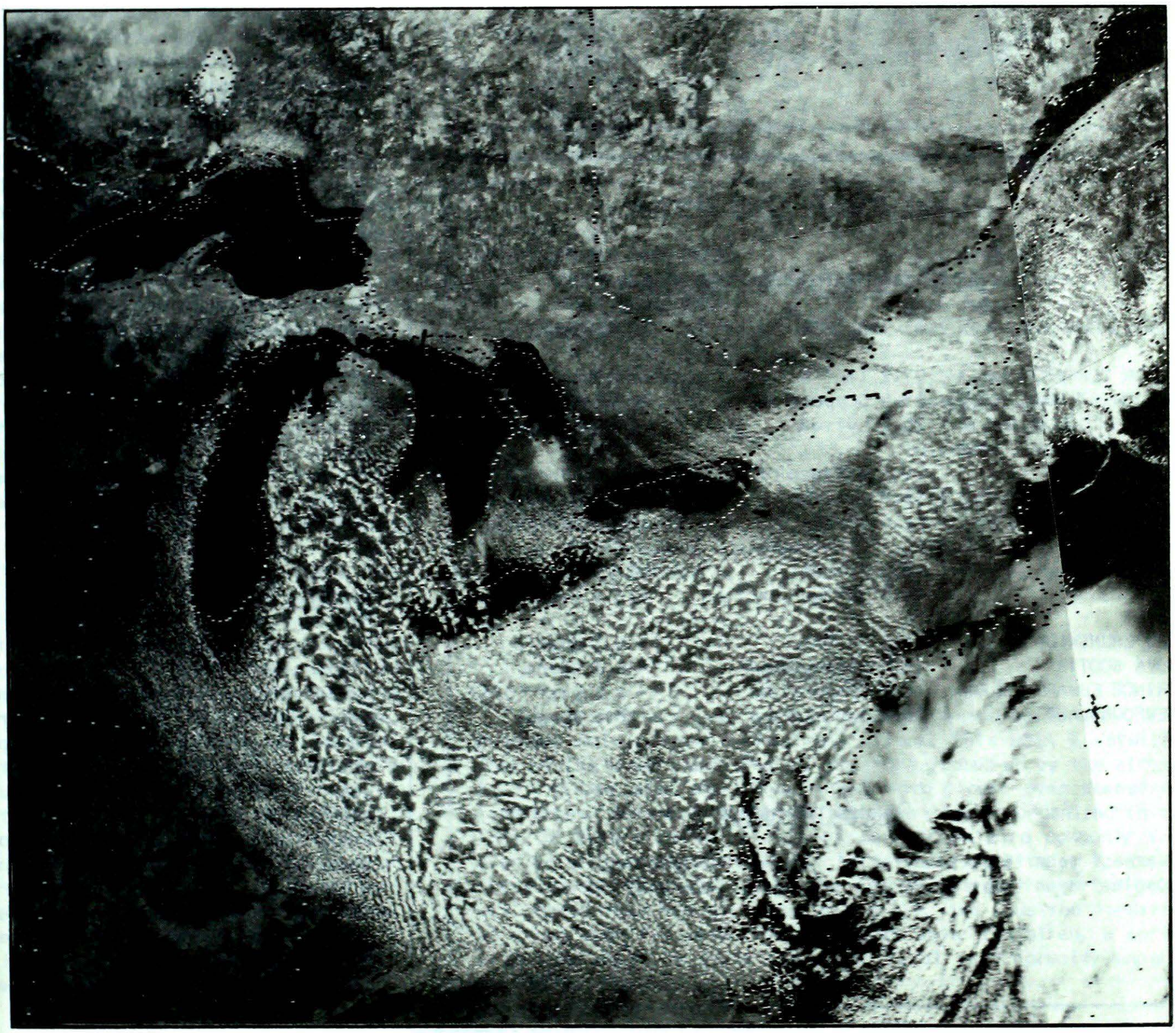
Environment Canada | Environnement Canada

Climatic Perspectives

A weekly review of Canadian climate | April 2 to 8, 1985 | Vol.7 NO.14

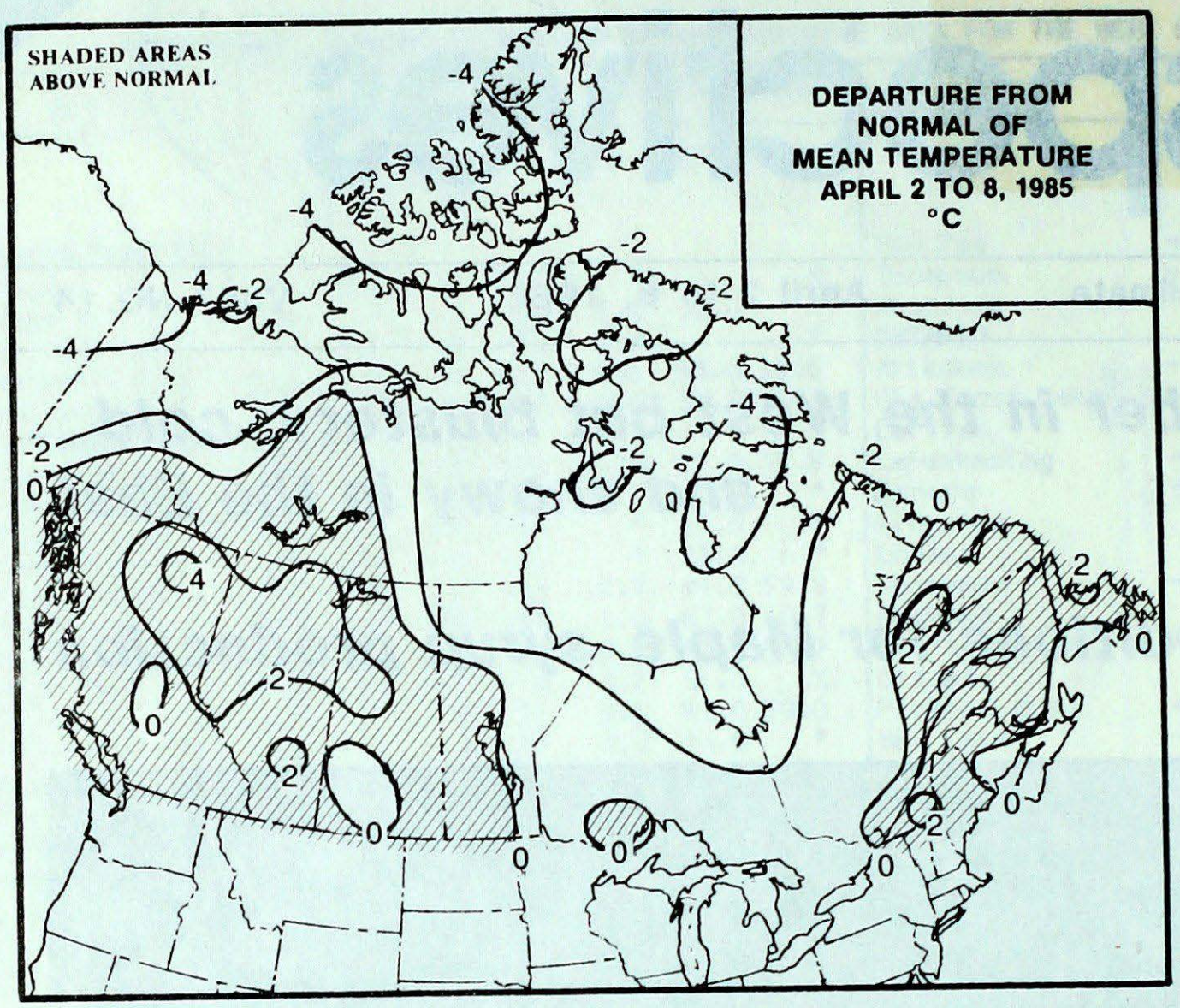
- ***Fine Easter weather in the West but blustery, cold and snowy in the East***

- ***Unfavourable conditions for Maple syrup production***



The NOAA 9 satellite image of April 9, 1985 shows the Great Lakes acting as a moisture source. For more details see page 3.

Canada



WEEKLY TEMPERATURE EXTREMES (°C)

	MAXIMUM	MINIMUM
YUKON TERRITORY	7.2 Teslin	-35.5 Shingle Point
NORTHWEST TERRITORIES	15.5 Coppermine	-44.6 Eureka
BRITISH COLUMBIA	23.2 Lytton	-10.6 Dease Lake
ALBERTA	20.2 Whitecourt	-21.0 Fort Chipewyan
SASKATCHEWAN	11.9 Estevan	-26.0 Uranium City
MANITOBA	11.6 Gretna Winnipeg	-26.0 Churchill
ONTARIO	19.1 Simcoe	-23.2 Big Trout Lake
QUEBEC	13.8 Sutton Junction	-28.6 Inukjuak
NEW BRUNSWICK	13.0 Chatham	- 6.7 Charlo
NOVA SCOTIA	16.6 Greenwood	- 6.4 Sydney
PRINCE EDWARD ISLAND	10.7 Summerside	- 6.2 East Point
NEWFOUNDLAND	16.2 Deer Lake	-18.2 Goose

ACROSS THE NATION

Warmest mean temperature	9.9	Hope, B.C.
Coolest mean temperature	-38.3	Eureka, NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

With the exception of the southern Yukon and southern Mackenzie, temperatures were generally below normal, with minimums still dropping to the minus thirties and forties at night. In contrast, temperatures in the southwest soared into the mid-teens over the Easter weekend. The weather was frequently cloudy and windy. Advisories were issued for the Dempster Highway due to blowing and heavy drifting snow. Snowfall accumulations were generally light, ranging from 3 to 5 centimetres, even though snow showers occurred frequently.

British Columbia

After an unsettled first half, the weather improved dramatically for the holiday weekend, becoming pleasantly sunny and mild. Temperatures moderated steadily each day. During the latter part of the week, maximum temperatures were in the mid to high teens most everywhere. Several communities in the south registered readings in the low twenties. Excellent spring skiing continues in the Kootenays. Some early field work has started in the southwest. Tulips and other spring flowers are in full bloom on Vancouver Island and along the lower mainland.

Prairies

Several disturbances deposited light snow earlier in the week, but skies became predominantly sunny over the Easter weekend. Temperatures in Alberta were mild, especially during the latter part of the week. The temperature at Whitecourt climbed to 20°C on April 8. In the east, temperatures returned to more seasonal values as a pool of cold Arctic air spilled southward from Northwest Territories. All southern agricultural areas are snow free, but snow depths in the north still range between 50 and 70 centimetres.

Ontario

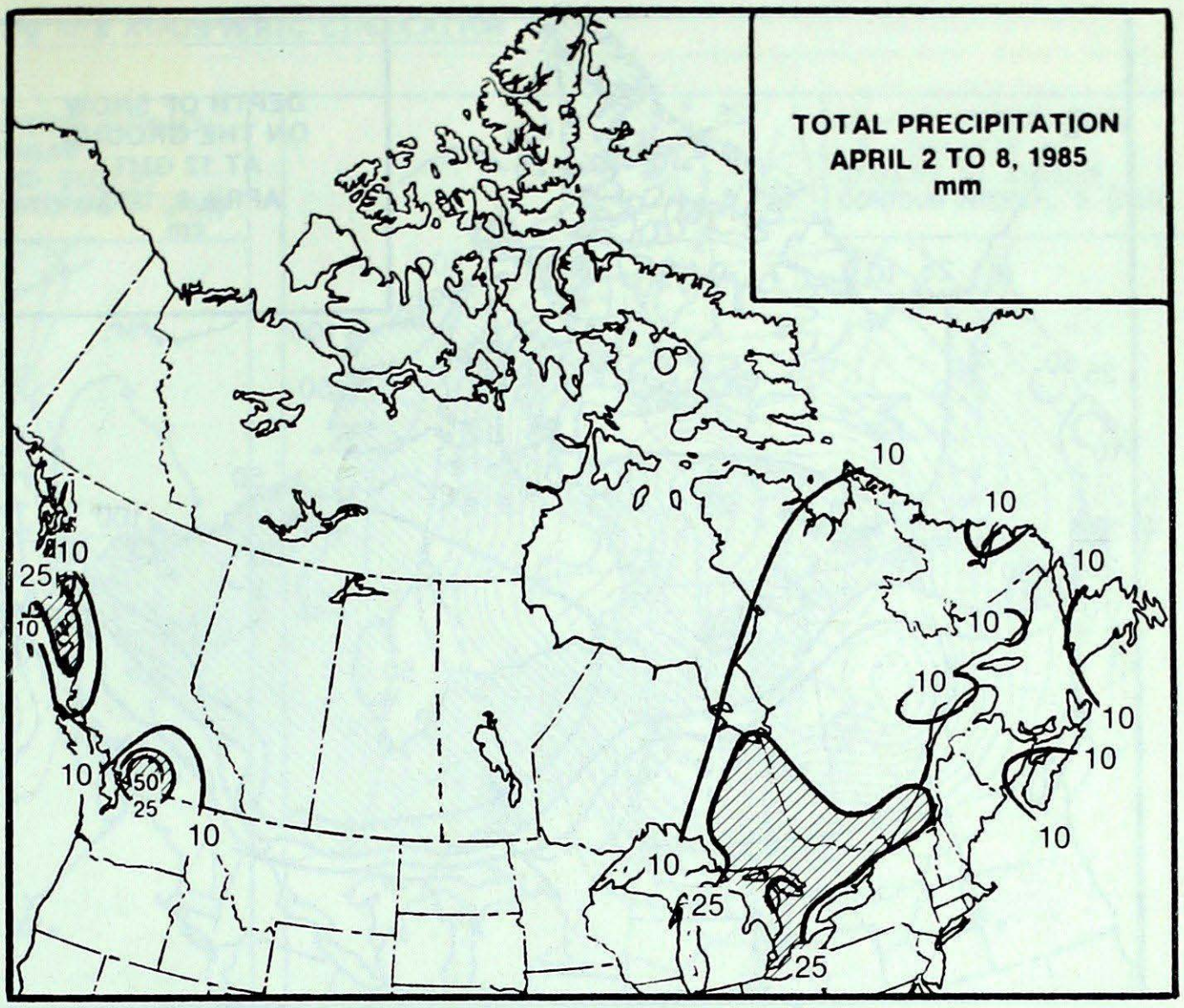
Winter just didn't want to let go. On more than one occasion southern Ontario residence woke up to several centimetres of fresh snow. Some communities in northern Ontario received as much as 40 cm of new snow. On April 5, heavy thunderstorms rolled across the southern half of the province. A tornado was reported near Windsor. On April 6, gale force winds gusting to 110 km/h swept through the province, ripping shingles off roofs and toppling trees and power lines. The combinations of heavy rains and fierce winds caused major flooding in southwestern Ontario as rising waters from Lake Erie and Lake St. Clair surged across banks and backed up the rivers. Damaging waves pounded the shore lines. The southwesterly gales caused ice to jam at the entrance of the Welland canal bringing shipping to a halt.

Québec

Several weather systems affected the province and the week was primarily cloudy and damp. Heaviest precipitation, between 20 and 30 millimetres, fell in the southwest. Temperatures fluctuated, but overall averaged near normal. Snow still covered most of the province. Snow depths ranged from 8 cm in the Eastern Townships to more than 100 cm in the north.

Atlantic Provinces

The week was mainly cloudy and cool. Milder weather was briefly experienced during the weekend. The temperature at Greenwood climbed to 17°C on April 6, a new daily record. Relatively dry weather conditions were experienced in Newfoundland. Precipitation in the Maritimes, partly in form of snow, ranged from 10 to 40 millimetres. Shearwater recorded more than 18 cm of new snow this week, which is already more than their normal snowfall for the whole month of April. Due to unfavourable weather conditions maple sap has been flowing sluggishly this year, and many maple syrup producers have experienced at least a 50 per cent reduction from their normal quotas.

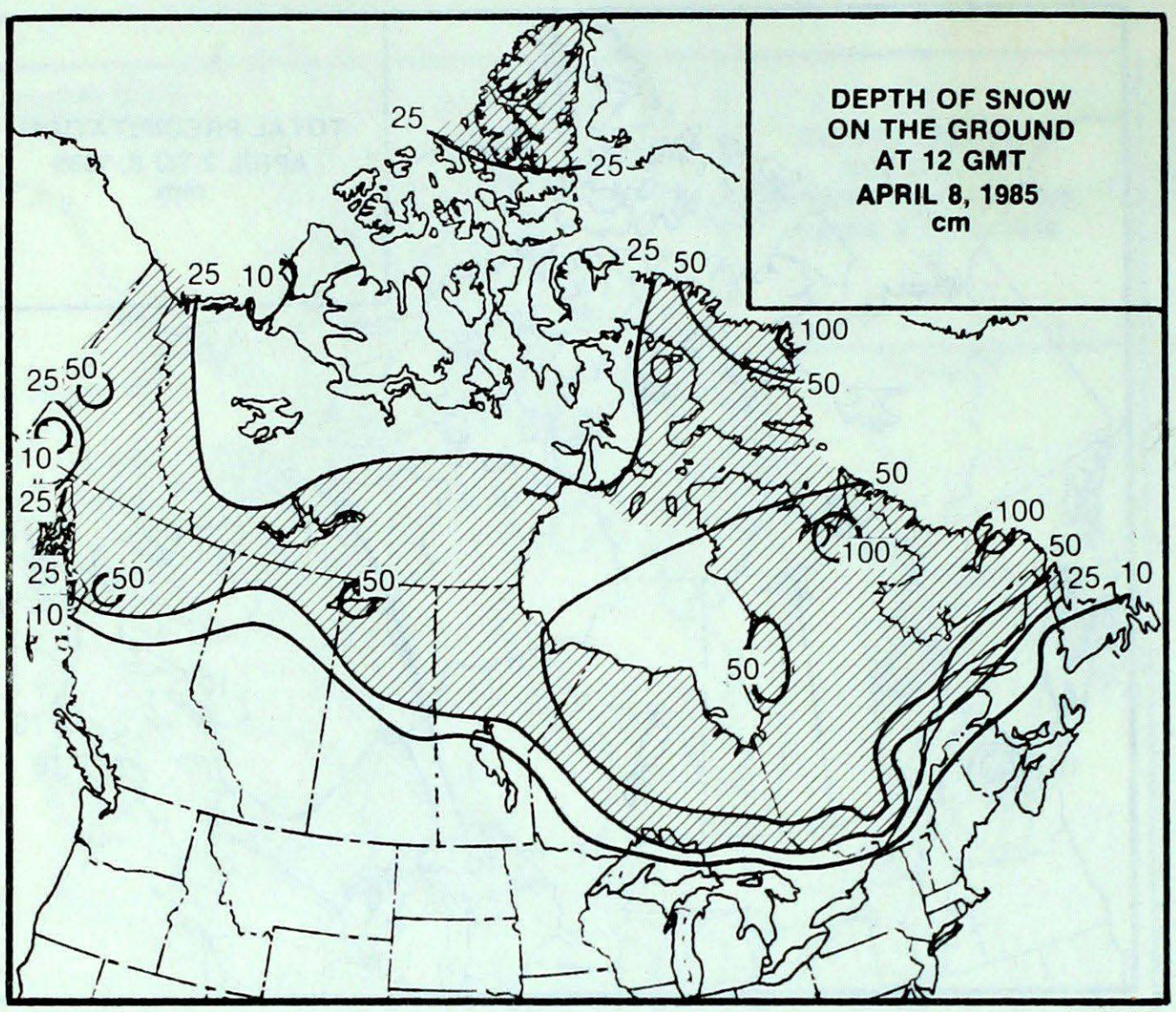


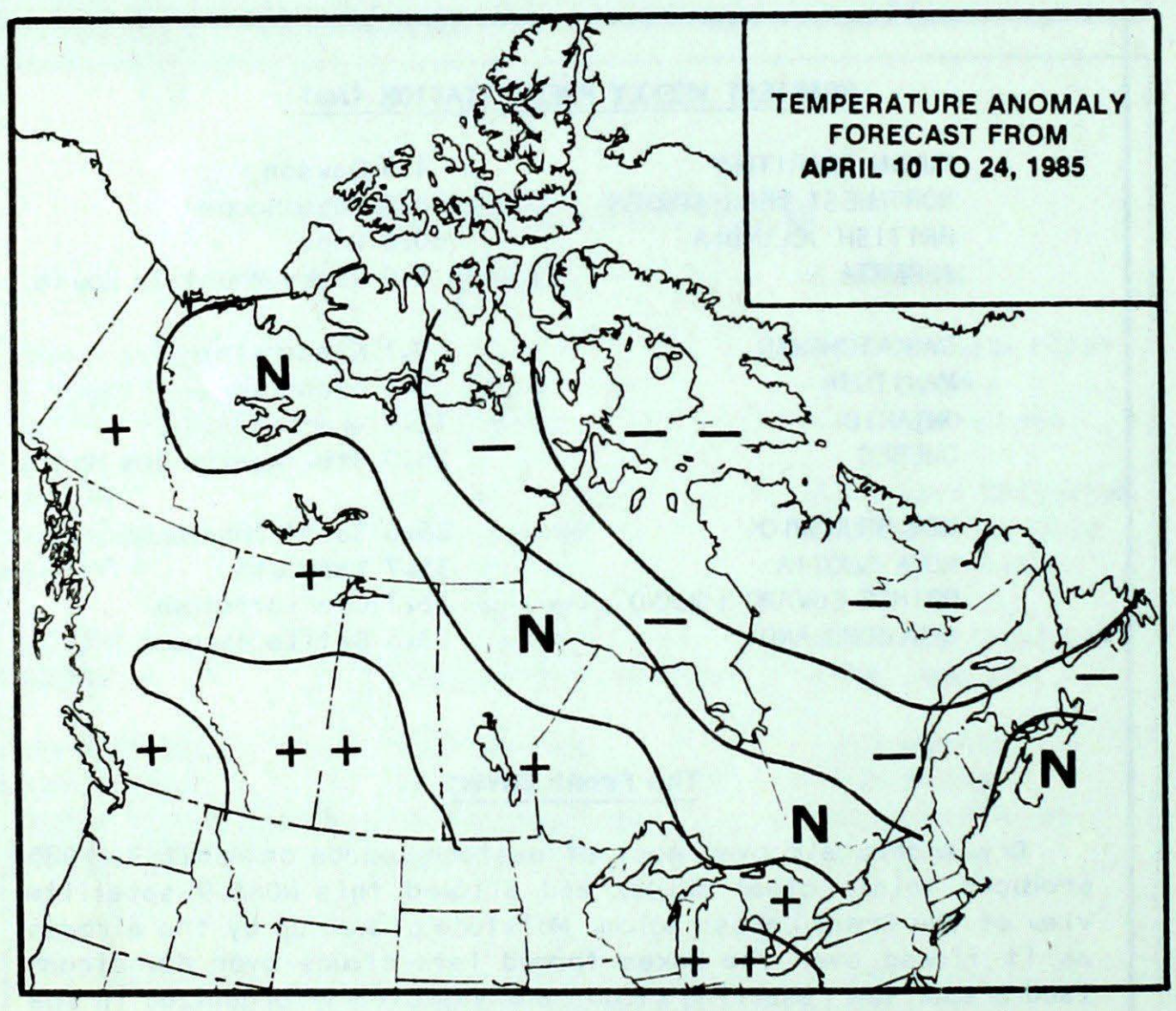
HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON TERRITORY	4.5	Dawson
NORTHWEST TERRITORIES	8.8	Cape Hooper
BRITISH COLUMBIA	60.6	Hope
ALBERTA	6.9	Rocky Mountain House
SASKATCHEWAN	9.2	Kindersley
MANITOBA	9.1	Lynn Lake
ONTARIO	72.7	Wiarton
QUEBEC	28.0	Ste. Agathe des Monts
NEW BRUNSWICK	25.6	Saint John
NOVA SCOTIA	39.7	Yarmouth
PRINCE EDWARD ISLAND	16.7	Charlottetown
NEWFOUNDLAND	13.3	Battle Harbour

The Front Cover

Dry Arctic air over most of eastern Canada on April 9, 1985 produced mainly clear skies, and allowed this NOAA 9 satellite view of the Great Lakes region. Moisture picked up by the airmass as it flowed over the Lakes formed into clouds over downstream land areas. The resulting cloud bank was clearly organized in the form of Bénard cells, a type of convection more commonly seen over water surfaces such as the Atlantic (see CP Vol., 7, No. 2, front cover) than over land. The temperature of the Great Lakes was cooler than the air passing over it, and thus the formation of cloud over the water itself was strongly inhibited, a spring situation which is quite the opposite of that normally experienced in winter.





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

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.

CLIMATIC PERSPECTIVES VOLUME 7

Managing Editor	M.J. Newark
Editor (English)	A. Radomski
Editor (French)	A. Caillet
Staff Writer	M. Skarpathiotakis
Art Layout and Graphics	W. Johnson K. Czaja J. Rautenberg
Word Processing	U. Ellis, N. Khaja P. Hare

Regional Correspondents

Atl.: F.Amirault; Que.: J.Miron
Central: F.Luclow; Ont.: D.Paquette
Western: W.Prusak; Pac.: N.Penny
Yukon : H.Wahl; Ice Central Ottawa
AES Satellite Data Lab

ISSN 0225-5707 UDC 551.506.1(71)

Climatic Perspectives is a weekly bilingual publication of the Canadian Climate Centre, Atmospheric Environment Service, 4905 Dufferin St., Downsview, Ont. Canada M3H 5T4. **Phone (416)667-4906/4711.**

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.

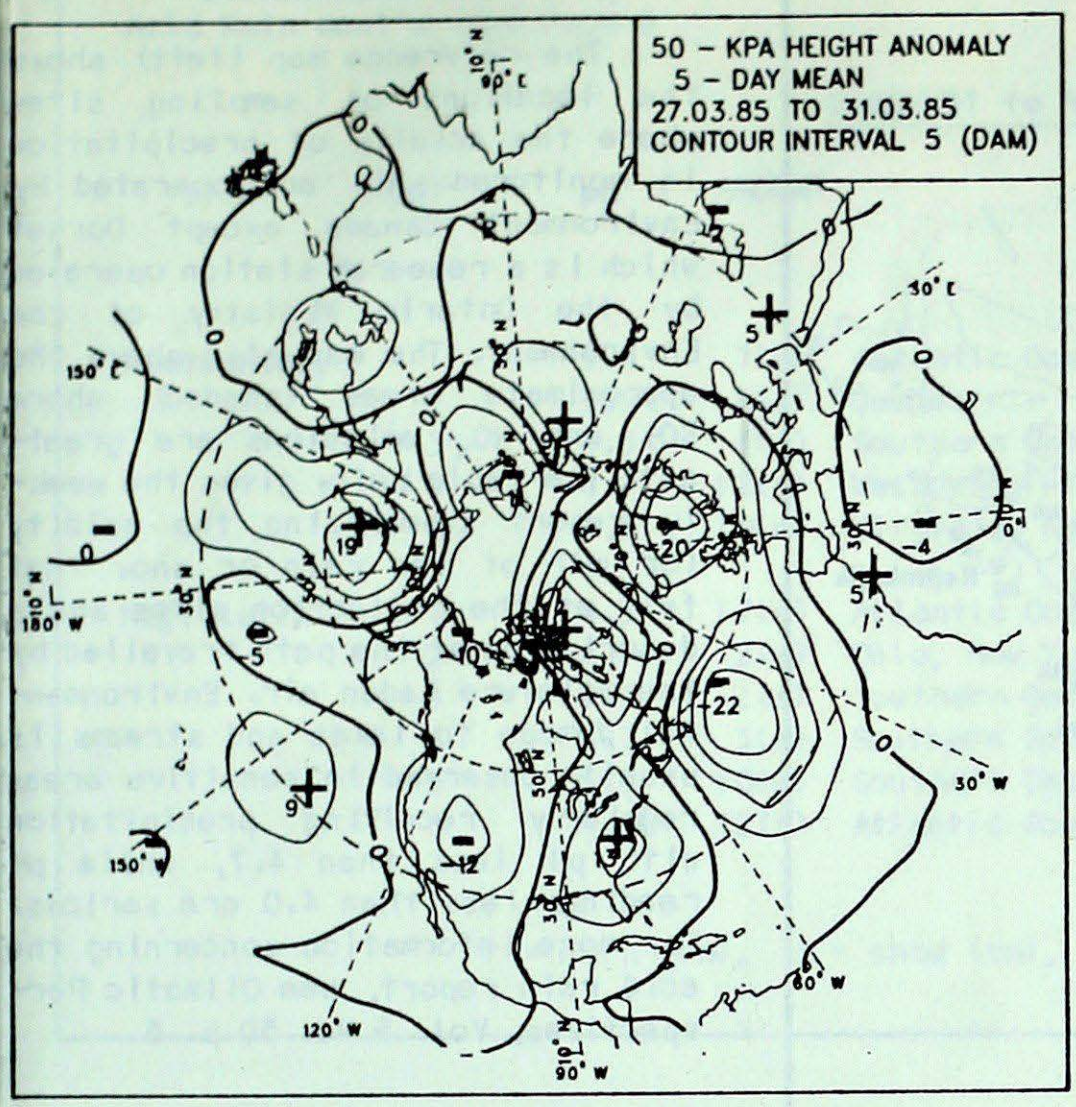
The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment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

Annual Subscriptions

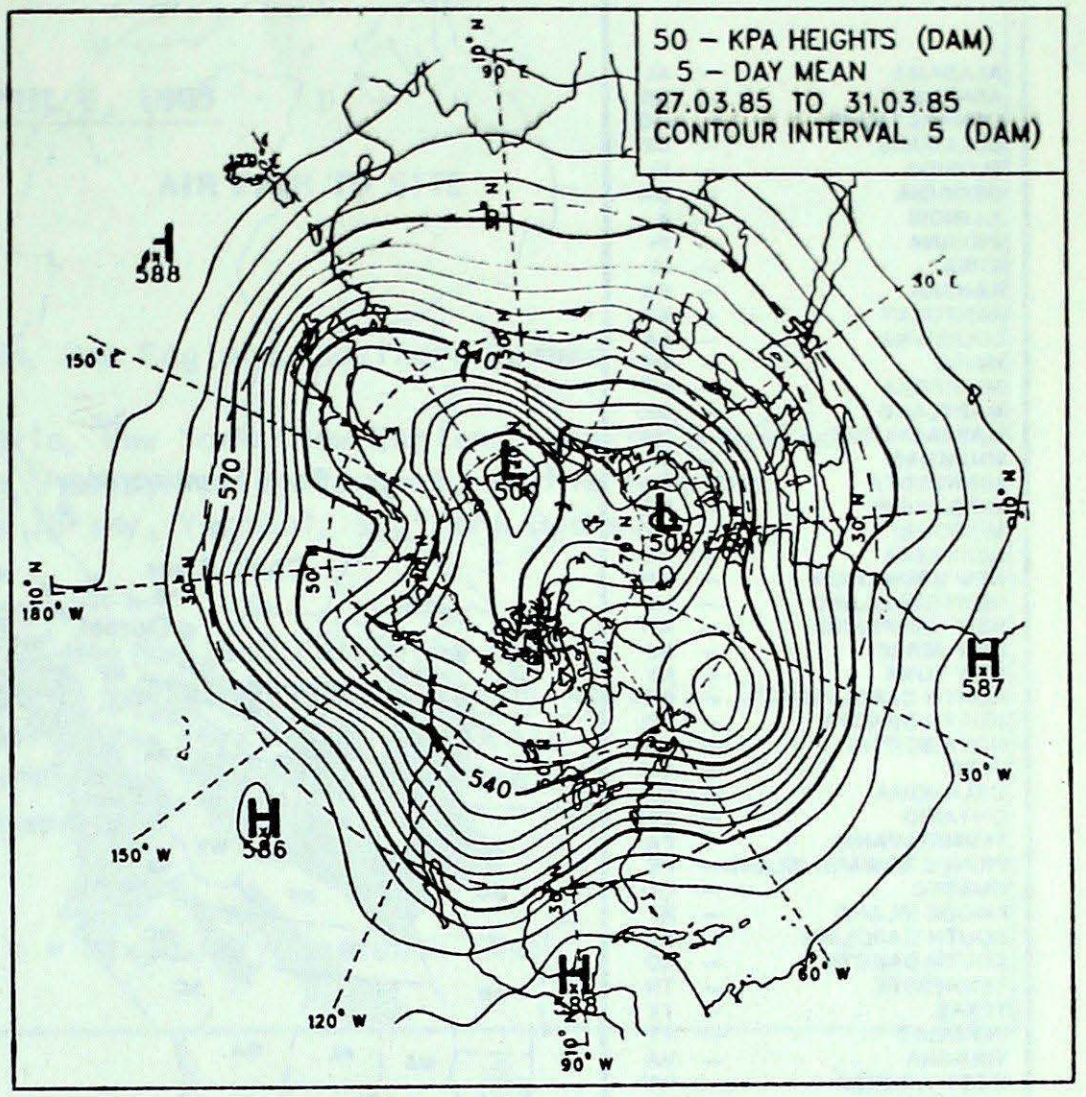
Weekly issue including monthly supplement: $35.00
Monthly issue only: $10.00

Subscription enquiries: Supply and Services Canada, Publishing Centre, Ottawa, Ontario, Canada, K1A 0S9. Phone (613)994-1495

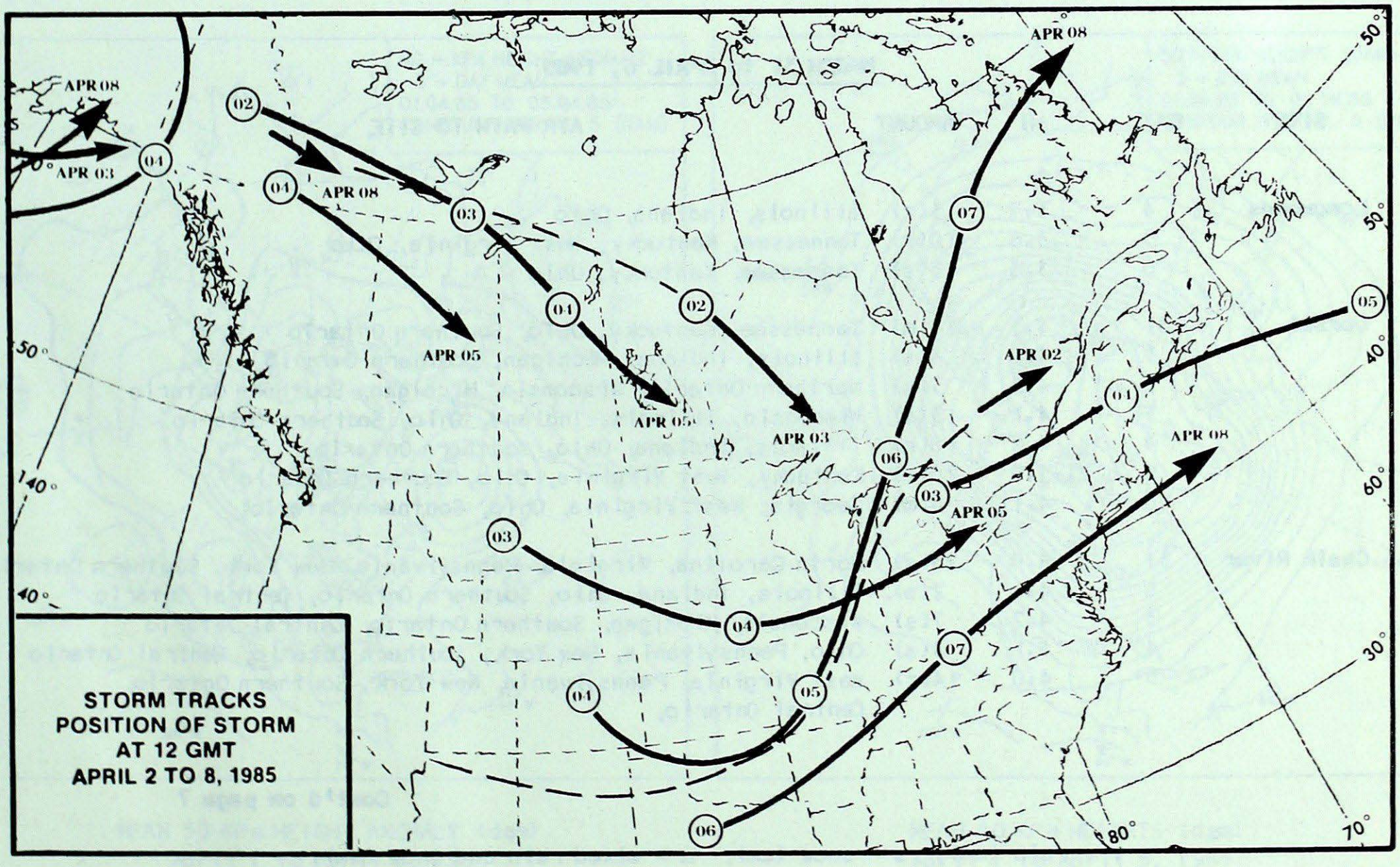
50 KPa ATMOSPHERIC CIRCULATION



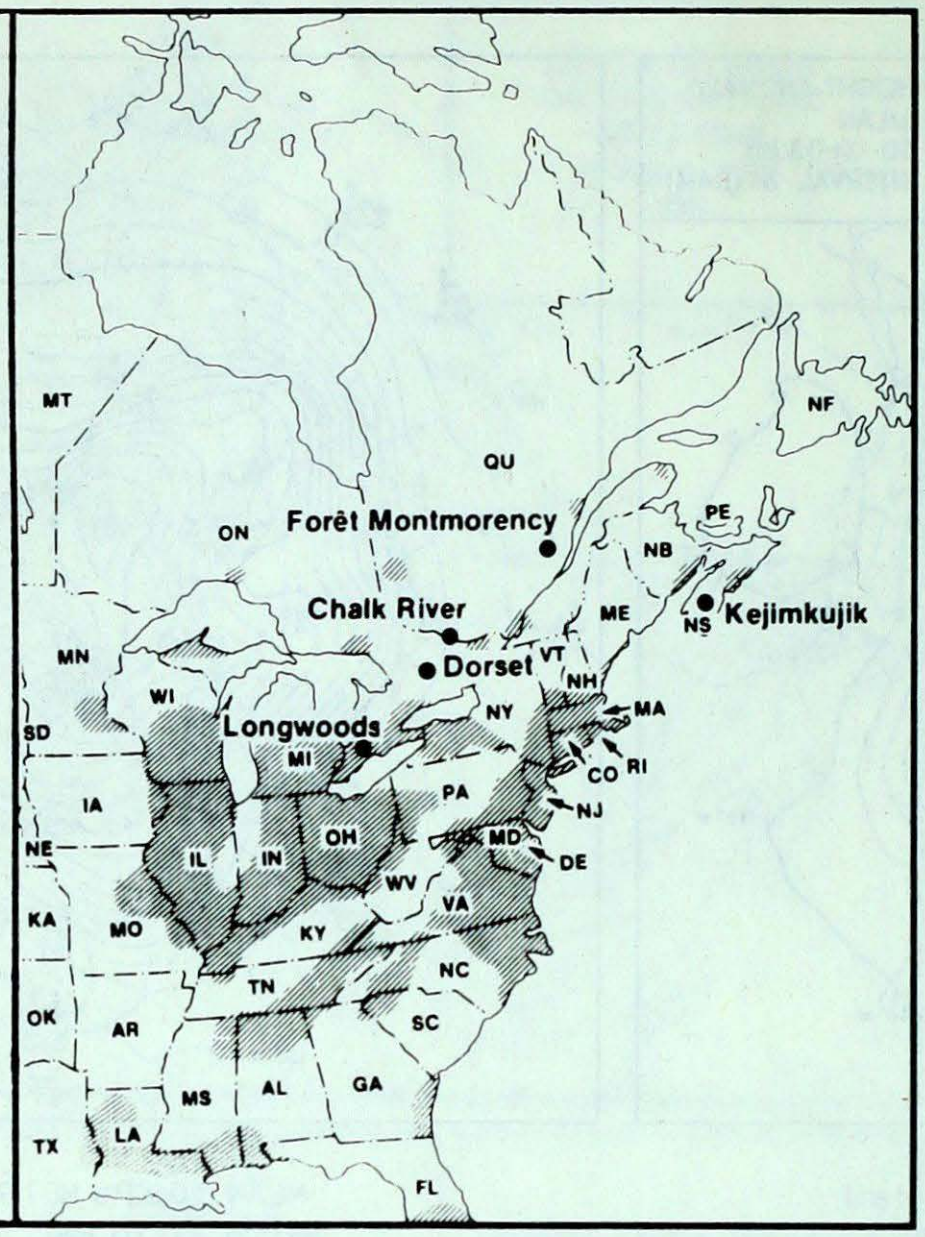
MEAN 50 KPa HEIGHT ANOMALY (dam)
March 27 to March 31, 1985



MEAN 50 KPa HEIGHTS (dam)
March 27 to March 31, 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.

MARCH 31 to APRIL 6, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	4	3.7	3(r)	Illinois, Indiana, Ohio
	5	3.6	10(r)	Tennessee, Kentucky, West Virginia, Ohio
	6	3.6	5(s)	Tennessee, Kentucky, Ohio
Dorset	31	4.3	18(m)	Tennessee, Kentucky, Ohio, Southern Ontario
	1	4.1	4(s)	Illinois, Indiana, Michigan, Southern Ontario
	2	4.3	3(s)	Northern Ontario, Wisconsin, Michigan, Southern Ontario
	3	4.1	3(s)	Wisconsin, Illinois, Indiana, Ohio, Southern Ontario
	4	4.2	18(r)	Illinois, Indiana, Ohio, Southern Ontario
	5	3.8	20(m)	Kentucky, West Virginia, Ohio, Southern Ontario
	6	4.1	4(m)	Georgia, West Virginia, Ohio, Southern Ontario
Chalk River	31	4.8	23(s)	North Carolina, Virginia, Pennsylvania, New York, Southern Ontario
	1	4.1	2(s)	Illinois, Indiana, Ohio, Southern Ontario, Central Ontario
	3	4.2	7(s)	Wisconsin, Michigan, Southern Ontario, Central Ontario
	4	4.1	4(s)	Ohio, Pennsylvania, New York, Southern Ontario, Central Ontario
	5	4.0	14(r)	West Virginia, Pennsylvania, New York, Southern Ontario, Central Ontario,

Cont'd on page 7

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

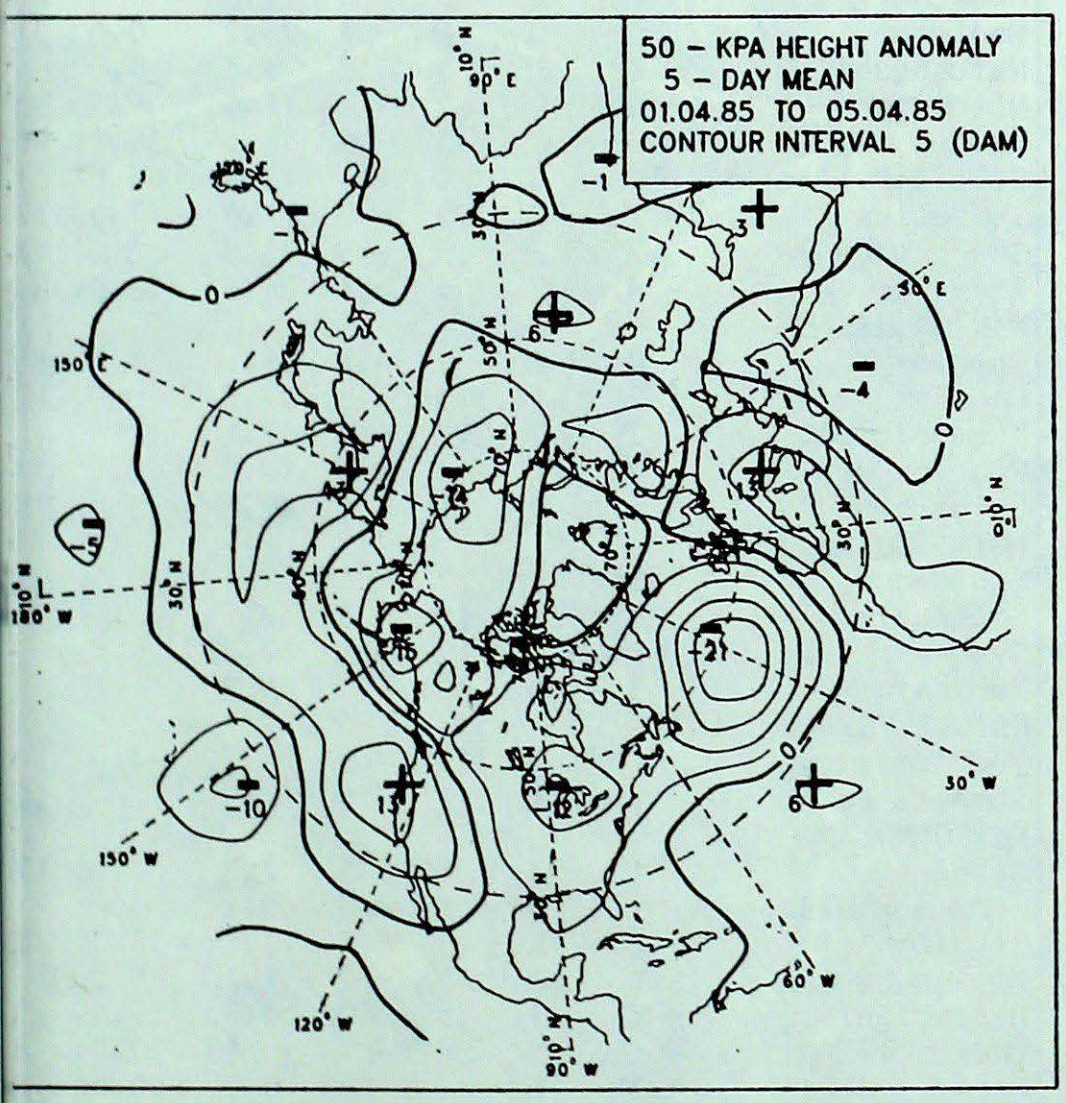
Acid Rain cont'd from Page 6

MARCH 31 to APRIL 6, 1985

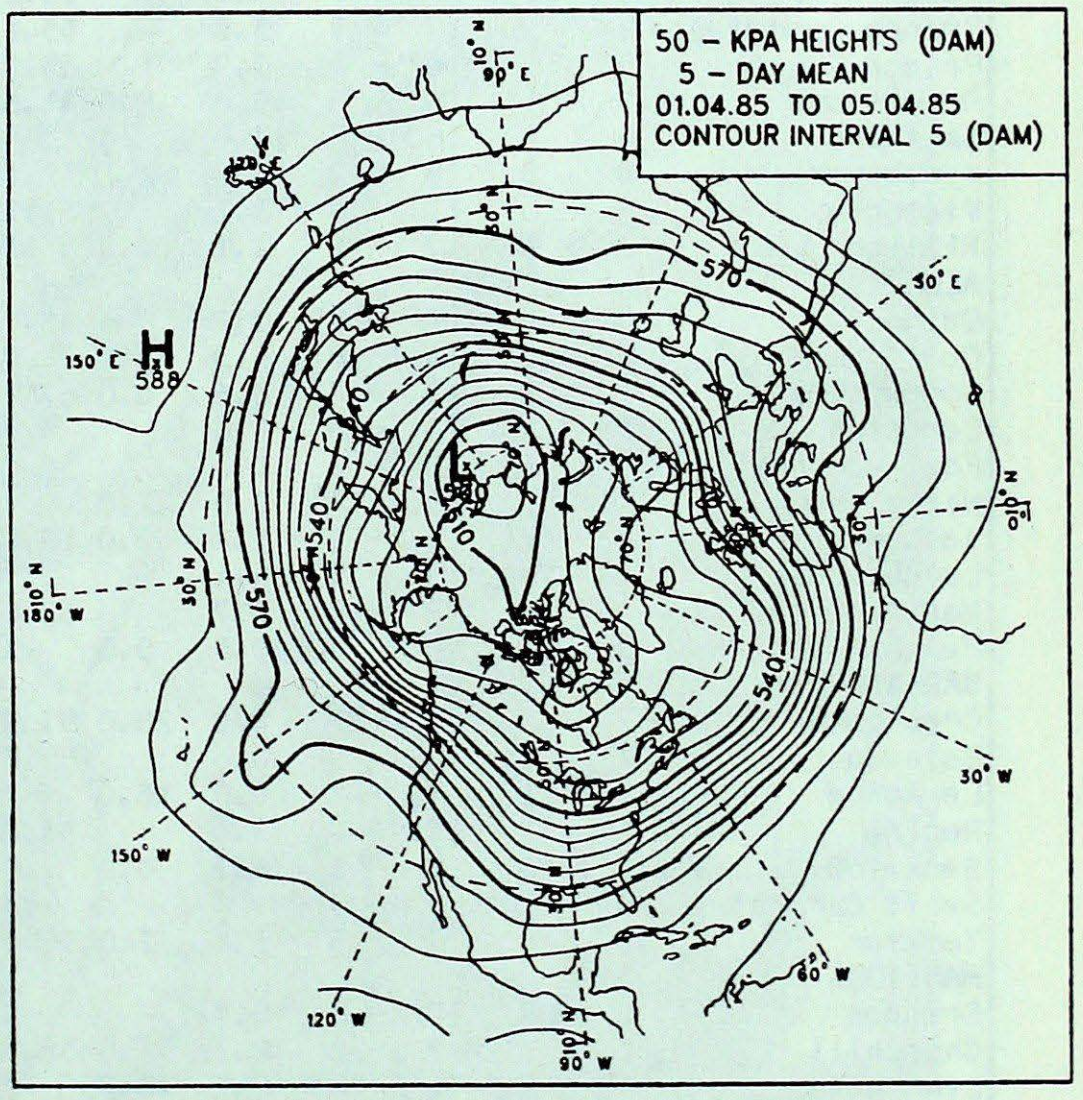
SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Montmorency	1	5.2	7(s)	Atlantic Ocean, New England, Southern Québec
	2	3.9	1(s)	Québec
	3	4.5	4(s)	Southern Ontario, New York, New England, Southern Québec
	5	4.2	12(m)	West Virginia, Pennsylvania, Vermont, Southern Québec
	6	4.3	10(m)	Virginia, New Jersey, Vermont, Southern Québec
Kejimkujik	1	4.3	17(s)	Atlantic Ocean,
	2	4.1	2(s)	Ohio, New York, New England, Atlantic Ocean
	3	3.8	2(s)	Southern Ontario, New York, Pennsylvania, Atlantic Ocean
	4	3.7	3(m)	Southern Ontario, New York, Atlantic Ocean
	5	3.8	10(m)	Southern Ontario, New York, Atlantic Ocean
	6	4.5	32(r)	Atlantic Ocean

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

50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)
April 1 to April 5, 1985



MEAN 50 KPa HEIGHTS (dam)
April 1 to April 5, 1985

TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT APRIL 9, 1985

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	- 9	- 4	7	-29	4.5	63.0	X
Mayo A	- 6	- 1	7	-25	1.2	33.0	X
Shingle Point	-26	- 6	-14	-35	*	38.0	*
Watson Lake	- 2	2	7	-15	1.2	58.0	40.0
Whitehorse	- 1	2	7	-11	1.0	26.0	*
NORTHWEST TERRITORIES							
Coppermine	-22	1	16	-34	*	25.0	*
Fort Smith	- 5	3	11	-23	5.7	27.0	*
Inuvik	-22	- 4	-13	-32	2.4	36.0	*
Norman Wells	-15	- 3	- 1	-30	4.0	23.0	*
Yellowknife	-11	2	4	-27	3.4	41.0	57.0
Baker Lake	-25	- 3	-16	-33	2.4	69.0	55.8
Coral Harbour	-20	- 1	-18	-32	0.0	21.0	*
Cape Dyer	-18	- 3	-10	-29	3.2	104.0	X
Clyde	-21	1	-12	-29	6.4	58.0	40.3
Frobisher Bay	-21	- 4	-10	-31	0.2	32.0	57.9
Alert	-33	- 3	-24	-39	1.4	46.0	51.1
Eureka	-38	- 5	-30	-45	0.0	35.0	68.2
Hall Beach	-26	- 2	-15	-38	0.2	21.0	X
Resolute	-32	- 5	-24	-39	0.0	17.0	61.9
Cambridge Bay	-30	- 4	-21	-39	0.0	39.0	*
Mould Bay	-34	- 6	-27	-42	*	17.0	*
Sachs Harbour	-28	- 4	-17	-32	0.0	9.0	83.7
BRITISH COLUMBIA							
Cape St. James	7	1	10	3	6.2		42.3
Cranbrook	6	1	18	- 4	4.4		62.1
Fort Nelson	2	4	13	- 7	0.0	39.0	56.4
Fort St. John	3	3	16	- 5	0.4		X
Kamloops	8	0	21	- 4	13.3		*
Penticton	8	0	18	- 2	0.3		47.8
Port Hardy	6	1	20	- 1	19.1		38.2
Prince George	2	0	17	- 7	3.8		53.4
Prince Rupert	5	1	18	- 2	37.9		35.0
Revelstoke	5	1	16	- 3	19.6	8.0	41.6
Smithers	4	2	16	- 7	0.0		*
Vancouver	8	0	18	2	7.2		39.1
Victoria	8	0	17	0	3.2		33.1
Williams Lake	2	- 1	17	- 8	2.1	4.0	*
ALBERTA							
Calgary	3	1	19	- 5	2.8		48.7
Cold Lake	2	1	14	- 8	6.8		*
Coronation	2	2	12	- 4	5.6	0.0	67.7
Edmonton Namao	3	1	18	- 5	1.6		*
Fort McMurray	1	3	18	-12	0.0		50.6
High Level	- 1	1	16	-14	0.0	22.0	*
Jasper	5	3	18	- 8	1.4	0.0	58.1
Lethbridge	4	1	19	- 5	6.4		*
Medicine Hat	4	0	16	- 2	6.7		60.0
Peace River	2	3	16	- 6	0.0	0.0	X
SASKATCHEWAN							
Cree Lake	- 7	X	7	-23	4.8	28.0	57.5
Estevan	2	0	12	- 9	0.6		55.5
La Ronge	- 1	2	9	-12	0.0	16.0	*
Regina	1	1	10	- 8	2.4		54.0
Saskatoon	0	0	9	- 8	6.2	0.0	*
Swift Current	0	- 1	7	- 5	*		*
Yorkton	- 1	1	7	- 8	3.2	2.0	58.4
MANITOBA							
Brandon	1	1	10	- 7	0.4		*
Churchill	-17	- 3	- 8	-26	2.2	31.0	38.1
Lynn Lake	-11	- 3	- 1	-25	9.1	48.0	*
The Pas	- 3	0	7	-15	0.3	3.0	58.8
Thompson	- 9	0	2	-26	3.0	33.0	29.1
Winnipeg	0	0	12	- 8	*		*
ONTARIO							
Atikokan	- 1	1	10	-10	4.6	0.0	25.8
Big Trout Lake	-10	- 2	1	-23	1.4	91.0	45.0
Earlton	- 3	- 1	6	-13	*	32.0	X
Kapuskasing	- 5	- 1	7	-19	37.6	65.0	*
Kenora	- 1	- 1	9	-10	4.0	3.0	X
Kingston	3	1	11	- 5	*		*
London	4	0	18	- 4	25.8	0.0	25.9
Moosonee	- 9	- 3	2	-19	24.4	84.0	40.2
Muskoka	0	- 2	6	-11	*	5.0	X
North Bay	- 3	- 2	5	-11	41.6	39.0	29.5
Ottawa	2	0	10	- 4	27.2		31.6
Pickle Lake	- 6	- 1	6	-21	17.4	66.0	X
Red Lake	- 3	- 2	5	-14	2.8	10.0	27.8
Sudbury	- 3	- 1	5	-10	31.3	10.0	28.0
Thunder Bay	- 1	0	7	-10	3.5		39.8
Timmins	- 4	- 1	7	-18	39.6		X
Toronto	3	- 1	11	- 5	17.8	2.0	X
Trenton	3	- 1	15	- 4	20.2		X
Wiarton	1	- 1	11	- 5	72.7	0.0	*
Windsor	5	0	19	- 4	32.6		X
QUEBEC							
Bagotville	- 1	0	5	- 9	4.1	15.0	X
Blanc-Sablon	- 2	1	4	-10	20.0	50.0	6.5
Inukjuak	-20	- 5	-11	-29	8.4	69.0	43.8
Kuujjuaq	-14	- 2	- 3	-25	15.6	119.0	32.1
Kuujjuarapik	-15	- 3	- 2	-24	11.6	39.0	*
Maniwaki	1	1	7	-10	16.0	20.0	29.1
Mont-Joli	- 1	0	5	- 6	4.6		27.9
Montréal	3	0	9	- 3	25.2	0.0	31.7
Natashquan	- 2	1	3	- 8	5.4	5.0	*
Nitchequon	- 9	0	2	-19	11.6		33.1
Québec	0	0	5	- 6	16.6	36.0	26.0
Schefferville	-10	0	1	-23	17.2	65.0	31.1
Sept-Iles	- 2	0	2	- 9	13.0	27.0	32.4
Sherbrooke	2	2	9	- 3	25.6	8.0	18.2
Val-d'Or	- 4	- 2	5	-14	24.6	58.0	34.2
NEW BRUNSWICK							
Charlo	0	2	7	- 7	15.1	15.0	18.4
Chatham	2	1	13	- 5	17.6	0.0	12.5
Fredericton	2	0	12	- 5	22.1		*
Moncton	2	1	13	- 4	16.6	0.0	14.5
Saint John	1	0	11	- 4	25.6		14.7
NOVA SCOTIA							
Greenwood	3	0	17	- 3	39.3	0.0	X
Shearwater	2	- 1	10	- 3	*		*
Sydney	0	- 1	12	- 6	10.4	0.0	9.4
Yarmouth	3	0	12	- 3	39.7		*
PRINCE EDWARD ISLAND							
Charlottetown	1	0	10	- 3	16.7	4.0	*
Summerside	2	1	11	- 3	14.6		12.3
NEWFOUNDLAND							
Gander	1	2	8	- 5	7.0	7.0	17.4
Port aux Basques	- 1	0	6	- 7	9.8	3.0	*
St. John's	0	1	10	- 6	4.8	4.0	28.4
St. Lawrence	0	0	5	- 7	2.2	5.0	X
Cartwright	- 4	0	5	-10	8.6	120.0	26.0
Churchill Falls	- 6	3	4	-17	*	97.0	*
Goose	- 3	1	9	-18	10.0	82.0	35.9

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