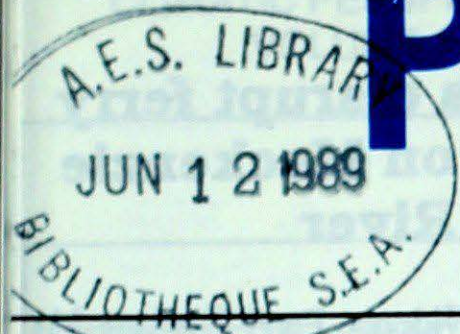


# Climatic Perspectives



May 22 to 28, 1989

A weekly review of Canadian climate

Vol. 11 No. 22

## Cool and wet weather lowers risk of forest fires, and slows germination on the Prairies

Wet and cool weather has been the order of the week. The welcome moisture has improved the soil moisture on the Prairies.

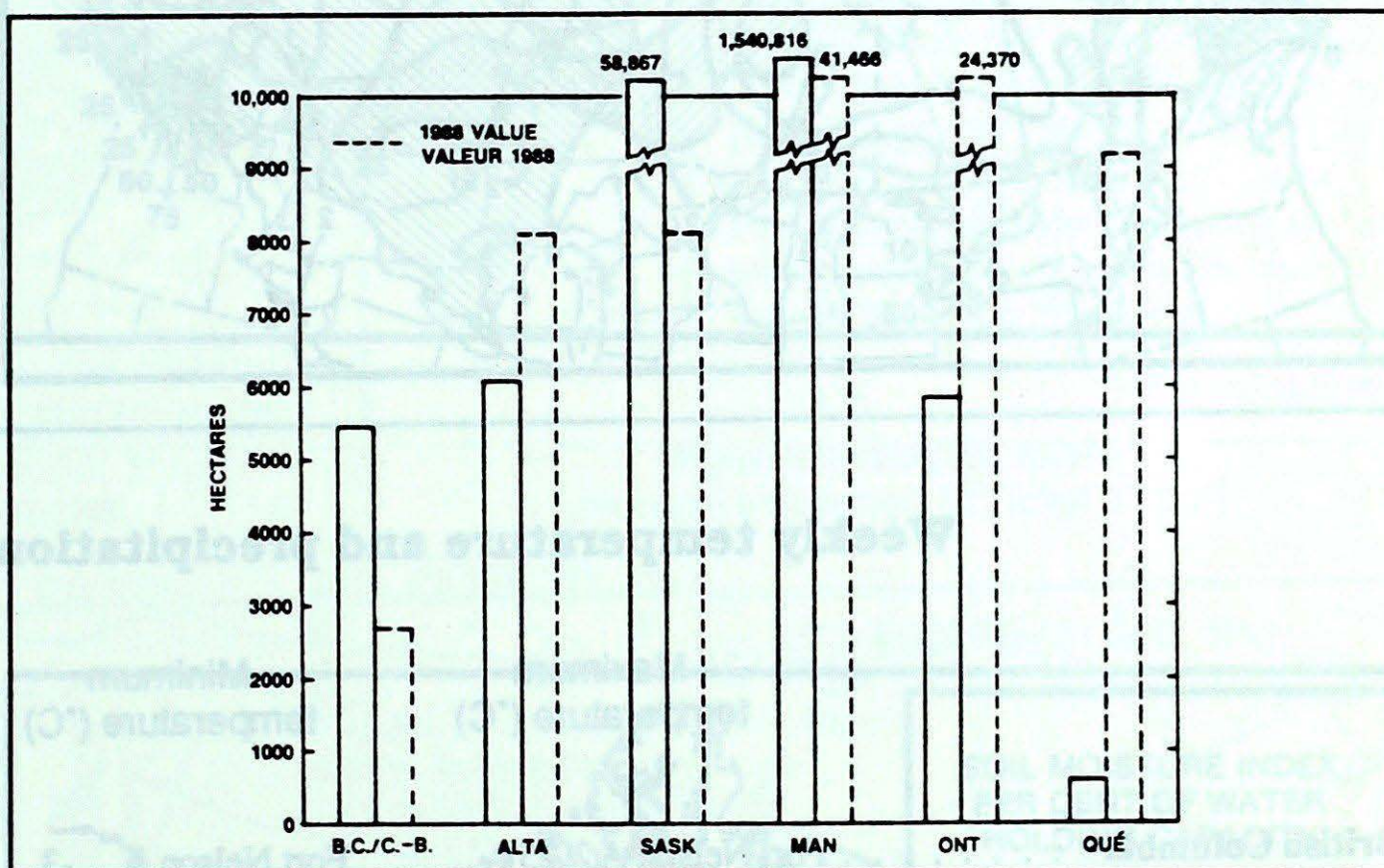
According to Alberta Wheat Pool spokesman, Bruno Frieson, more than 90% of Alberta is now showing soil moisture from "fair to good". However, not much seeding has taken place since May 19th, because of the cool temperatures, and snow and rain which has fallen. The cool temperatures could delay germination.

On the 22nd, Edmonton received 2.4 cm of snow, and on the 23rd, a record low of -3°C, broke the old record of -1°C, set in 1986.

On the 23rd, Calgary received 6.0 cm of snow, and on the 28th, Lethbridge received 7.7 cm of snow.

On the 28th, southern Saskatchewan saw a late winter snowfall that was unexpectedly heavy in the Cypress Hills where there were unofficial reports of 19 to 40 cm of heavy snow. The cool and wet weather extended across the Prairies to northwestern Ontario. Red Lake, Ontario received 59.4 mm of rain.

In Manitoba, the forest fire index improved throughout the week, and is listed as moderate. So far this season, 1,540,816 hectares of forest have been consumed by fire in Manitoba.



Hectares of forest destroyed by fire this year, as of May 24, 1989.

### Heavy thunderstorms deluge farms in southwestern Ontario

The evening of the 25th and early morning of the 26th saw heavy thunderstorms move through Windsor to London. Windsor recorded 55 mm, with 22 mm of rain falling in one 12-minute period. Leamington to Wheatley had unofficial amounts recorded above 100 mm, with one farmer reporting 130 mm. This heavy rain has helped to replenish groundwater supplies, though due to the intensity of the rain, there was a quick run-off. There was some flooding of basements, wash-outs of roads in the Leamington area, and soil erosion.

M. Burnett, Windsor Weather Office

### A look ahead...

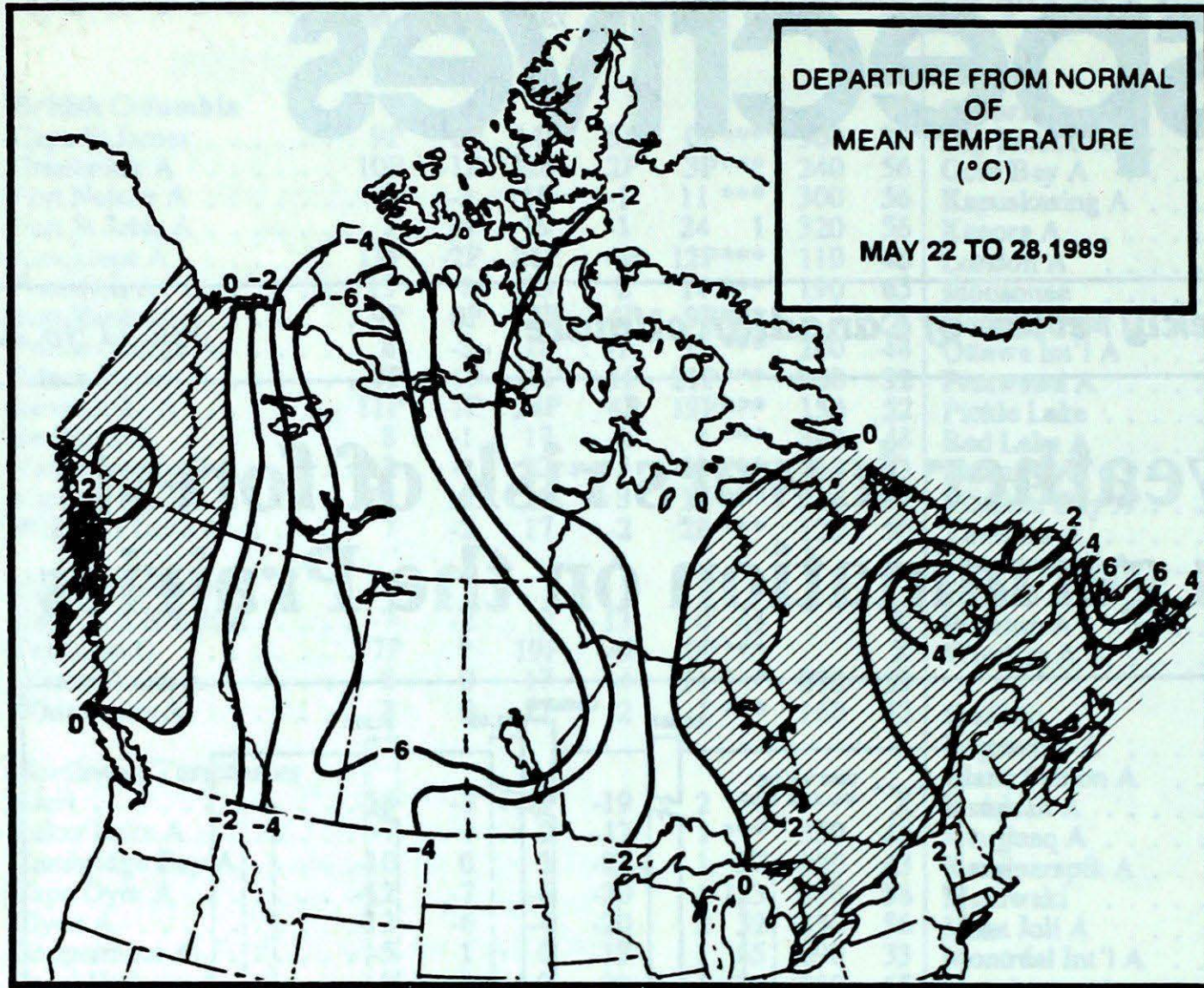
Above-normal temperatures are expected over most of the country for the week of June 5th. Cooler than normal temperatures are expected in eastern Manitoba, central and northern Ontario, and all of Québec.

Southwesterly winds on the east and west coasts of Canada will likely give above-normal precipitation over the western half of British Columbia and the Atlantic Provinces. Drier than normal weather is likely over the Prairies due to a northwesterly upper atmospheric flow.

— prepared May 31, 1989

A. Gergey, Canadian Climate Centre





### Ice jams disrupt ferry service on Mackenzie River

The Fort Providence Ferry crossing has been operating on a limited basis since May 20th. On the 22nd, it was pulled from the water, due to ice coming down Great Slave Lake, and jamming in the Mackenzie River. Ferry service resumed later in the week but operated only on an intermittent schedule. Food is still being flown in to Yellowknife until the ferry service is fully into service.

The Liard River ferry at Fort Simpson is back in service.

Inuvik is cut off until early June, as all ice roads along the Dempster Highway are closed for the season. Until the ferry goes into the water, historically in the first week of June, prices of goods will go up for awhile.

W. Miller, Yellowknife Weather Office

### Weekly temperature and precipitation extremes

	Maximum temperature (°C)	Minimum temperature (°C)	Heaviest precipitation (mm)
British Columbia . . . . .	Fort Nelson A 25	Fort Nelson A -3	Hope A 85
Yukon Territory . . . . .	Whitehorse A 22	Komakuk Beach A -12	Watson Lake A 6
Northwest Territories . . . . .	Norman Wells A 23	Coppermine A -20	Cape Dyer A 14
Alberta . . . . .	Medicine Hat A 22	High Level A -5	Pincher Creek (aut) 57
Saskatchewan . . . . .	Estevan A 27	Meadow Lake A -5	Nipawin A 40
Manitoba . . . . .	Portage La Prairie A 25	Churchill A -6	Gimli 48
Ontario . . . . .	Windsor A 28	Winisk (aut) -3	Red Lake A 59
Québec . . . . .	Val-d'Or A 26	Kuujuuaq A -6	Natashquan A 43
New Brunswick . . . . .	Chatham A 30	Miscou Island (aut) 3	St Stephen (aut) 26
Nova Scotia . . . . .	Greenwood A 25	Sydney A 2	Truro 29
Prince Edward Island . . . . .	Summerside A 23	Charlottetown A 6	Summerside A 34
Newfoundland . . . . .	Deer Lake A 26	Nain A, Nfld -8	Stephenville A 46

#### Across the Country...

Highest Mean Temperature . . . . .	Windsor A(ONT) 17
Lowest Mean Temperature . . . . .	Cape Young A(NWT) -11

89/05/22-89/05/28



CLIMATIC PERSPECTIVES  
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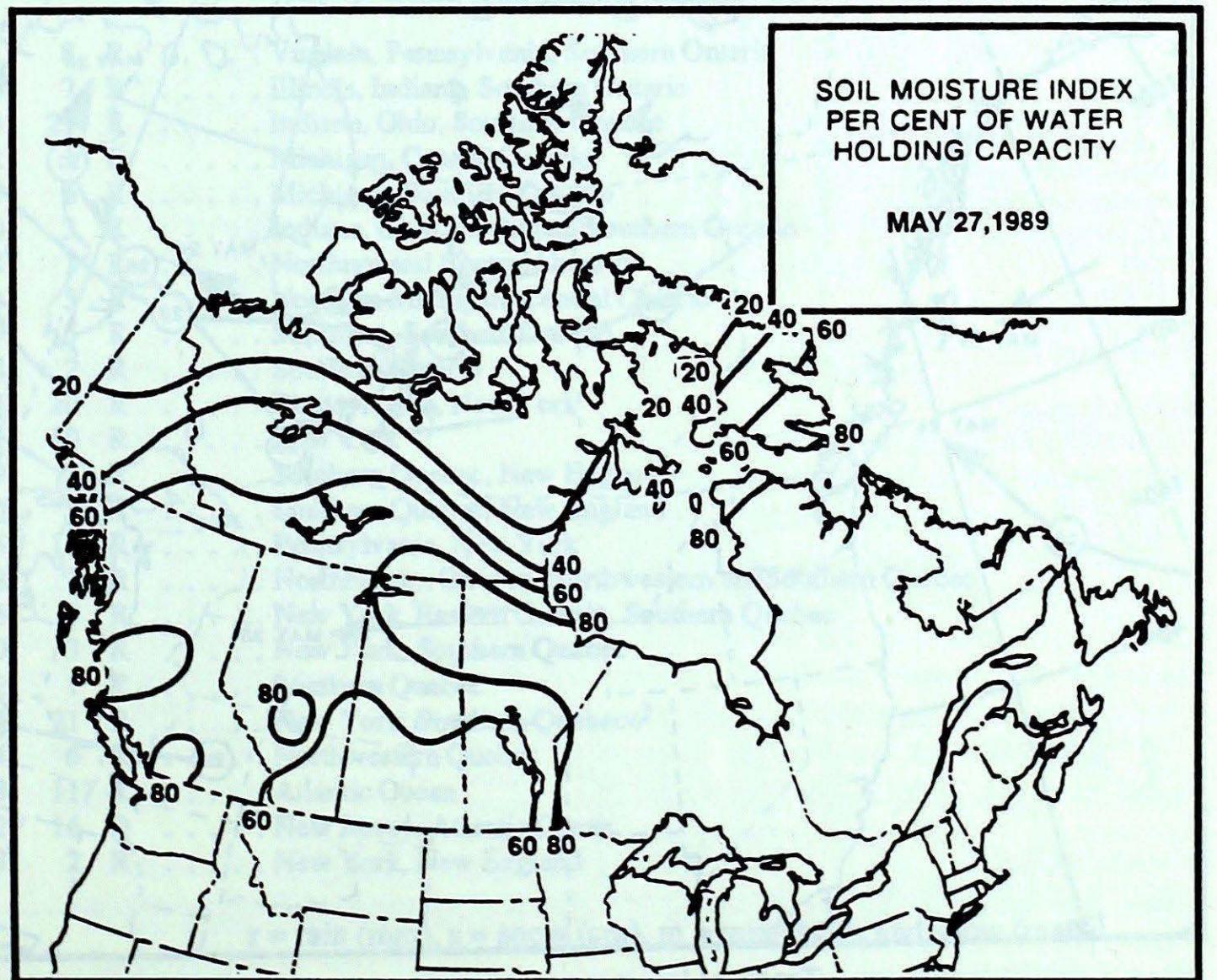
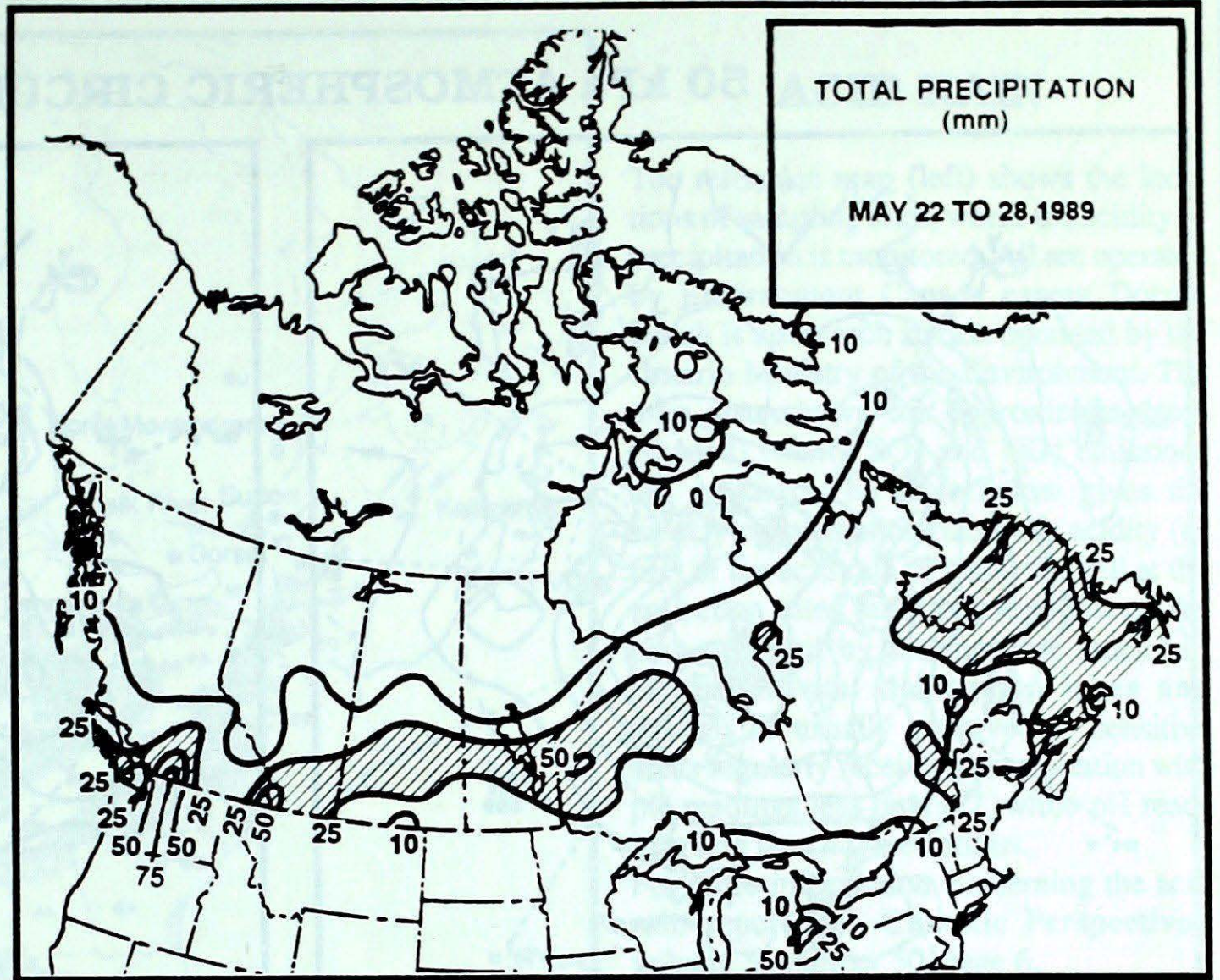
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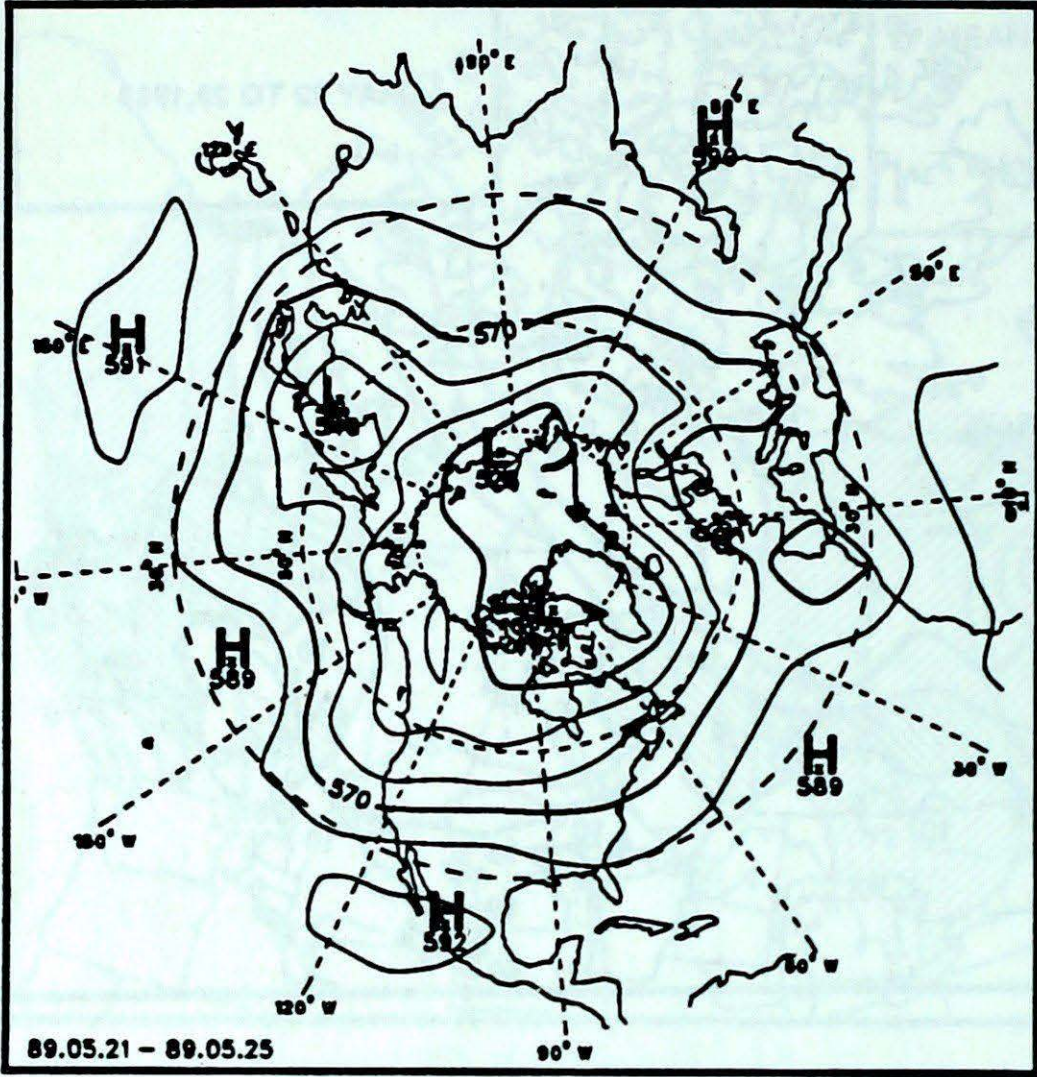
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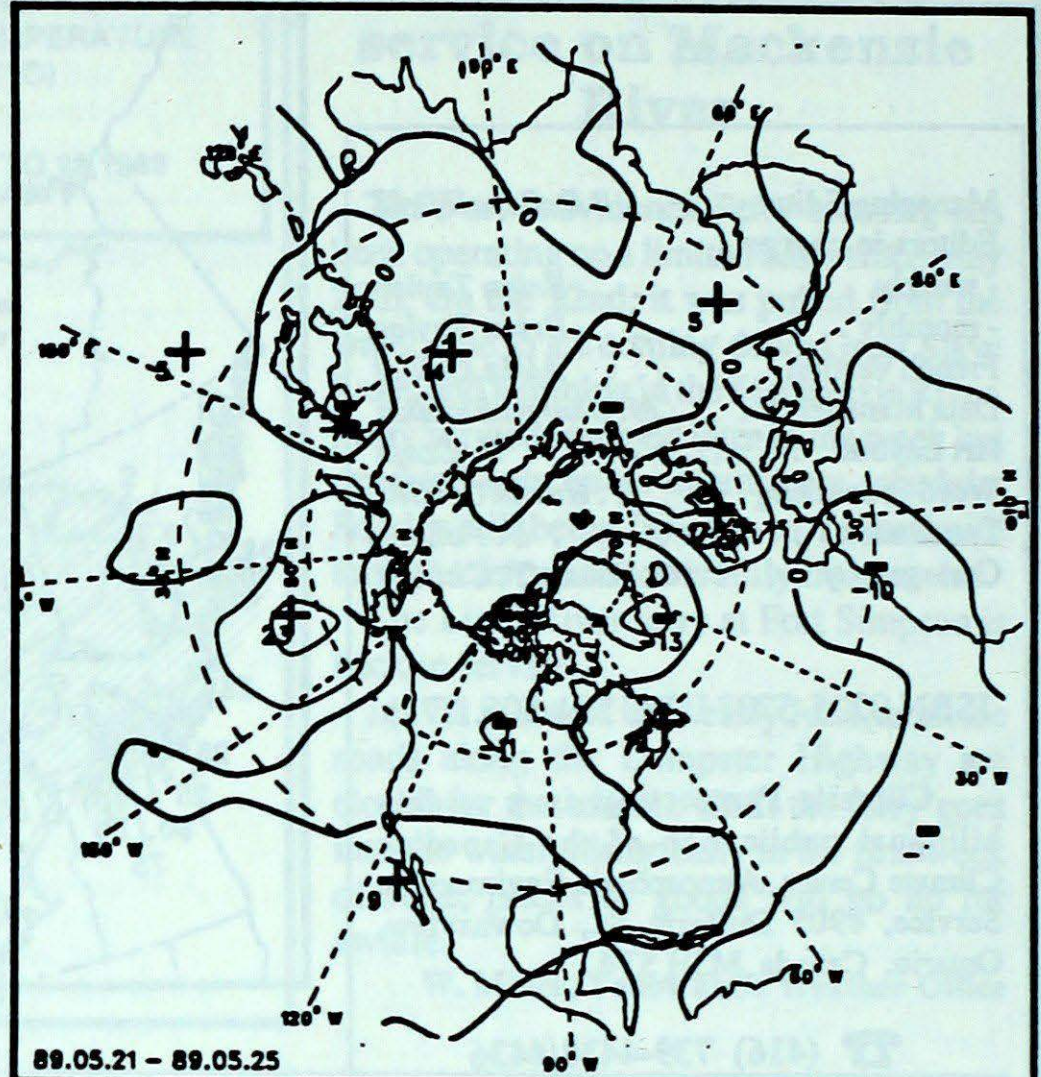




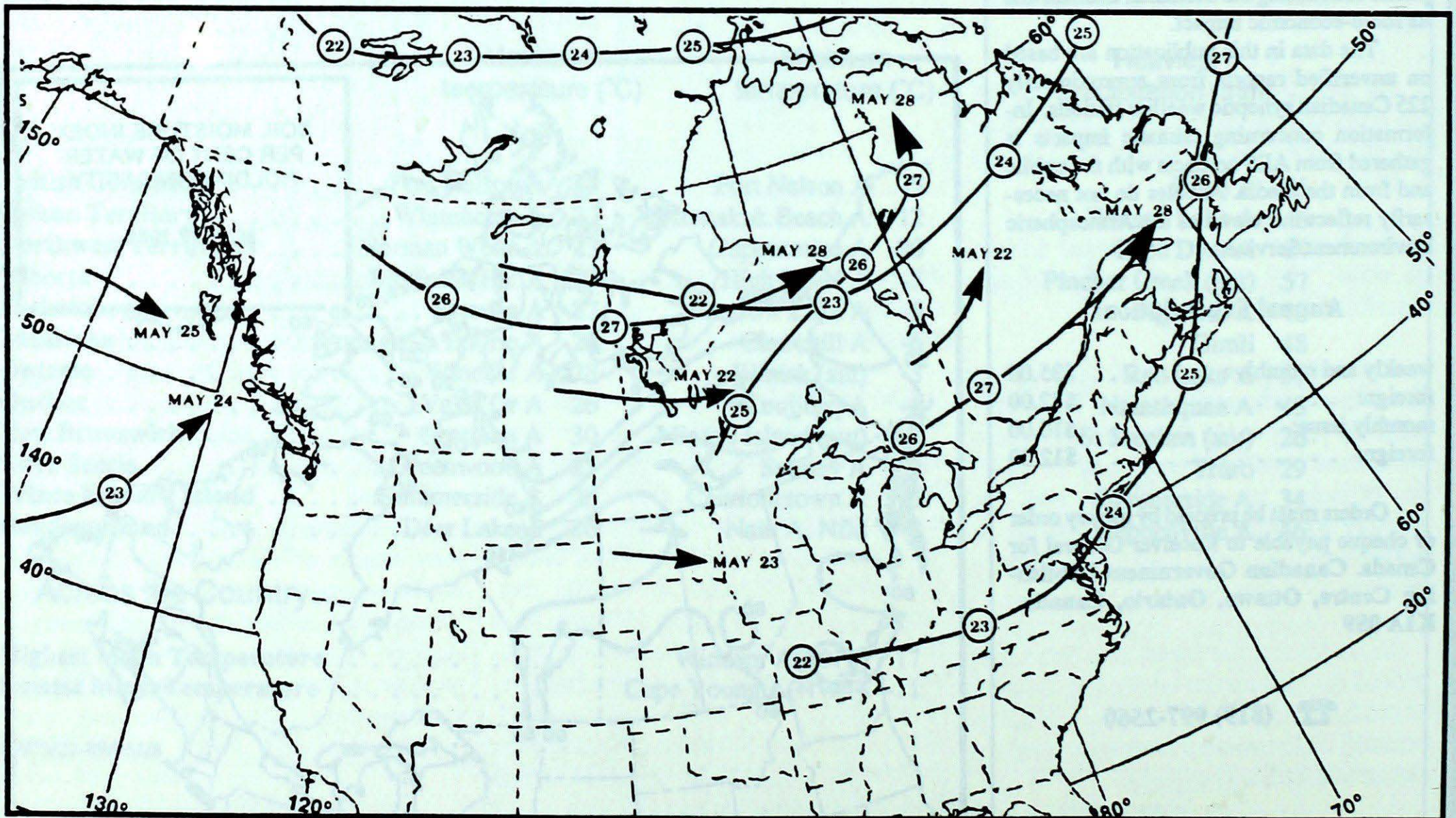
### 50 kPa ATMOSPHERIC CIRCULATION



Mean geopotential height  
50 kPa level (10 decametre intervals)



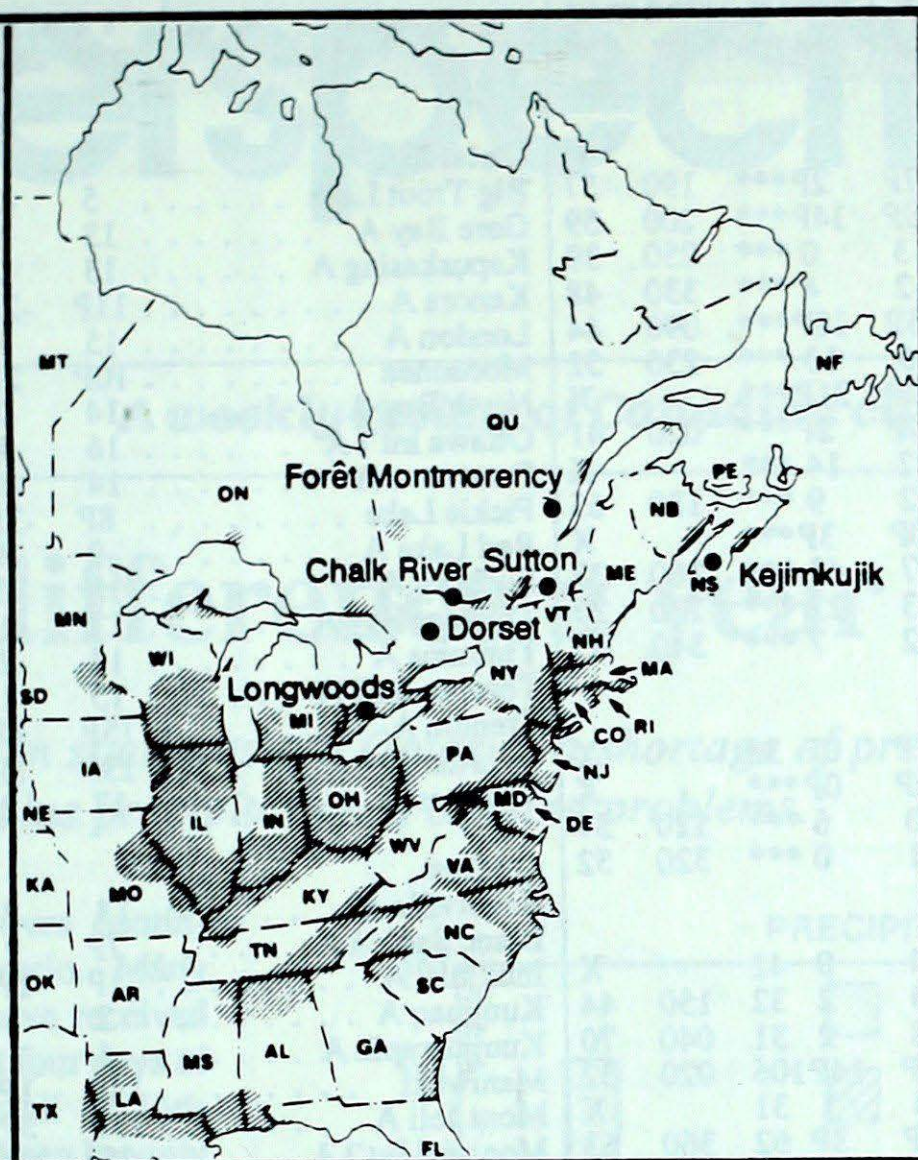
Mean geopotential height anomaly  
50 kPa level (10 decametre intervals)



Track of low pressure centres at 12 UTC each day during the period.



- 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
- MASSACHUSETTS -- 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

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<sub>2</sub> and NO<sub>x</sub> 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
From May 21 to 27, 1989				
Longwoods	23	4.2	8 R	Virginia, Pennsylvania, Southern Ontario
	24	4.0	7 R	Illinois, Indiana, Southern Ontario
	25	3.8	21 R	Indiana, Ohio, Southern Ontario
Dorset *	21	4.2	1 R	Michigan, Central Ontario
	25	4.3	6 R	Michigan, Southern Ontario
	26	4.0	3 R	Indiana, Ohio, Michigan, Southern Ontario
	27	4.4	1 R	Northern and Central Ontario
Chalk River	21	4.4	5 R	Northern Michigan, Central Ontario
	25	3.9	5 R	Michigan, Southern Ontario
Sutton	26	3.8	2 R	Southern Ontario
	21	4.3	20 R	Pennsylvania, New York
	22	5.1	10 R	New York
	23	3.9	2 R	Southern Quebec, New England
	24	4.0	3 R	Southern Quebec, New England
Montmorency	26	3.6	11 R	Pennsylvania, New York
	27	4.2	2 R	Northeastern Ontario, Northwestern and Southern Quebec
	21	4.5	3 R	New York, Eastern Ontario, Southern Quebec
	22	5.0	3 R	New York, Southern Quebec
	25	4.2	1 R	Southern Quebec
Kejimikujik	26	4.6	21 R	New York, Southern Quebec
	27	4.4	6 R	Northwestern Quebec
	24	4.8	11 R	Atlantic Ocean
	26	4.2	16 R	New Jersey, Atlantic Ocean
	27	4.3	2 R	New York, New England

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



STATION	temperature				precip.		wind max		STATION	temperature				precip.		wind max	
	moy	anom	max	min	ptot	st	dir	vit		moy	anom	max	min	ptot	st	dir	vit
<b>British Columbia</b>								<b>Ontario</b>									
Cape St James	11P	2P	17P	7P	2P***	190	57	Big Trout Lake	5	-2	16	-1	31	1	070	67	
Cranbrook A	9P	-2P	19P	0P	14P***	200	59	Gore Bay A	13	1	22	4	3	***	310	74	
Fort Nelson A	10	-2	25	-3	0	***	250	39	Kapuskasing A	13	2	25	3	22	***	280	63
Fort St John A	8	-3	21	-2	4	***	330	48	Kenora A	11P	-2P	20P	2P	34P***	240	76	
Kamloops A	12P	-3P	22P	5P	18P***	090	44	London A	15	1	26	4	34	***	220	52	
Penticton A	12	-3	20	5	13	***	230	52	Moosonee	10P	2P	21P	-1P	20P***	300	50	
Port Hardy A	11P	1P	22P	2P	21P***		X	North Bay A	14	2	24	2	6	***	250	59	
Prince George A	9P	-2P	20P	0P	2P***	020	41	Ottawa Int'l A	16	1	25	7	7	***	310	41	
Prince Rupert A	9	0	15	2	14	***	X	Petawawa A	14	-1	26	0	9	***	290	50	
Revelstoke A	12	0	22	2	9	***	180	65	Pickle Lake	8P	-3P	19P	-1P	32P***	220	76	
Smithers A	9P	-1P	19P	0P	3P***		X	Red Lake A	9	-4	21	-1	59	***	230	74	
Vancouver Int'l A	11	-2	16	7	43	***	160	37	Sudbury A	15	2	25	4	11	***	240	70
Victoria Int'l A	10	-2	16	3	22	***	130	37	Thunder Bay A	12	1	23	0	26	***	090	69
Williams Lake A	9	-1	20	2	7	***	340	43	Timmins A	14	2	24	0	8	***	250	56
<b>Yukon Territory</b>								<b>Québec</b>									
Komakuk Beach A	-4P	-1P	2P	-12P	0P	38	X	Bagotville A	13	2	21	4	42	***	300	44	
Teslin (aut)	10P	*	21P	-2P	0P***		X	Blanc Sablon A	7P	*	16P	2P	29P***	070	35		
Watson Lake A	10	2	22	0	6	***	120	37	Inukjuak A	1P	1P	14P	-6P	2P***	300	74	
Whitehorse A	11	3	22	-1	0	***	320	52	Kuujuuaq A	2	1	18	-6	17	***	260	59
<b>Northwest Territories</b>								<b>New Brunswick</b>									
Alert	-10	-2	-4	-14	0	42	X	Charlo A	11	3	23	5	20	***	280	48	
Baker Lake A	-5	-1	1	-13	2	32	150	44	Chatham A	15	3	30	5	16	***	300	52
Cambridge Bay A	-9	-3	-2	-18	2	31	040	70	Fredericton A	15	3	27	6	17	***	300	57
Cape Dyer A	-5P	0P	3P	-13P	14P	106	020	52	Moncton A	15P	4P	25P	6P	25P***	210	72	
Clyde A	-6	-1	2	-15	1	31		X	Saint John A	14	4	23	5	25	***	320	54
Coppermine A	-11P	-7P	-3P	-20P	3P	62	360	63	<b>Nova Scotia</b>								
Coral Harbour A	-5	-1	1	-14	14	***	010	76	Greenwood A	17	5	25	9	28	***	260	57
Eureka	-10	-3	-5	-14	0	11	290	56	Shearwater A	14	4	21	8	26	***	220	39
Fort Smith A	5P	-5P	20P	-5P	0P***	010	48	Sydney A	12	4	25	2	4	***	220	41	
Hall Beach A	-6P	1P	0P	-13P	8P***	060	52	Yarmouth A	13	2	21	8	19	***	290	56	
Inuvik A	6	4	21	-8	0	1		X	<b>Prince Edward Island</b>								
Iqaluit A	-2	-1	3	-11	8	2	150	46	Charlottetown A	13P	3P	22P	6P	28P***		X	
Mould Bay A	-11P	-3P	-2P	-17P	2P	22	200	48	Summerside A	14	4	23	7	34	***	210	46
Norman Wells A	8	-1	23	-5	0	***	040	37	<b>Newfoundland</b>								
Resolute A	-11P	-3P	-5P	-18P	0P	22	320	37	Cartwright	5	2	16	-1	32	***	330	59
Yellowknife A	2	-5	11	-7	0	***	360	54	Churchill Falls A	8	5	23	2	16	1	280	57
<b>Alberta</b>								<b>89/05/22-89/05/28</b>									
Calgary Int'l A	6	-6	17	-2	15	***	010	63	Gander Int'l A	14	6	24	-1	12	***	160	50
Cold Lake A	7	-6	19	-3	3	***	310	56	Goose A	7	1	22	1	39	***		X
Edmonton Namao A	6	-6	17	-2	11	***	030	43	Port Aux Basques	7	1	13	3	36	***	080	59
Fort McMurray A	6	-6	18	-3	3	***	320	44	St John's A	13	7	24	1	6	***	170	56
High Level A	6	-5	22	-5	0	***	360	41	St Lawrence	8	3	19	3	40	***		X
Jasper	7	-3	16	-2	4	***		X	Wabush Lake A	9	6	23	1	31	***	280	59
Lethbridge A	7	-6	21	-1	36	***	260	83									
Medicine Hat A	10	-5	22	1	40	***	280	52									
Peace River A	7	-4	19	-2	5	***	280	59									
<b>Saskatchewan</b>																	
Cree Lake								X									
Estevan A	12P	-2P	27P	2P	19P***	250	57										
La Ronge A	6P	-6P	14P	-2P	11P***		X										
Regina A	11	-3	23	1	32	***	270	69									
Saskatoon A	8P	-6P	18P	0P	26P***	010	59										
Swift Current A	8P	-5P	18P	1P	26P***	270	67										
Yorkton A	10P	-3P	20P	0P	30P***	350	46										
<b>Manitoba</b>																	
Brandon A	11P	-3P	24P	0P	8P***	030	57										
Churchill A	-1P	-3P	6P	-6P	1P	2	290	63									
Lynn Lake A	4P	-7P	11P	-4P	1P***	360	39										
The Pas A	7P	-4P	14P	-1P	8P***	010	44										
Thompson A	3P	-7P	13P	-3P	4P***	030	56										
Winnipeg Int'l A	11	-3	24	2	12	***	300	56									

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.