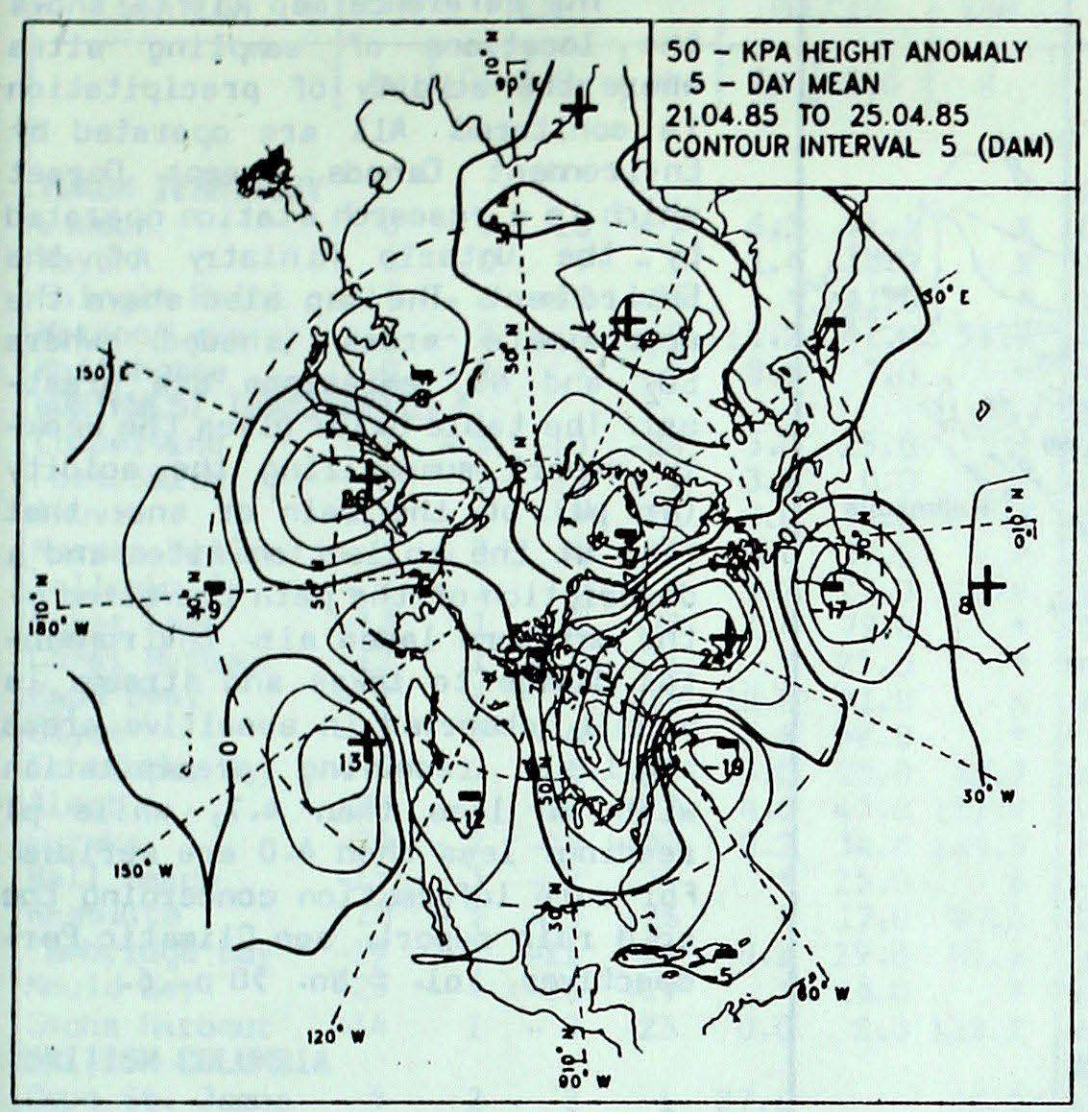
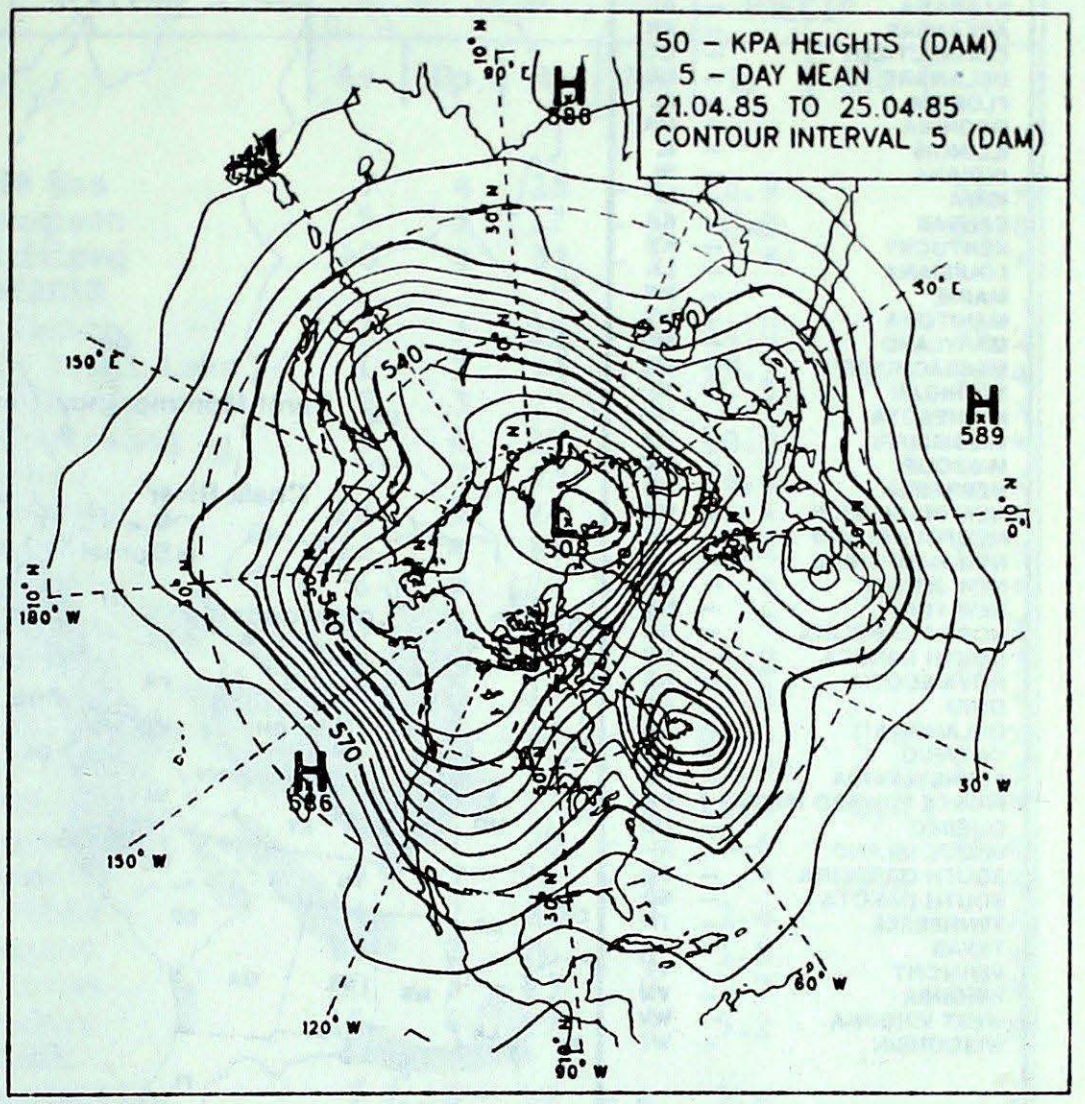
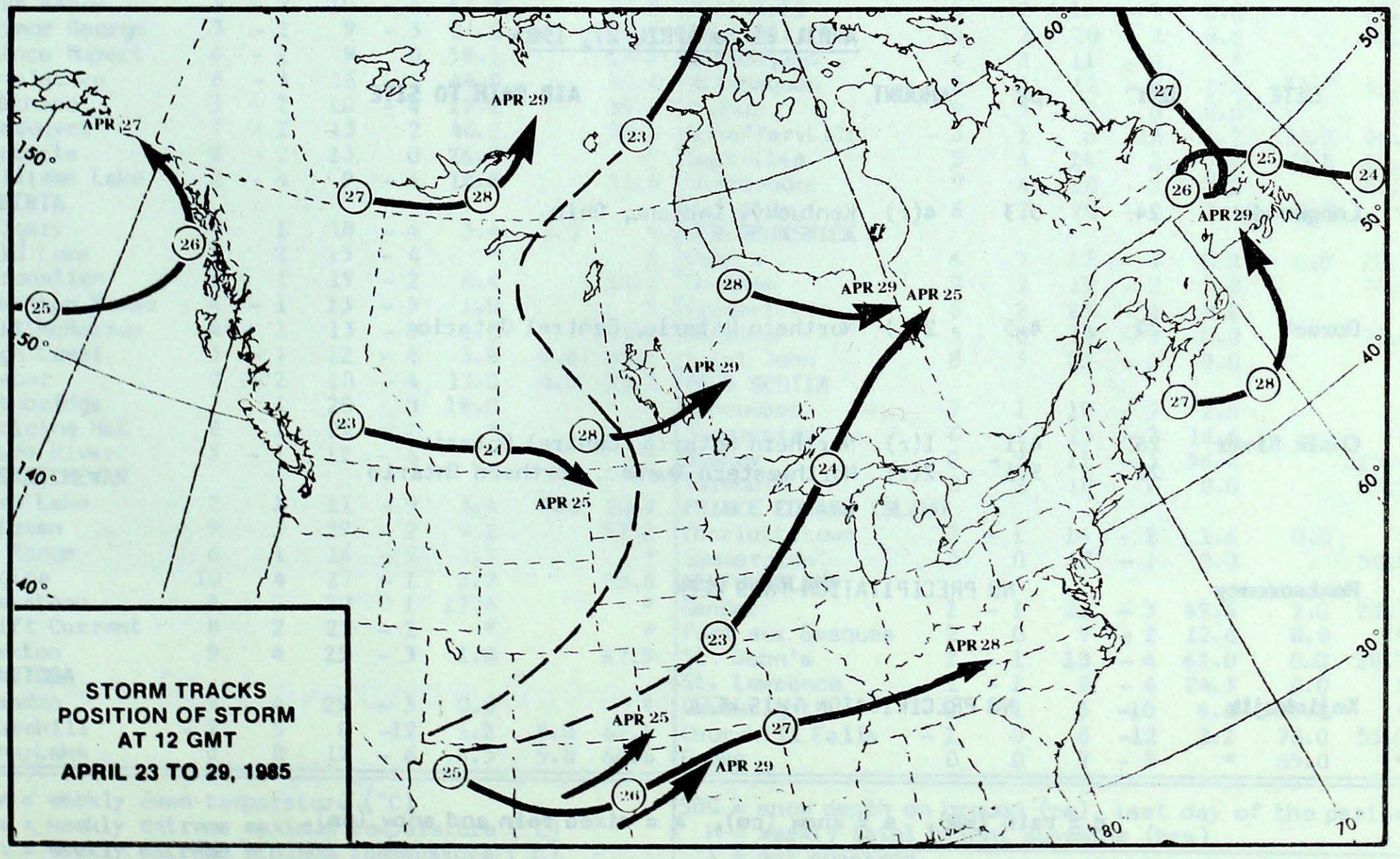
50 KPa ATMOSPHERIC CIRCULATION



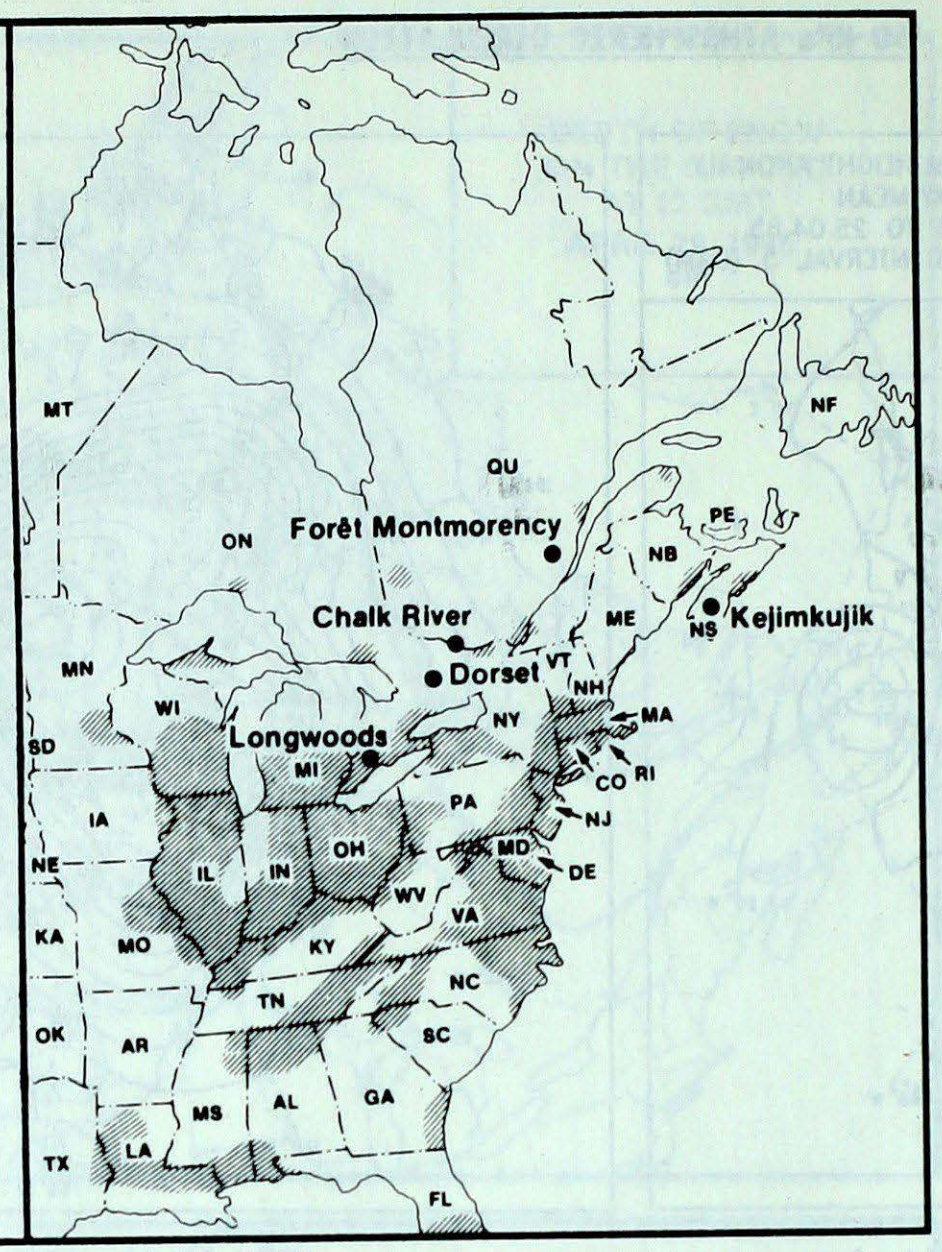
MEAN 50 KPa HEIGHT ANOMALY (dam)
April 21 to April 25, 1985



MEAN 50 KPa HEIGHTS (dam)
April 21 to April 25, 1985



ALABAMA	—	AL
ARKANSAS	—	AR
CONNECTICUT	—	CO
DELAWARE	—	DE
FLORIDA	—	FL
GEORGIA	—	GA
ILLINOIS	—	IL
INDIANA	—	IN
IOWA	—	IA
KANSAS	—	KA
KENTUCKY	—	KY
LOUISIANA	—	LA
MAINE	—	ME
MANITOBA	—	MT
MARYLAND	—	MD
MASSACHUSET	—	MA
MICHIGAN	—	MI
MINNESOTA	—	MN
MISSISSIPPI	—	MS
MISSOURI	—	MO
NEBRASKA	—	NE
NEW BRUNSWICK	—	NB
NEWFOUNDLAND	—	NF
NEW HAMPSHIRE	—	NH
NEW JERSEY	—	NJ
NEW YORK	—	NY
NORTH CAROLINA	—	NC
NORTH DAKOTA	—	ND
NOVA SCOTIA	—	NS
OHIO	—	OH
OKLAHOMA	—	OK
ONTARIO	—	ON
PENNSYLVANIA	—	PA
PRINCE EDWARD ISLAND	—	PE
QUÉBEC	—	QU
RHODE ISLAND	—	RI
SOUTH CAROLINA	—	SC
SOUTH DAKOTA	—	SD
TENNESSEE	—	TN
TEXAS	—	TX
VERMONT	—	VT
VIRGINIA	—	VA
WEST VIRGINIA	—	WV
WISCONSIN	—	WI



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.

APRIL 21 to APRIL 27, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	24	3.3	4(r)	Kentucky, Indiana, Ohio
Dorset	27	4.5	2(r)	Northern Ontario, Central Ontario
Chalk River	26	4.1	1(r)	Northern Ontario, Central Ontario
	27	5.1	2(r)	Northwestern Quebec, Northern Ontario
Montmorency			NO PRECIPITATION THIS WEEK	
Kejimkujik			NO PRECIPITATON THIS WEEK	

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

TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT APRIL 30, 1985

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	0	- 2	10	- 9	6.5	41.1	X
Mayo A	2	0	9	- 3	1.4	10.0	X
Shingle Point	-17	- 6	-10	-25	*	41.0	*
Watson Lake	0	- 2	8	-10	-11.2	41.0	58.3
Whitehorse	0	- 2	7	- 7	8.4	7.0	*
NORTHWEST TERRITORIES							
Coppermine	-17	- 4	-10	-28	3.0	25.0	*
Fort Smith	2	2	12	- 7	3.8	0.0	*
Inuvik	-15	- 6	- 5	-25	0.0	38.0	*
Norman Wells	- 6	- 3	4	-17	8.0	27.0	*
Yellowknife	- 2	1	6	- 9	5.2	22.0	26.8
Baker Lake	-13	1	- 5	-23	1.4	79.0	*
Coral Harbour	-12	1	- 1	-21	*	25.0	*
Cape Dyer	- 7	6	0	-15	10.0	91.0	X
Clyde	-12	3	- 6	-17	1.4	58.0	*
Frobisher Bay	- 8	2	1	-18	3.0	22.0	28.7
Alert	-22	- 2	-18	-27	4.6	43.0	112.4
Eureka	-24	- 2	-18	-33	0.2	34.0	149.5
Hall Beach	-15	3	- 2	-25	*	25.0	X
Resolute	-20	- 1	-13	-26	*	17.0	87.0
Cambridge Bay	-19	- 1	-11	-28	0.2	29.0	81.8
Mould Bay	-23	- 4	-16	-29	*	14.0	*
Sachs Harbour	-14	1	- 8	-23	0.0	8.0	115.7
BRITISH COLUMBIA							
Cape St. James	5	- 2	8	1	27.8		36.6
Cranbrook	6	- 2	16	- 3	2.2		53.8
Fort Nelson	4	0	12	- 5	0.8	0.0	56.1
Fort St. John	4	- 1	10	- 4	4.0		X
Kamloops	8	- 2	18	- 1	2.8		*
Penticton	8	- 1	20	- 4	2.0		45.0
Port Hardy	5	- 2	10	- 1	61.9		26.8
Prince George	3	- 2	9	- 3	21.2		51.5
Prince Rupert	4	- 1	9	0	58.1		20.1
Revelstoke	6	- 3	16	- 2	44.8		32.4
Smithers	3	- 2	10	- 4	12.2		38.6
Vancouver	7	- 2	13	2	46.2		36.8
Victoria	8	- 2	13	0	26.0		*
Williams Lake	2	- 4	9	- 6	14.8		31.6
ALBERTA							
Calgary	5	1	18	- 4	3.4	0.0	*
Cold Lake	5	2	13	- 4	*		*
Coronation	6	1	19	- 2	6.4		58.7
Edmonton Namao	4	- 1	13	- 5	1.0		*
Fort McMurray	4	1	13	- 8	1.8		79.2
High Level	3	- 1	12	- 4	3.8	0.0	40.8
Jasper	2	- 2	10	- 4	13.0	0.0	35.7
Lethbridge	7	1	20	0	18.0		*
Medicine Hat	8	1	22	- 1	*		*
Peace River	3	- 1	12	- 6	*		X
SASKATCHEWAN							
Cree Lake	2	X	11	- 9	3.4	5.0	70.9
Estevan	9	3	29	- 2	9.2		57.2
La Ronge	6	1	16	- 5	1.3		*
Regina	10	4	27	- 1	3.2		59.8
Saskatoon	8	2	20	1	17.4		*
Swift Current	8	2	23	- 2	*		*
Yorkton	9	4	25	- 3	1.0		67.9
MANITOBA							
Brandon	9	4	29	- 3	0.0		*
Churchill	- 2	5	8	-12	1.2	8.0	67.1
Lynn Lake	3	0	12	- 6	4.5	5.0	60.6
The Pas	7	4	18	- 4	4.9		56.9
Thompson	5	3	17	- 5	0.0		64.8
Winnipeg	10	4	32	- 3	*		*
ONTARIO							
Atikokan	7	3	25	- 3	44.0		35.2
Big Trout Lake	1	2	13	- 8	29.2	2.0	22.4
Earlton	9	3	25	- 3	*		X
Kapuskasing	8	4	28	- 4	10.0		*
Kenora	7	2	25	- 2	16.4		X
Kingston	10	3	24	1	*		*
London	13	4	28	1	6.4		57.8
Moosonee	6	5	24	- 5	*	2.0	*
Muskoka	11	3	28	- 3	*		X
North Bay	10	4	27	- 3	1.2		55.3
Ottawa	10	2	19	2	3.8		*
Pickle Lake	3	2	22	- 8	87.6	0.0	X
Red Lake	6	1	25	- 4	27.8	0.0	43.5
Sudbury	10	5	27	- 3	11.4	0.0	*
Thunder Bay	7	2	25	- 5	8.6		39.6
Timmins	9	5	28	- 4	*	23.0	X
Toronto	11	2	22	0	2.4		X
Trenton	11	2	26	0	1.8		X
Wiarton	10	3	23	0	15.7		60.9
Windsor	15	4	29	3	5.2		X
QUEBEC							
Bagotville	7	3	19	- 4	2.6		X
Blanc-Sablon	0	- 1	6	- 3	8.0	10.0	*
Inukjuak	- 4	4	4	-14	16.9	57.0	37.2
Kuujjuaq	- 4	3	9	-16	4.6	118.0	*
Kuujjuarapik	2	5	13	- 8	*	10.0	*
Maniwaki	9	3	22	- 3	4.4		54.7
Mont-Joli	5	2	16	- 5	0.0		62.7
Montréal	10	2	20	2	8.6		67.0
Natashquan	4	3	11	- 4	*		*
Nitchequon	0	4	11	- 8	1.2	33.0	61.9
Québec	9	3	19	0	0.8		*
Schefferville	- 3	1	6	-16	1.7	31.0	56.1
Sept-Iles	5	4	14	- 2	3.4	0.0	64.5
Sherbrooke	9	4	20	- 2	7.2		66.9
Val-d'Or	6	2	20	- 5	3.6	0.0	*
NEW BRUNSWICK							
Charlo	6	3	17	- 4	0.4	0.0	70.7
Chatham	7	2	19	- 2	0.0		75.2
Fredericton	8	2	23	- 4	0.0		*
Moncton	5	0	19	- 5	0.0		75.8
Saint John	8	3	20	- 3	0.0		*
NOVA SCOTIA							
Greenwood	7	1	19	- 5	2.6		X
Shearwater	6	1	15	- 2	16.6		*
Sydney	2	- 2	11	- 3	36.4		25.0
Yarmouth	8	2	18	0	0.0		59.2
PRINCE EDWARD ISLAND							
Charlottetown	3	- 1	16	- 2	1.6	0.0	*
Summerside	4	0	17	- 1	0.0		50.8
NEWFOUNDLAND							
Gander	1	- 1	11	- 3	49.6	2.0	23.7
Port aux Basques	2	0	9	- 2	12.6	0.0	*
St. John's	2	- 1	10	- 4	61.0	0.0	28.7
St. Lawrence	1	- 1	8	- 4	24.3	0.0	X
Cartwright	- 2	- 1	3	-10	4.6	98.0	*
Churchill Falls	- 2	0	6	-12	2.2	76.0	55.0
Goose	0	0	7	- 5	*	65.0	*

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