Environment Canada Environnement Canada

Climatic Perspectives

April 17 to 23, 1989 — A weekly review of Canadian climate — Vol. 11 No. 17

Cold weather persists in Ontario and Québec

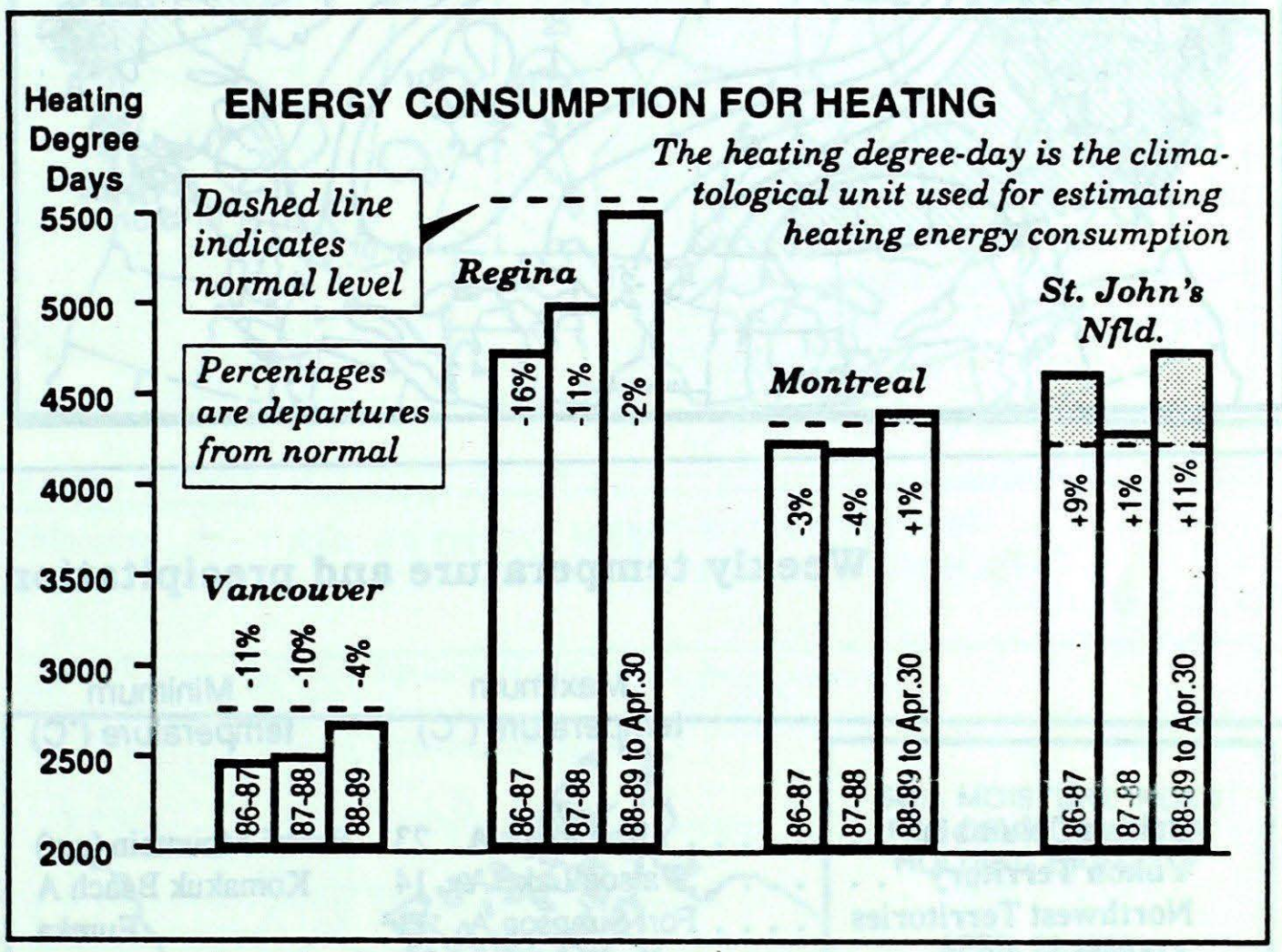
A persistent high pressure area produced sunny but cool conditions in Ontario and most of Québec. For the second week in a row, several daily record minimums were broken.

Assuming a continuation of this cold weather for the rest of April, this would be the third month in a row with below normal monthly means. Boaters are still finding ice remaining on the lakes in cottage country north of Toronto. At this point, melting is 2-3 weeks later than normal.

The combination of sunny skies, moderate winds and no precipitation resulted in excellent drying conditions allowing farm field work to commence in many parts of southern Ontario. The cold weather has also benefitted maple syrup production, especially in Québec.

In Ontario, precipitation has reverted to below normal for the month at most locales. Toronto, so far this month has received only 31 mm compared to the normal of 53 mm for the 21-day period. If these dry conditions continue in southern Ontario until the end of the month, it will be the fifth month in succession of below normal precipitation.

Bryan Smith, Ontario Climate Centre
Roger Gauthier, AES, Montreal



Wintry weather in the Atlantic Provinces

Winter-like weather continued in the Maritimes, bringing with it cold and snow. Unseasonably cold Arctic air on April 23, broke several daily low temperature records. Snow fell at a number of locations at the beginning of the week, and at most locations on the weekend. Hardest hit were eastern New Brunswick and Prince Edward Island. CFB Chatham recorded a weekend total of 27.8 cm and Summerside, P.E.I. reported 16.6 cm.

Gander, Newfoundland is experiencing one of the snowiest winters on record. On the 22nd, a 7.0 cm snowfall brought the season's total to 519.4 cm. The total winter record was set in the winter of 1964-65, when 631.2 cm fell.

Frank Amirault, AES, Halifax

Red River update

The Red River peaked at Emerson, Manitoba on April 23 with no flooding problems. The peak is expected to reach the floodway at Winnipeg on April 29 and no flooding problems are anticipated

Water Resources Branch, Ottawa

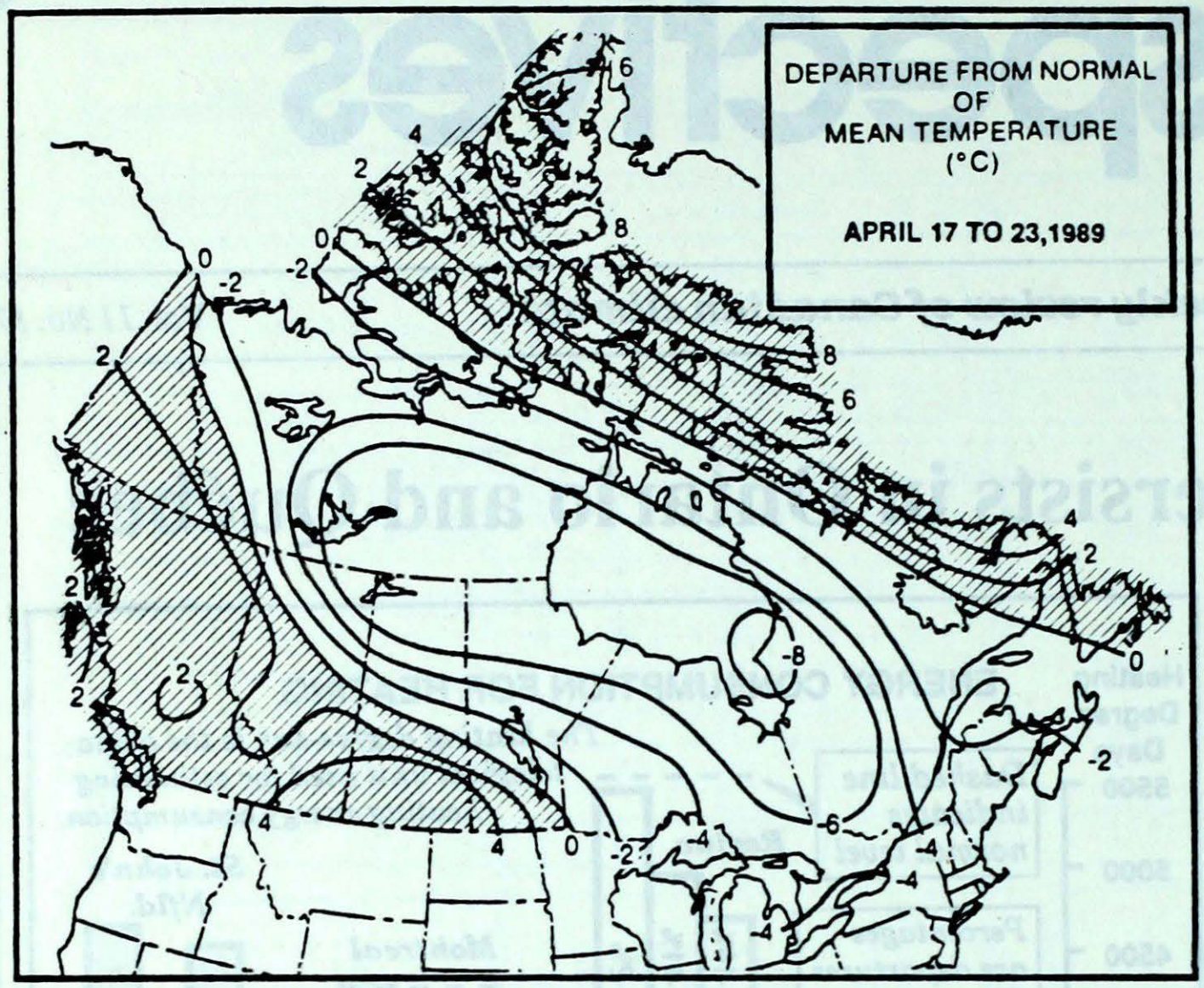
Unseasonably cool temperatures to continue in Eastern Canada...

A large area of cold air over northern Québec will continue to bring colder than normal temperatures from the Prairies to the St. Lawrence Valley during the first week of May. A flow from the south will push milder than normal temperatures over the Yukon, along the west coast of B.C., southern Manitoba and the East Coast. (prepared April 26)

A. Shabbar, Canadian Climate Centre

For further information contact Brian Taylor (416) 739-4438

Canada



Mild air finally reaches Baffin Island

After consistently below normal temperatures since December 1988, Baffin Island has finally experienced warm weather this week, with anomalies of 3 to 8°C. Low pressure systems tracking from Hudson Bay and Labrador produced winds from the south and east and allowed temperatures to rise to record daily maximums. Clyde set new records on the 18th, 19th, 20th, and 22nd when -0.1°C was recorded. Cape Dyer reached 4.6°C on the 23rd. Iqualit has also been mild, with maximums ranging from 0°C on the 21st to 5.1°C on the 23rd. Snow is rapidly melting under partly cloudy days.

Yves Landry, AES, Iqaluit

Weekly temperature and precipitation extremes

	Maximum temperature (°C)		Minimum temperature (°C)		Heaviest precipitation (mm)	
British Columbia	Kamloops A	23	Puntzi Mountain (aut)	-9	Port Hardy A	55
Yukon Territory	Watson Lake A	14	Komakuk Beach A	-23	Watson Lake A	6
Northwest Territories	Fort Simpson A	11	Eureka	-33	Cape Dyer A	37
Alberta	Lethbridge A	26	Fort Chipewyan A	-20	Red Deer A	12
Saskatchewan	Estevan A	30	Collins Bay	-20	La Ronge A	24
	Regina A	30				
Manitoba	Dauphin A	25	Churchill A	-24	Thompson A	31
Ontario	Windsor A	20	Winisk (aut)	-22	Windsor A	25
Québec	Montréal Int'l A	17	La Grande IV A	-28	Natashquan A	51
New Brunswick	St Stephen (aut)	12	St Stephen (aut)	-6	Chatham A	26
Nova Scotia	Western Head (aut)	12	Truro	-5	Sydney A	49
Prince Edward Island	Summerside A	10	Charlottetown A	-3	Charlottetown A	40
Newfoundland	Stephenville A	13	Wabush Lake A	-14	Nain A, Nfld	77

Across The Country...

Warmest Mean Temperature	Kamloops A (BC)	12
Coolest Mean Temperature	Alert (NWT)	-22

89/04/17-89/04/23

CLIMATIC PERSPECTIVES
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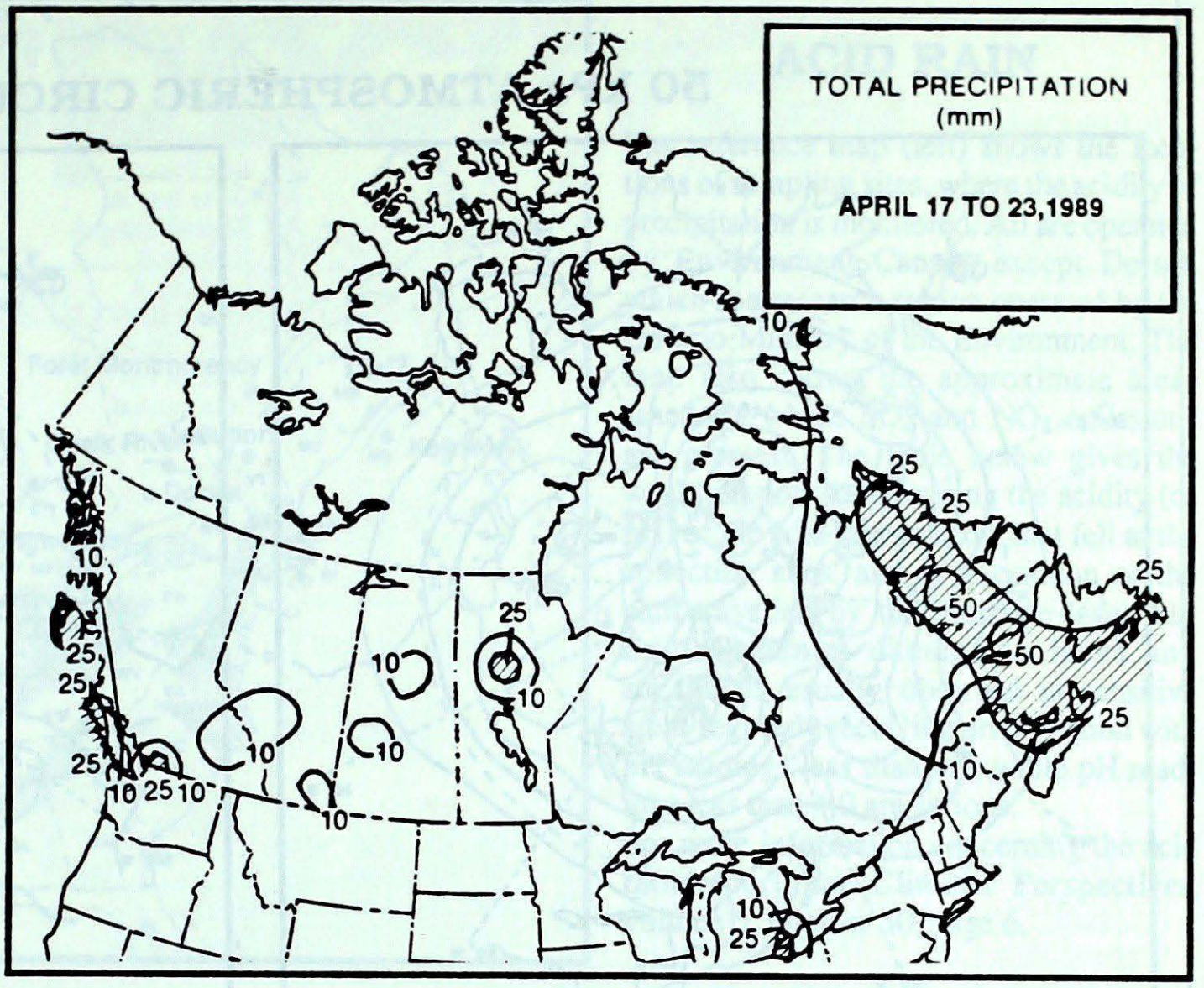
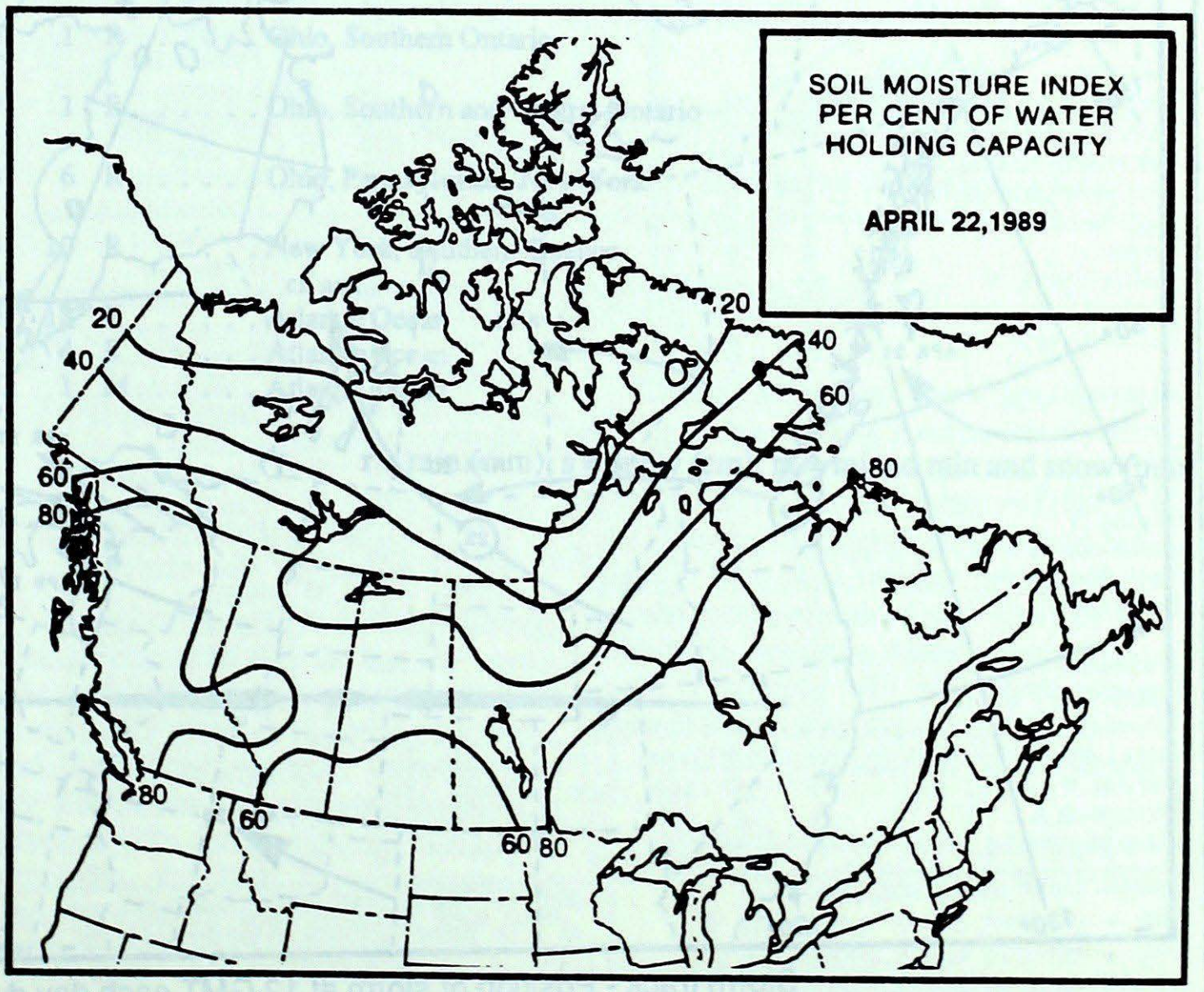
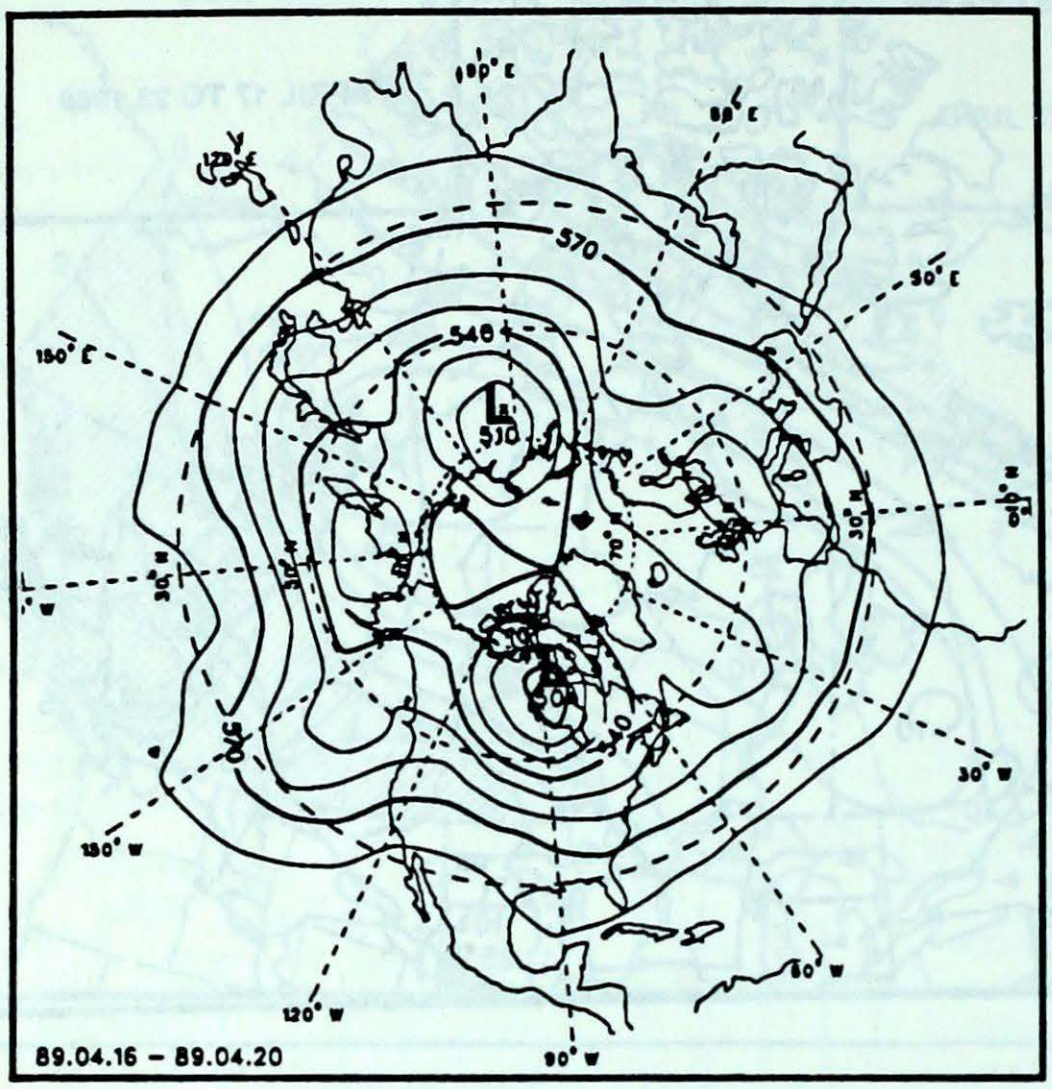
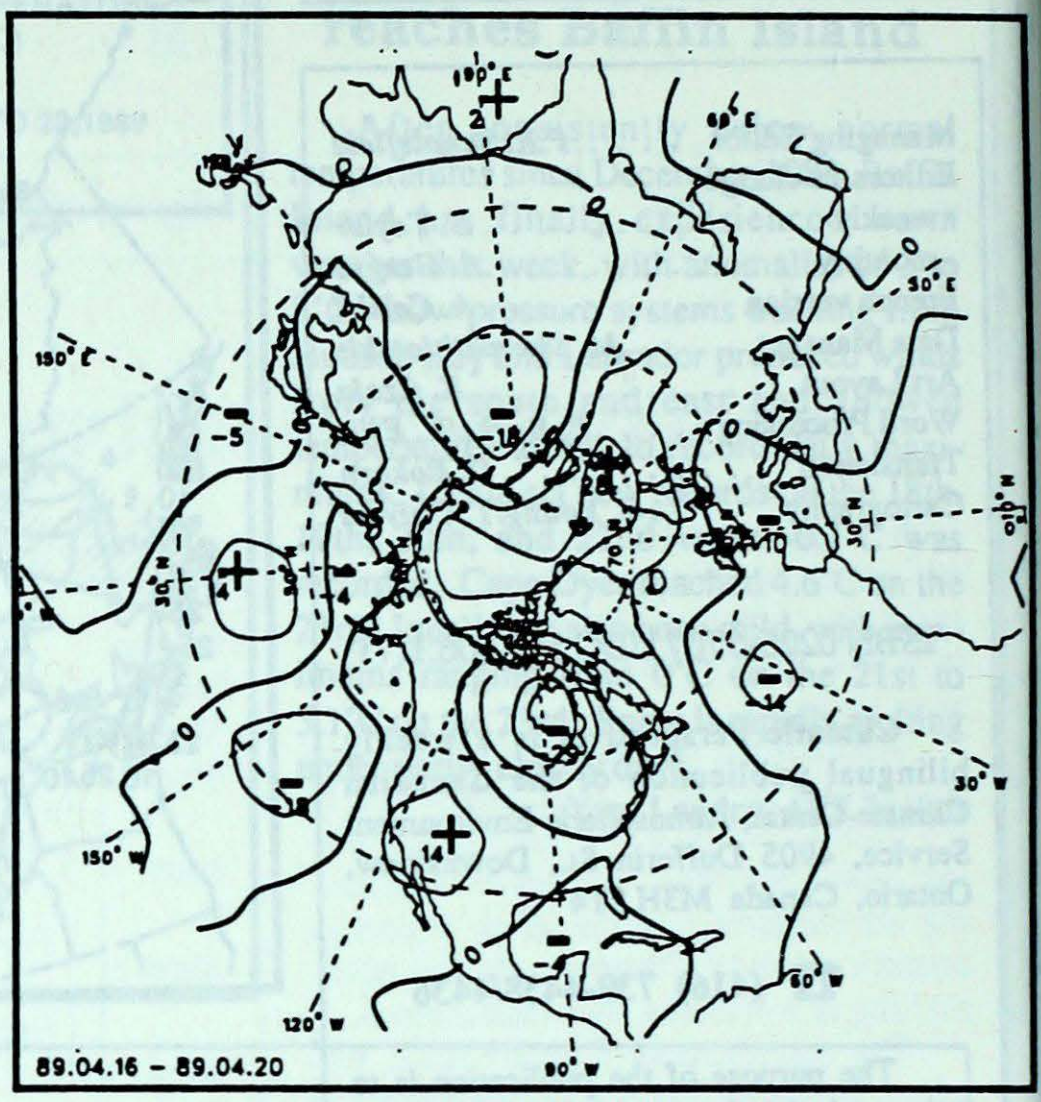




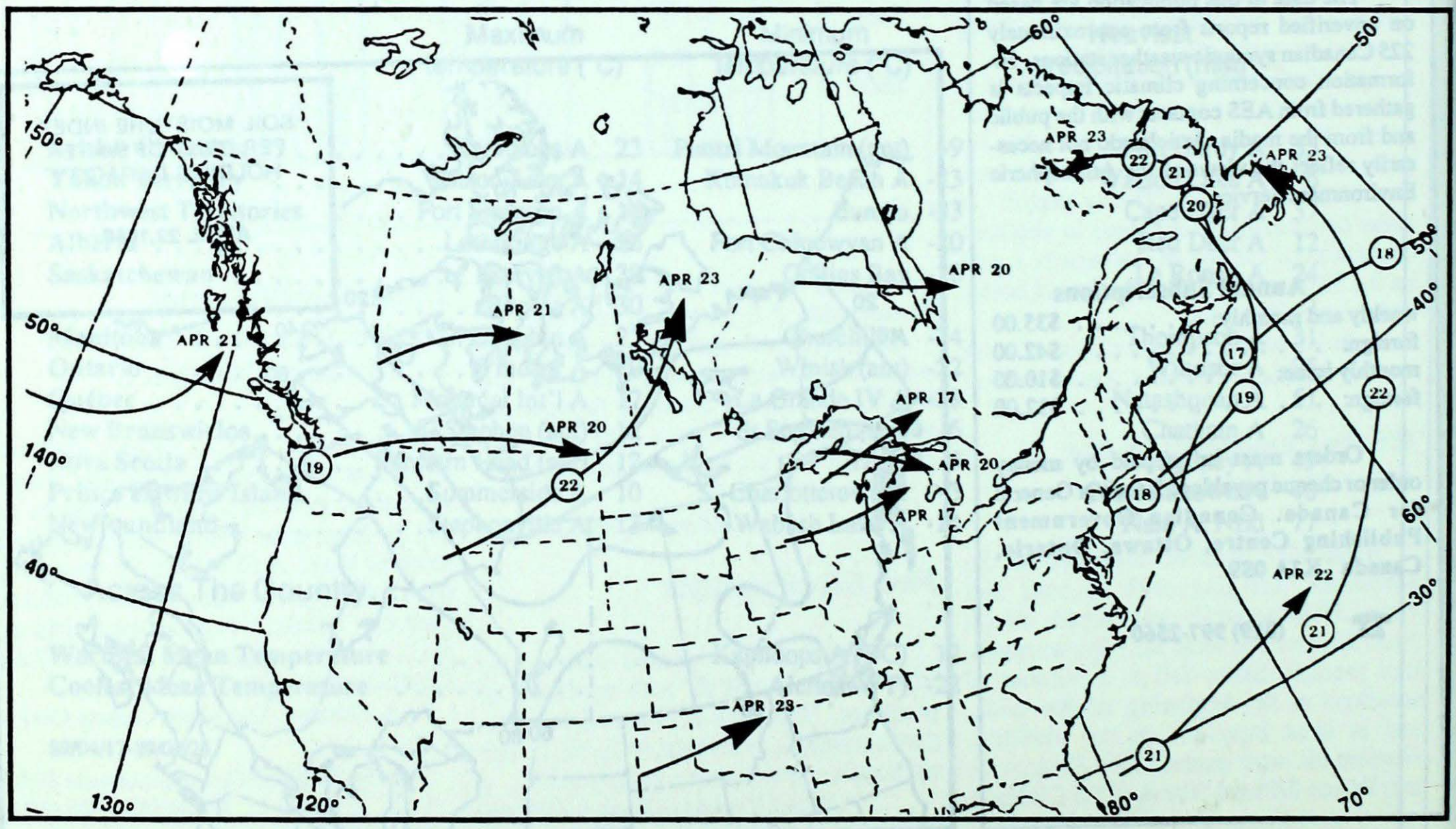
50 kPa ATMOSPHERIC CIRCULATION



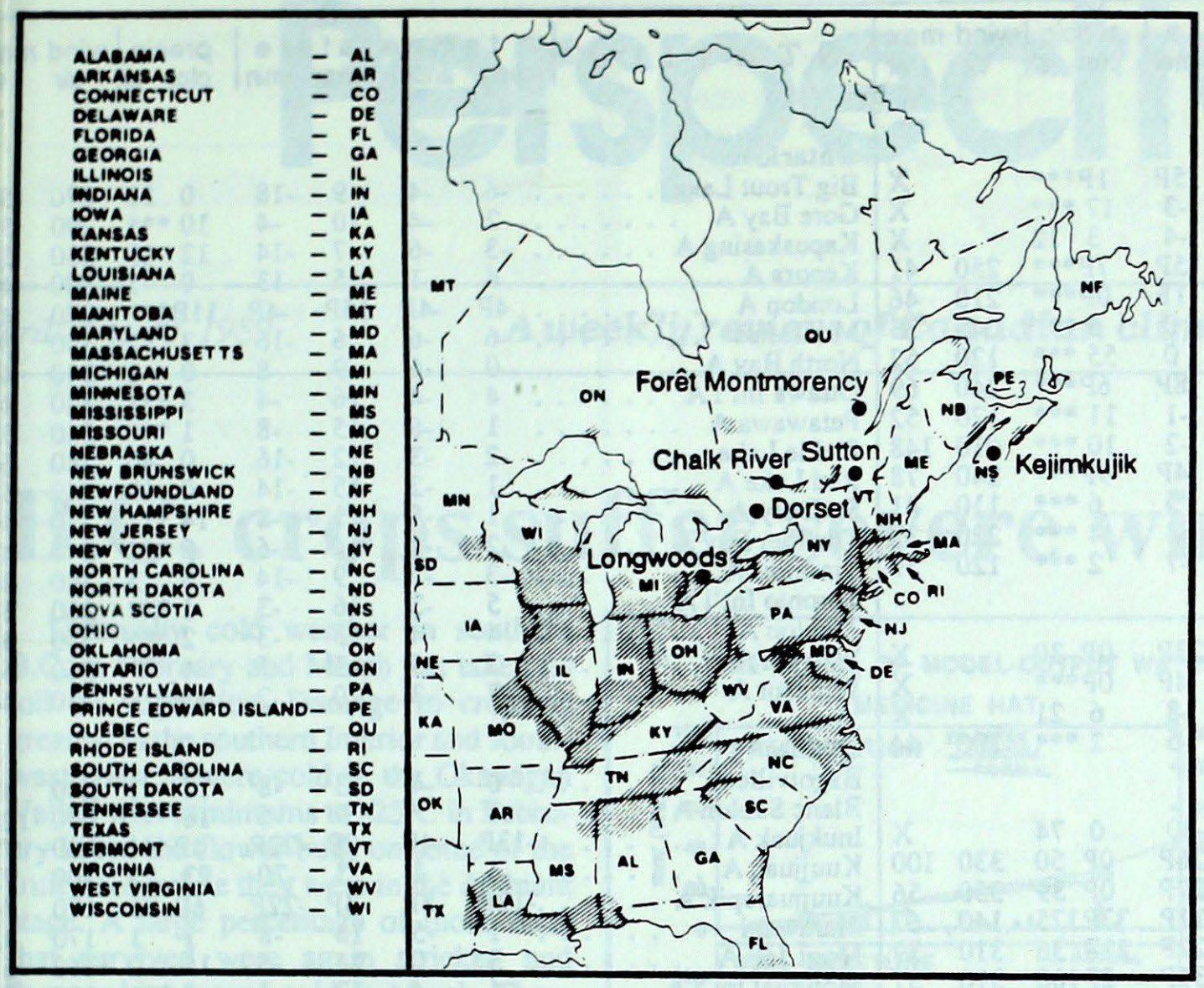
Mean geopotential height
50 kPa level (10 decameter intervals)



Mean geopotential height anomaly
50 kPa level (10 decameter intervals)



Storm track - Position of storm at 12 GMT each day during the period.



ACID RAIN

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 acid 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 readings less than 4.7, while pH readings less than 4.0 are serious.

For more information concerning the acid rain report, see **Climatic Perspectives**, volume 5, number 50, page 6.

SITE	day	pH	amount		AIR PATH TO SITE
					April 16 to 22, 1989
Longwoods	17	3.8	13	R	. . . . . Ohio, Southern Michigan, Southern Ontario
Dorset *	17	4.1	1	R	. . . . . Ohio, Southern Ontario
Chalk River	17	3.9	1	R	. . . . . Ohio, Southern and Central Ontario
Sutton	17	3.8	6	R	. . . . . Ohio, Pennsylvania, New York
Montmorency	17	4.3	10	R	. . . . . New York, Southern Quebec
Kejimkujik	16	5.0	18	R	. . . . . Atlantic Ocean
	19	3.9	4	R	. . . . . Atlantic Ocean
	22	3.7	1	M	. . . . . Atlantic Ocean

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

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vit
British Columbia								
Cape St James	8P	2P	12P	5P	1P***			X
Cranbrook A	9	3	22	-3	17 ***			X
Fort Nelson A	3	0	15	-4	3	12		X
Fort St John A	6P	2P	16P	-5P	7P***		250	41
Kamloops A	12P	3P	23P	1P	0P***		210	46
Penticton A	11	2	22	0	5 ***		040	33
Port Hardy A	9	2	18	0	55 ***		120	52
Prince George A	7P	3P	19P	-8P	6P***		240	69
Prince Rupert A	8	2	16	-1	11 ***		170	52
Revelstoke A	8	1	20	-2	10 ***		010	148
Smithers A	7P	3P	19P	-4P	9P***		240	78
Vancouver Int'l A	11	2	19	5	6 ***		110	41
Victoria Int'l A	10	1	17	3	4 ***		220	37
Williams Lake A	6	2	18	-7	2 ***		120	59
Yukon Territory								
Komakuk Beach A	-16P	1P	-8P	-23P	0P	30		X
Teslin (aut)	4P	*	13P	-4P	0P***			X
Watson Lake A	3	3	14	-8	6	21		X
Whitehorse A	5	4	13	-5	2 ***		200	44
Northwest Territories								
Alert	-22	1	-10	-30	0	74		X
Baker Lake A	-20P	-6P	-14P	-26P	0P	50	330	100
Cambridge Bay A	-19P	1P	-11P	-27P	0P	39	350	56
Cape Dyer A	-5P	10P	5P	-11P	37P	175	140	67
Clyde A	-9P	8P	0P	-22P	11P	36	310	39
Coppermine A	-19P	-2P	-5P	-31P	2P	100	310	37
Coral Harbour A	-16P	-2P	-3P	-27P	6P	46	160	78
Eureka	-19	6	-8	-33	0	20	150	56
Fort Smith A	-6P	-5P	5P	-19P	0P	11	310	33
Hall Beach A	-16P	4P	-4P	-24P	1P	40	090	70
Inuvik A	-16P	-4P	-6P	-27P	0P	20		X
Iqaluit A	-8P	6P	5P	-24P	1P	11	150	67
Mould Bay A	-20P	3P	-11P	-31P	1P	18	080	57
Norman Wells A	-7	-2	9	-17	3	5		X
Resolute A	-15P	7P	-5P	-21P	3P	23	050	65
Yellowknife A	-9P	-4P	2P	-22P	0P	9	350	32
Alberta								
Calgary Int'l A	7	3	22	-10	7 ***		330	57
Cold Lake A	5	1	21	-10	6 ***		300	41
Edmonton Namao A	7	3	22	-7	5 ***		170	41
Fort Mcmurray A	2	-2	15	-11	1 ***			X
High Level A	0	-4	8	-11	5	4	120	32
Jasper	6	2	17	-8	4 ***			X
Lethbridge A	9P	4P	26P	-10P	0P***		280	63
Medicine Hat A	11P	5P	25P	-5P	12P***		350	56
Peace River A	6	3	17	-7	0 ***			X
Saskatchewan								
Cree Lake	-10P	-11P	0P	-20P	0P***		340	44
Estevan A	10	5	30	-10	1 ***		320	70
La Ronge A	1	-2	16	-14	24 ***		320	50
Regina A	10	5	30	-14	1 ***		310	65
Saskatoon A	8	4	28	-10	2 ***		270	52
Swift Current A	9	4	26	-11	6 ***		230	63
Yorkton A	8	4	28	-11	0 ***		280	69
Manitoba								
Brandon A	8	4	24	-10	1 ***		240	61
Churchill A	-14P	-6P	-4P	-24P	0P	36	290	85
Lynn Lake A	-6P	-7P	7P	-21P	6P	21	320	56
The Pas A	3P	2P	16P	-14P	4P***		290	57
Thompson A	-3	-4	7	-19	31	2	280	63
Winnipeg Int'l A	7	2	23	-9	0 ***		130	56

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vit
Ontario								
Big Trout Lake	-6	-4	9	-18	0	22	270	59
Gore Bay A	2	-4	10	-4	10 ***		290	52
Kapuskasing A	-3	-6	7	-14	12	19	250	52
Kenora A	4	-1	15	-13	0	1	300	44
London A	4P	-4P	15P	-4P	11P***		270	43
Moosonee	-6	-6	6	-16	3	5	350	39
North Bay A	0	-6	9	-8	0	1	340	46
Ottawa Int'l A	4	-4	16	-4	3 ***		340	48
Petawawa A	1	-6	15	-8	1 ***		340	50
Pickle Lake	-2	-3	12	-16	0	40	280	61
Red Lake A	1	-2	15	-14	0	12	240	54
Sudbury A	1	-5	11	-8	14 ***		330	46
Thunder Bay A	2	-2	14	-6	0 ***		340	43
Timmins A	-3	-7	9	-14	6	3	340	46
Toronto Int'l A	5	-3	16	-3	1 ***		210	54
Trenton A	4	-4	15	-3	2 ***		350	48
Wiarton A	2	-5	13	-5	4 ***		260	50
Windsor A	7	-3	20	-2	25 ***		330	44
Québec								
Bagotville A	0	-4	13	-8	11	1	280	48
Blanc Sablon A	1	*	9	-5	18 ***		030	128
Inukjuak A	-13P	-4P	2P	-22P	4P	44	160	78
Kuujjuaq A	-6	1	3	-20	23	22	300	72
Kuujjuarapik A	-12P	-8P	-3P	-22P	6P	31	170	70
Maniwaki	1	-5	15	-8	1	1	170	43
Mont Joli A	3	0	11	-5	15	2	160	61
Montréal Int'l A	4	-4	17	-4	2 ***		290	52
Natashquan A	0	0	6	-4	51	24	260	54
Québec A	3	-2	12	-4	9 ***		320	63
Schefferville A	-5	1	3	-14	34	85	190	61
Sept-Iles A	1	0	9	-7	4	2	350	65
Sherbrooke A	2	-3	16	-6	5	1	280	54
Val D'or A	-4	-7	6	-15	7	1	320	57
New Brunswick								
Charlo A	1	-1	8	-4	24	14	290	56
Chatham A	2P	-3P	10P	-3P	26P***		330	61
Fredericton A	2	-4	11	-5	23	4	340	48
Moncton A	2	-2	10	-3	24	1	180	65
Saint John A	1P	-3P	10P	-5P	19P	1	010	56
Nova Scotia								
Greenwood A	3	-3	11	-4	8	1	180	78
Shearwater A	3	-2	11	-3	15	1	100	69
Sydney A	2	-1	9	-3	49	2	240	63
Yarmouth A	3	-3	8	-3	10	1	310	56
Prince Edward Island								
Charlottetown A	3	-1	10	-3	40	13	270	56
Summerside A	3P	-1P	10P	-1P	9P***		280	56
Newfoundland								
Cartwright	2P	4P	12P	-4P	20P	128	030	89
Churchill Falls A	-2	4	8	-12	53	103	350	78
Gander Int'l A	2	1	10	-3	14	2	060	82
Goose A	3P	4P	11P	-5P	8P	28	050	67
Port Aux Basques	1P	-1P	7P	-4P	29P	2	090	80
St John's A	2	1	10	-2	29 ***		240	91
St Lawrence	2	0	10	-4	40	1		X
Wabush Lake A	-5	-1	4	-14	24	54	190	56

89/04/17-89/04/23

mean = mean weekly temperature, °C
max = maximum weekly temperature, °C
min = minimum weekly temperature, °C
anom = mean temperature anomaly, °C

ptot = weekly precipitation total in mm
st = snow thickness on the ground in cm
dir = direction of max wind, deg. from north.
vit = wind speed in km/h

- Annotations -
X = no observation
P = less than 7 days of data
* = missing data when going to printing.