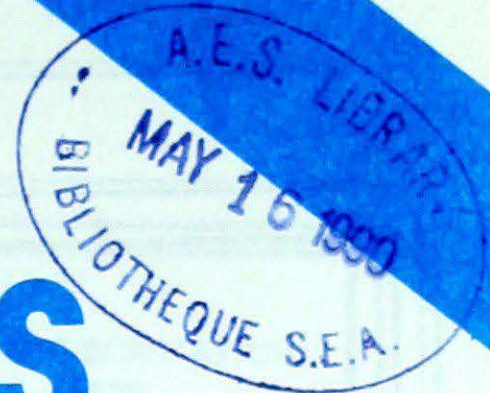


# Climatic Perspectives



archives

Ref 42

April 30 to May 6, 1990

A weekly review of Canadian climate and water

Vol.12 No.18

## Damaging windstorm strikes B.C.

*An intensifying Pacific weather system crossed Vancouver Island and moved rapidly into the B.C. interior May 5, producing damaging gale and storm-force winds.*

What started as a pleasant Saturday became a nightmare for many sailors plying the coastal waters of southern B.C., when winds increased dramatically during the afternoon, swamping and sinking dozens of boats. The Coast Guard was besieged with distress calls and trees were blown down throughout the Victoria area. Climatologically, the 80 km/h sustained wind speed recorded at Victoria Gonzales Observatory on May 5 can be expected to occur only once every 35 years during the May-to-September recreation boating season. The storm continued inland, with wind gusts up to 100 km/h, causing widespread damage. A funnel cloud was sighted near Campbell River. B.C. Hydro sustained the greatest amount of damage due to fallen trees. Some communities were without power for three days. The winds whipped a number of controlled slash burns out of control, keeping fire fighters busy and forced the evacuation of some residents.

### Recent rains quench dry Prairies

In the last few weeks, a significant amount of precipitation has fallen on the Prairies. However, all southern agricultu-

ral areas will still be highly dependent on timely rainfalls during the growing season.

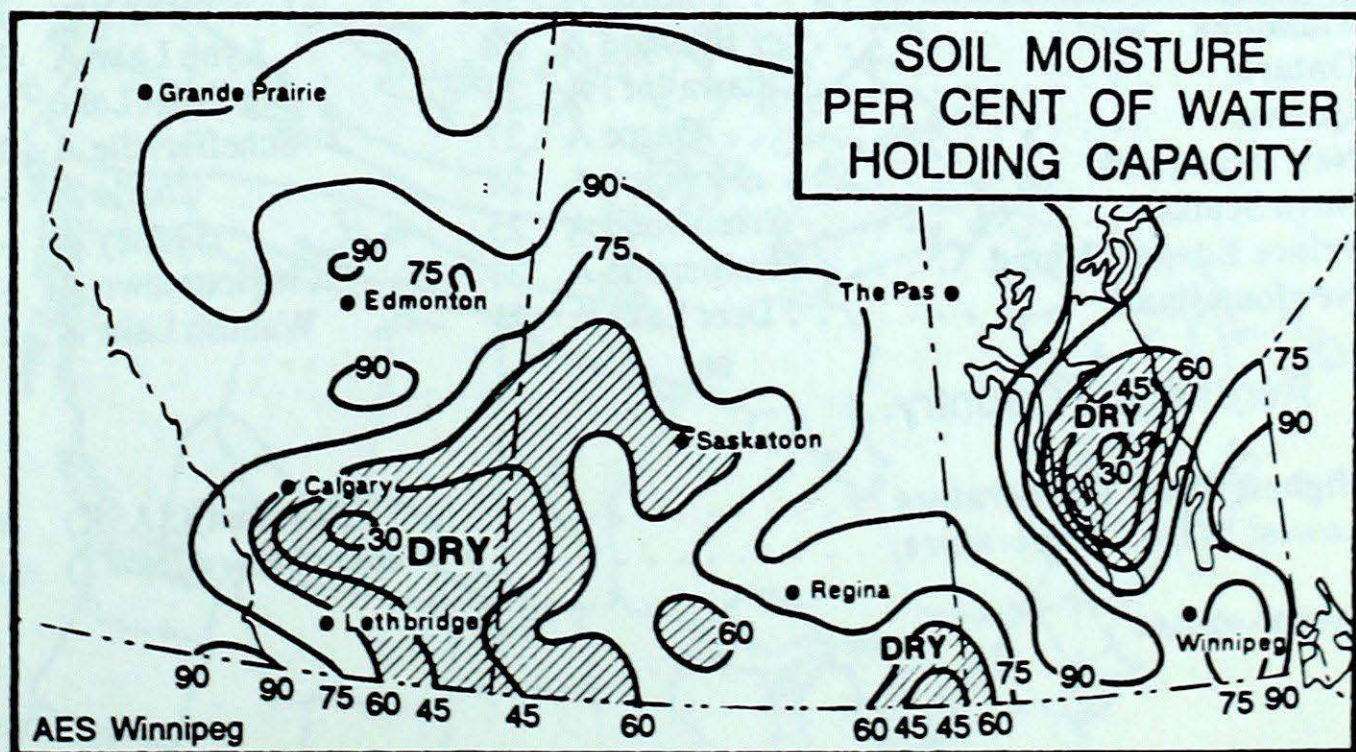
In Manitoba, the latest rain and snow helped fill many of the farm dugouts. Reservoirs, which were critically dry last year, are now nearly full. There is enough moisture for germination, and short term prospects have improved, but like last year, sub-soil conditions are still dry. Two critical areas are the extreme southeast and the Interlake area.

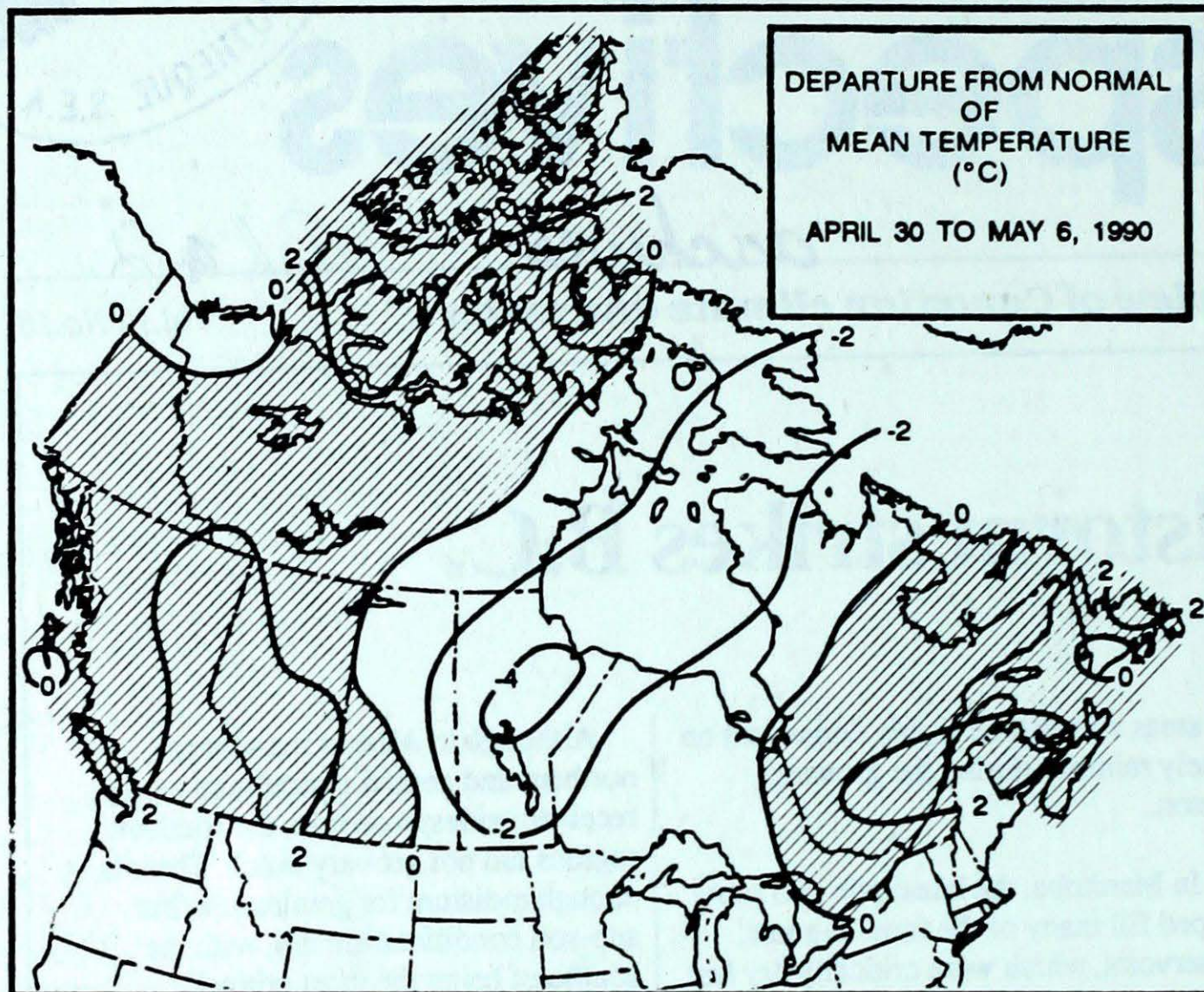
In Saskatchewan, moisture conditions are much better than last year. In fact, it is too wet in the north and east-central areas, and as a result, seeding has been delayed. Parts of the extreme southwest are still dry, but recent precipitation has been beneficial.

Although in Alberta the western, northern and central agricultural areas received widespread rain, the southern regions did not get very much. There is enough moisture for germination, but sub-soil conditions are dry, with the southeast being the most critical.

### Above-normal temperatures for the west...

For the week of May 14, above-normal temperatures are expected across the Yukon, British Columbia, the Mackenzie District of the Northwest Territories and the Arctic Islands except for Baffin Island. Elsewhere, below-normal temperatures are likely. The Yukon can expect temperatures about 2°C above normal, while the area in the vicinity of Hudson Bay will be about 2 to 4°C below normal.





DEPARTURE FROM NORMAL OF MEAN TEMPERATURE (°C)  
APRIL 30 TO MAY 6, 1990

**Weekly normal temperatures (°C)**

	max.	min.
Whitehorse A	9.8	-1.5
Iqaluit A	-2.4	-10.5
Yellowknife A	5.1	-4.9
Vancouver Int'l A	15.0	6.5
Victoria Int'l A	15.0	5.5
Calgary Int'l A	13.0	0.4
Edmonton Int'l A	14.4	1.0
Regina A	14.5	0.9
Saskatoon A	14.7	1.3
Winnipeg Int'l A	15.0	1.6
Ottawa Int'l A	15.7	3.9
Toronto (Pearson Int'l A)	15.4	3.5
Montréal Int'l A	15.8	4.3
Québec A	13.3	1.7
Fredericton A	13.5	1.3
Saint John A	11.9	1.1
Halifax (Shearwater)	11.0	2.1
Charlottetown A	9.8	0.8
Goose A	6.7	-2.1
St John's A	6.8	-0.5

**Weekly temperature and precipitation extremes**

	Maximum temperature (°C)	Minimum temperature (°C)	Heaviest precipitation (mm)
British Columbia	Kamloops A 33	Cranbrook A -4	Prince Rupert A 53
Yukon Territory	Watson Lake A 14	Komakuk Beach A -21	Watson Lake A 22
Northwest Territories	Fort Smith A 20	Hall Beach A -25	Ennadai Lake (aut) 23
Alberta	Medicine Hat A 28	Lloydminster A -6	Fort McMurray A 17
Saskatchewan	Estevan A 30	Collins Bay -13	Swift Current A 5
Manitoba	Brandon A 28	Lynn Lake A -16	Gillam A 14
Ontario	Ottawa Int'l A 23	Big Trout Lake -9	Windsor A 31
Québec	Gaspe A 27	Schefferville A -16	Mont Joli A 32
New Brunswick	Moncton A 24	Charlo A -3	Moncton A 36
Nova Scotia	Greenwood A 25	Sydney A -5	Sydney A 32
Prince Edward Island	Summerside A 21	Charlottetown A -2	Charlottetown A 28
Newfoundland	Deer Lake A 21	Wabush Lake A -11	Burgeo 43

**Across The Country...**

Highest Mean Temperature	Elbow (aut)(SASK) 16
Lowest Mean Temperature	Shepherd Bay A(NWT) -15

90/04/30-90/05/06

CLIMATIC PERSPECTIVES  
VOLUME 12

Managing Editor . . . . . Amir Shabbar  
Editor-in-charge  
- weekly/monthly . . . . . Andy Radomski  
French version . . . . . Alain Caillet  
Data Manager . . . . . M. Skarpathiotakis  
Computer support . . . . . Tommy Jang  
Art Set-up . . . . . K. Czaja  
Translation . . . . . D. Pokorn  
Cartography . . . . . T. Chivers

ISBN 0225-5707 UDC 551.506.1(71)

Climatic Perspectives is a weekly publication (disponible aussi en français) of the Canadian Climate Centre, Atmospheric Environment Service, 4905 Dufferin St., Downsview, Ontario, Canada M3H 5T4

☎ (416) 739-4438/4436

The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socio-economic impact.

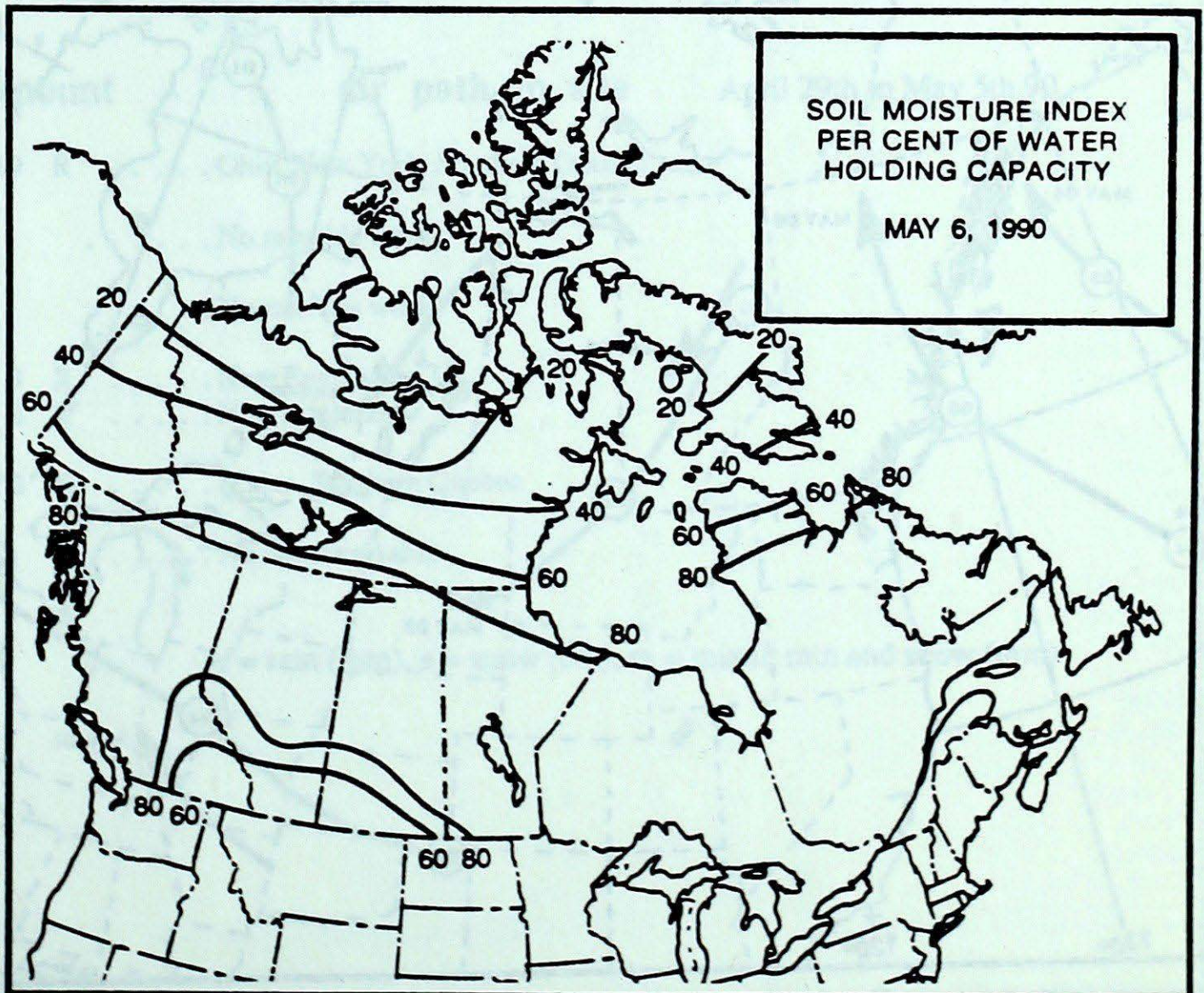
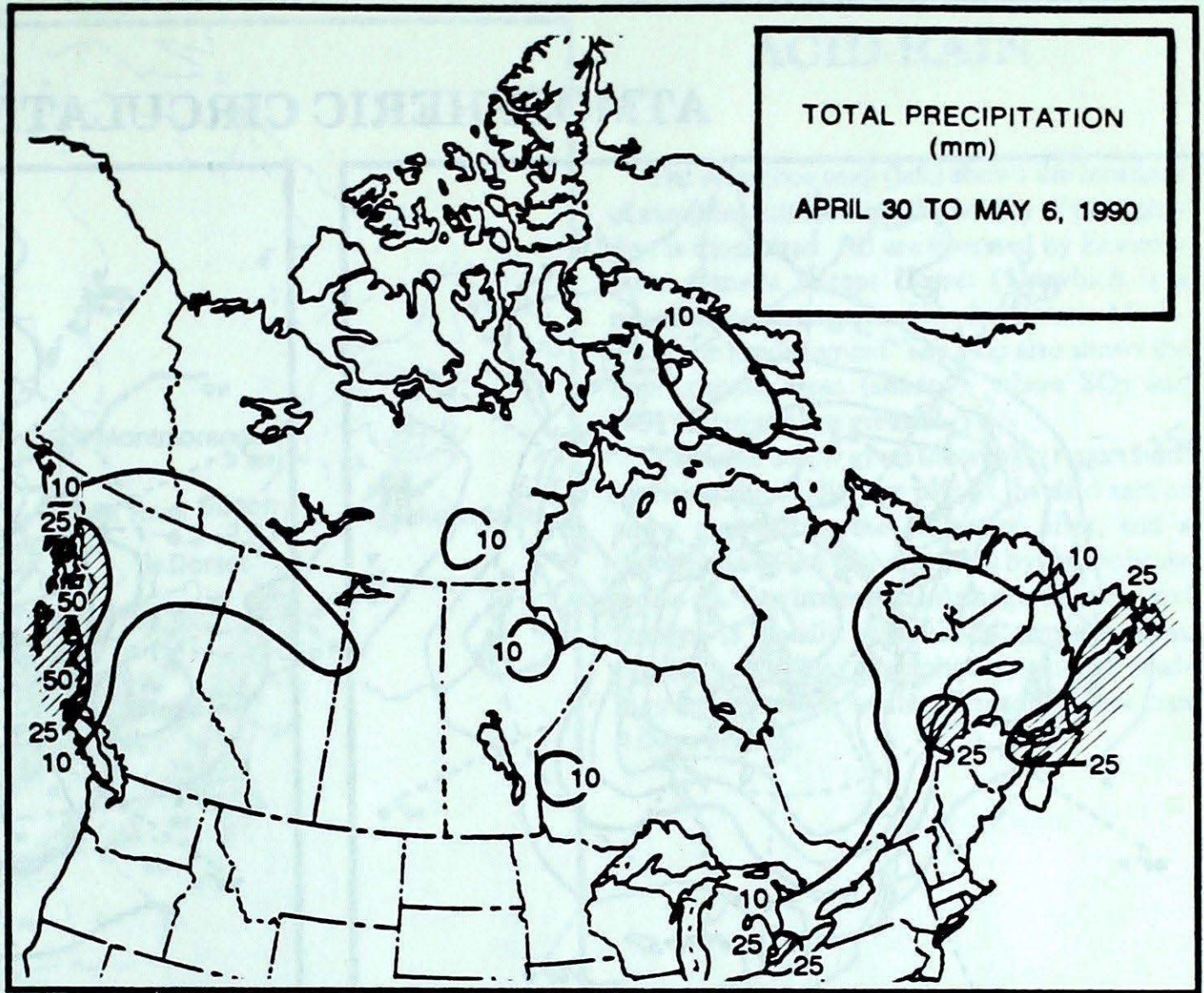
The data in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment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

Annual Subscriptions

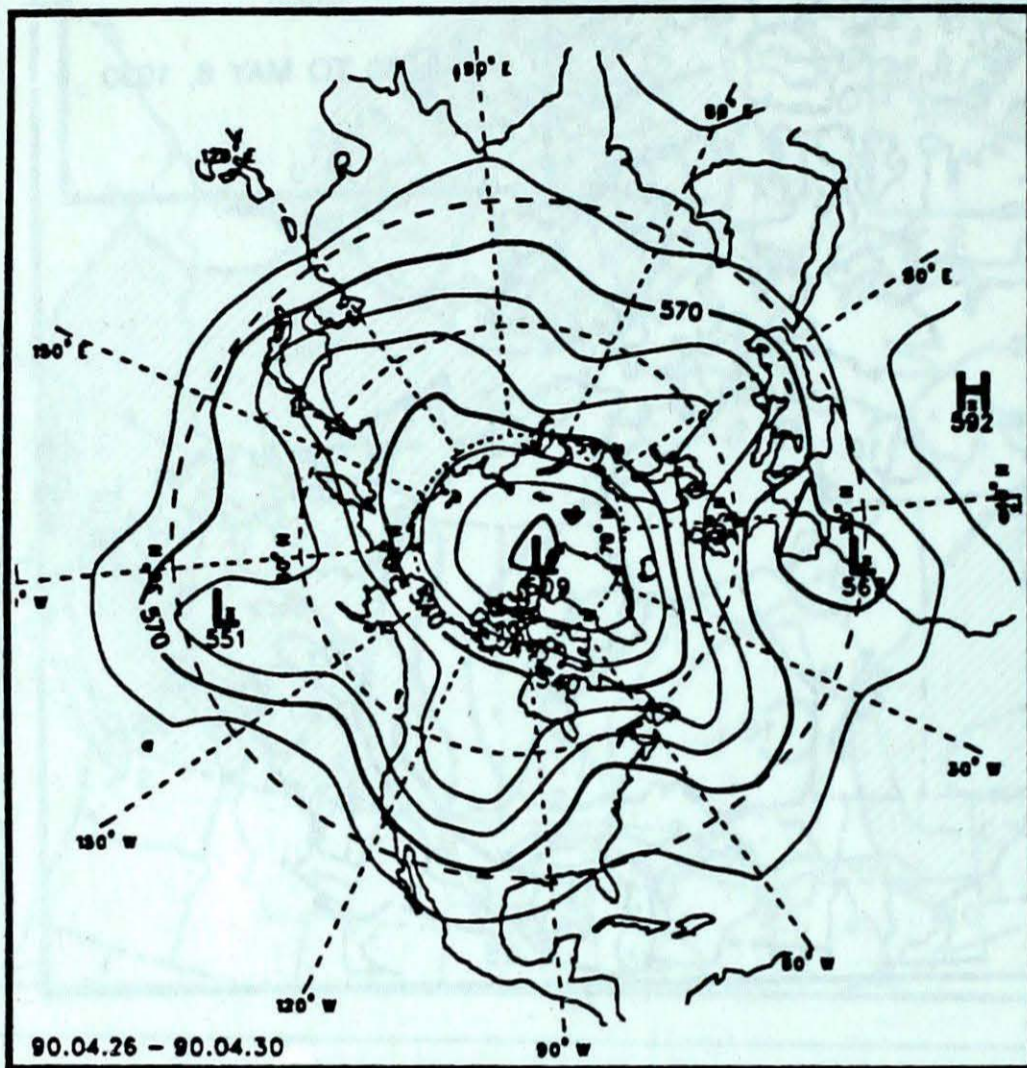
weekly and monthly : . . . . . \$35.00  
foreign: . . . . . \$42.00  
monthly issue: . . . . . \$10.00  
foreign: . . . . . \$12.00

Orders must be prepaid by money order or cheque payable to Receiver General for Canada. Canadian Government Publishing Centre, Ottawa, Ontario, Canada K1A 0S9

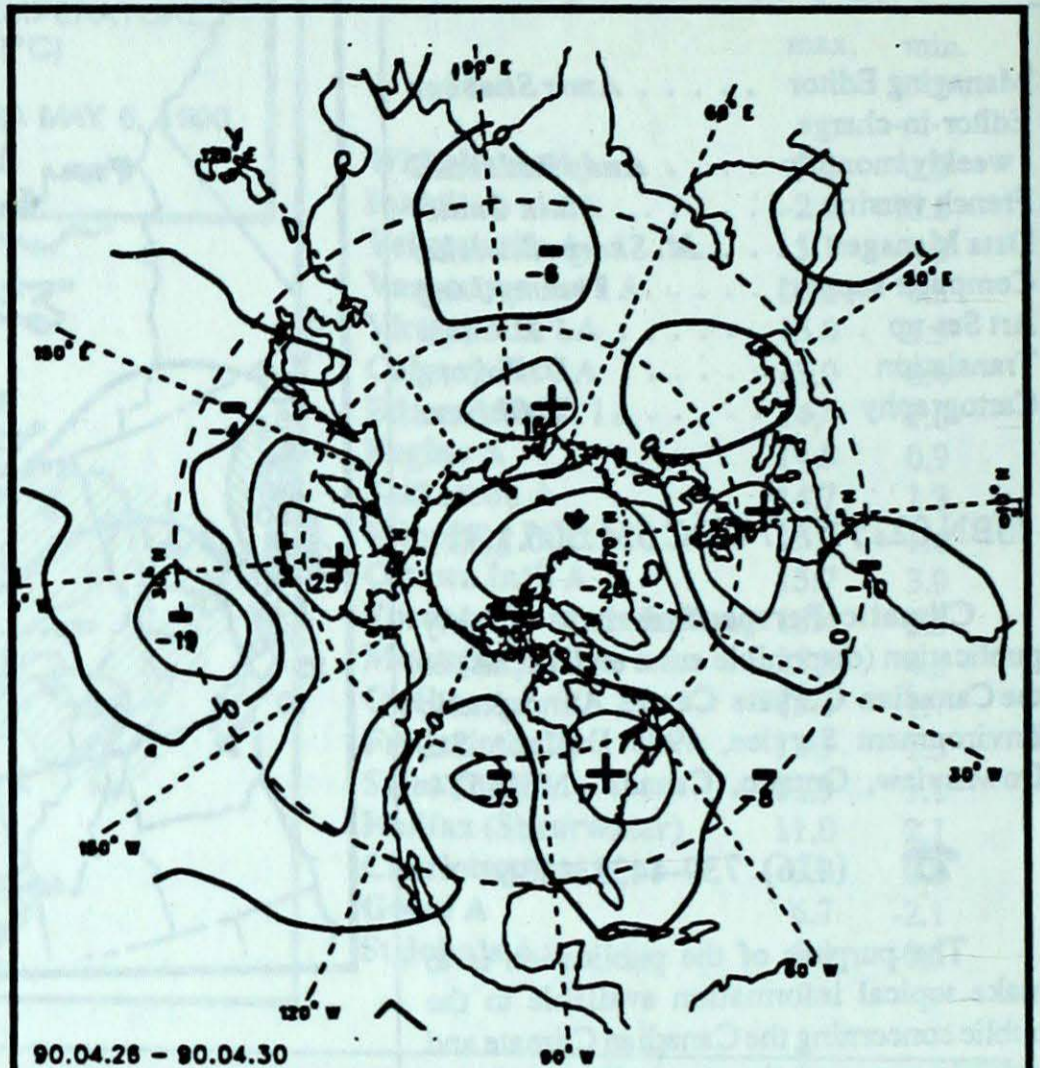
☎ (819) 997-2560



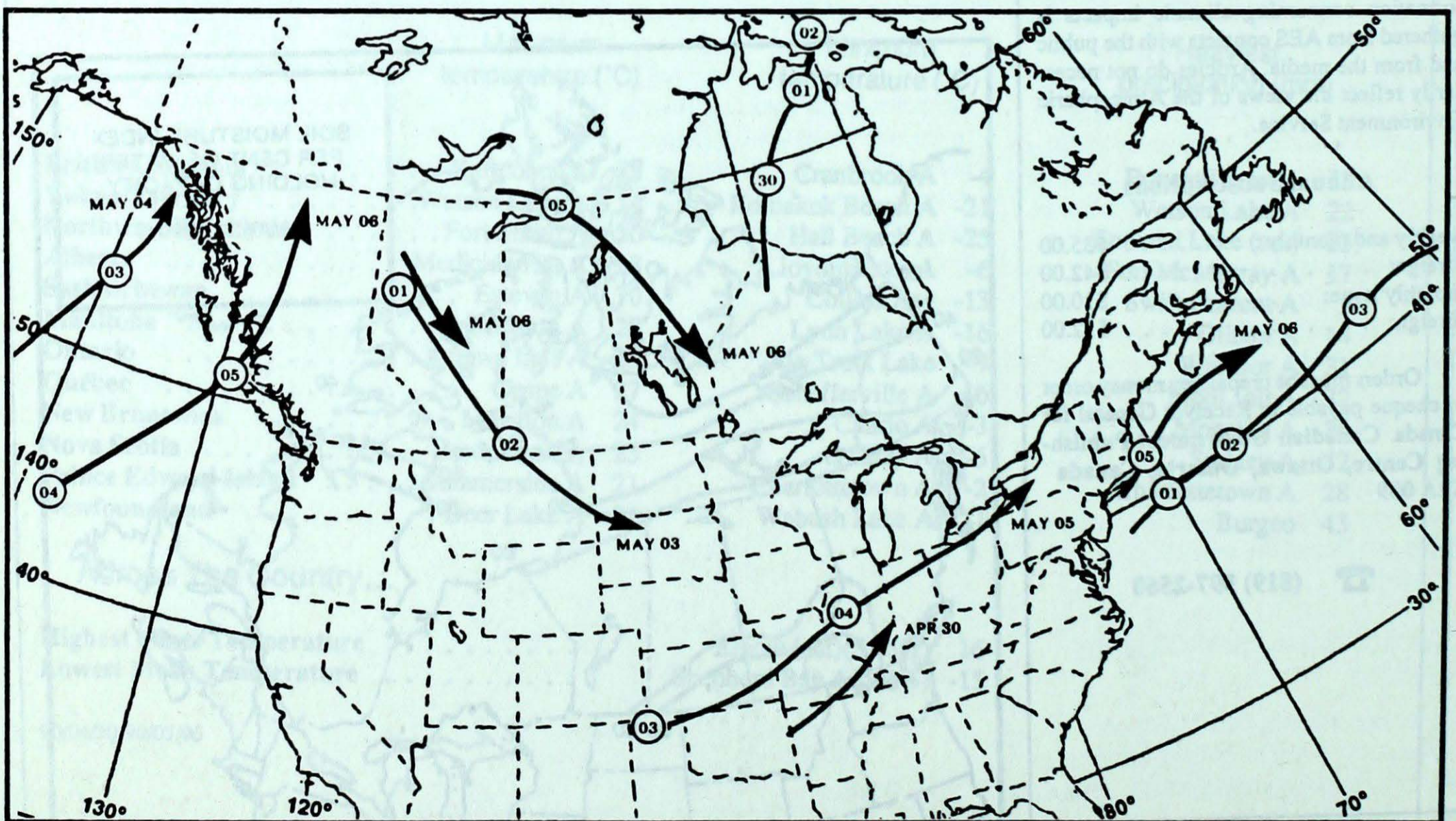
### ATMOSPHERIC CIRCULATION



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



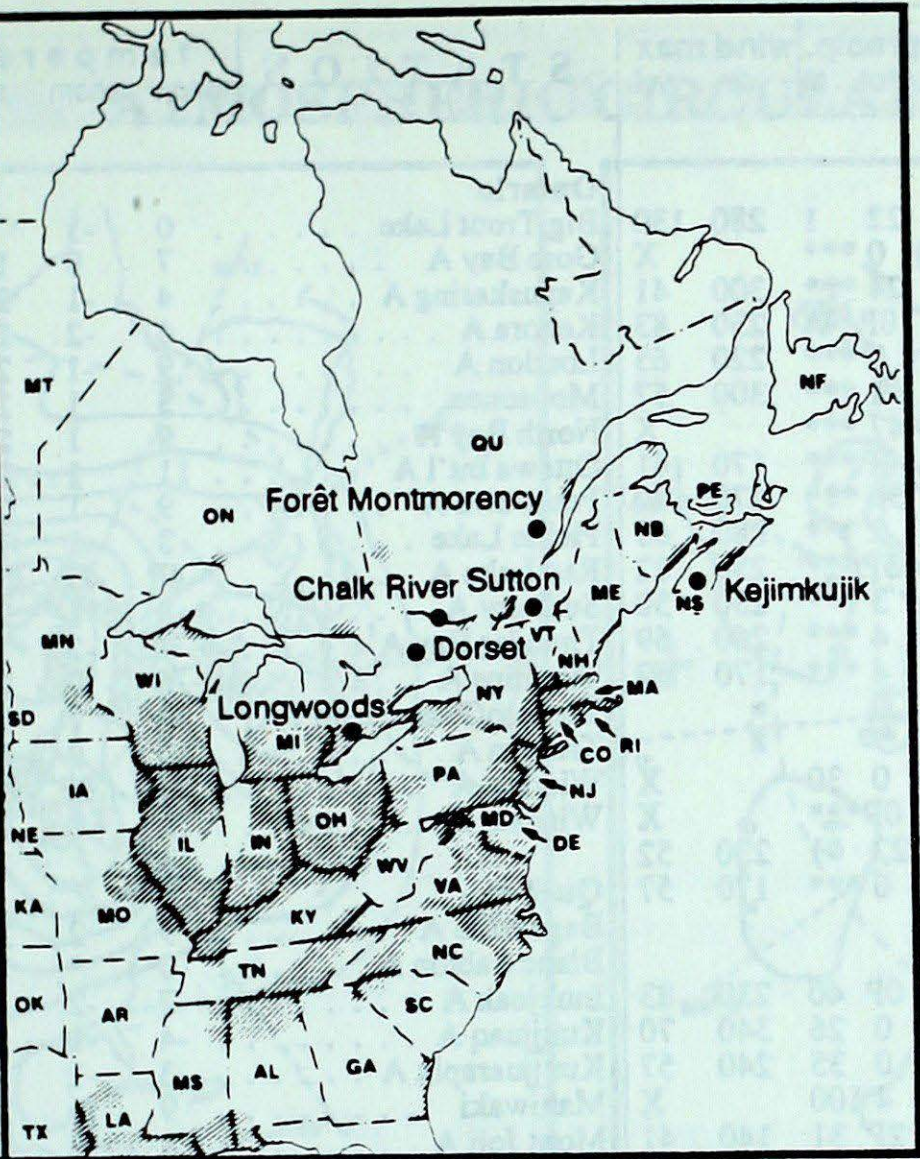
Mean geopotential height anomaly  
50-kPa level (10-decametre intervals)



Tracks of low pressure centres at 12:00 U.T. each day during the period.

### ACID RAIN

- ALABAMA - AL
- ARKANSAS - AR
- CONNECTICUT - CT
- 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



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.

Site	day	pH	amount	air path to site	April 29th to May 5th, 90
Longwoods	4	5.9	19 R	Ohio, New York, Southern Ontario	
Dorset *				No rain this week	
Chalk River				No rain this week	
Sutton	4	3.9	3 R	New England	
	5	4.7	6 R	New England	
Montmorency	5	4.3	2 R	Maine, Southern Quebec	
Kejimikujik				No data available	

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

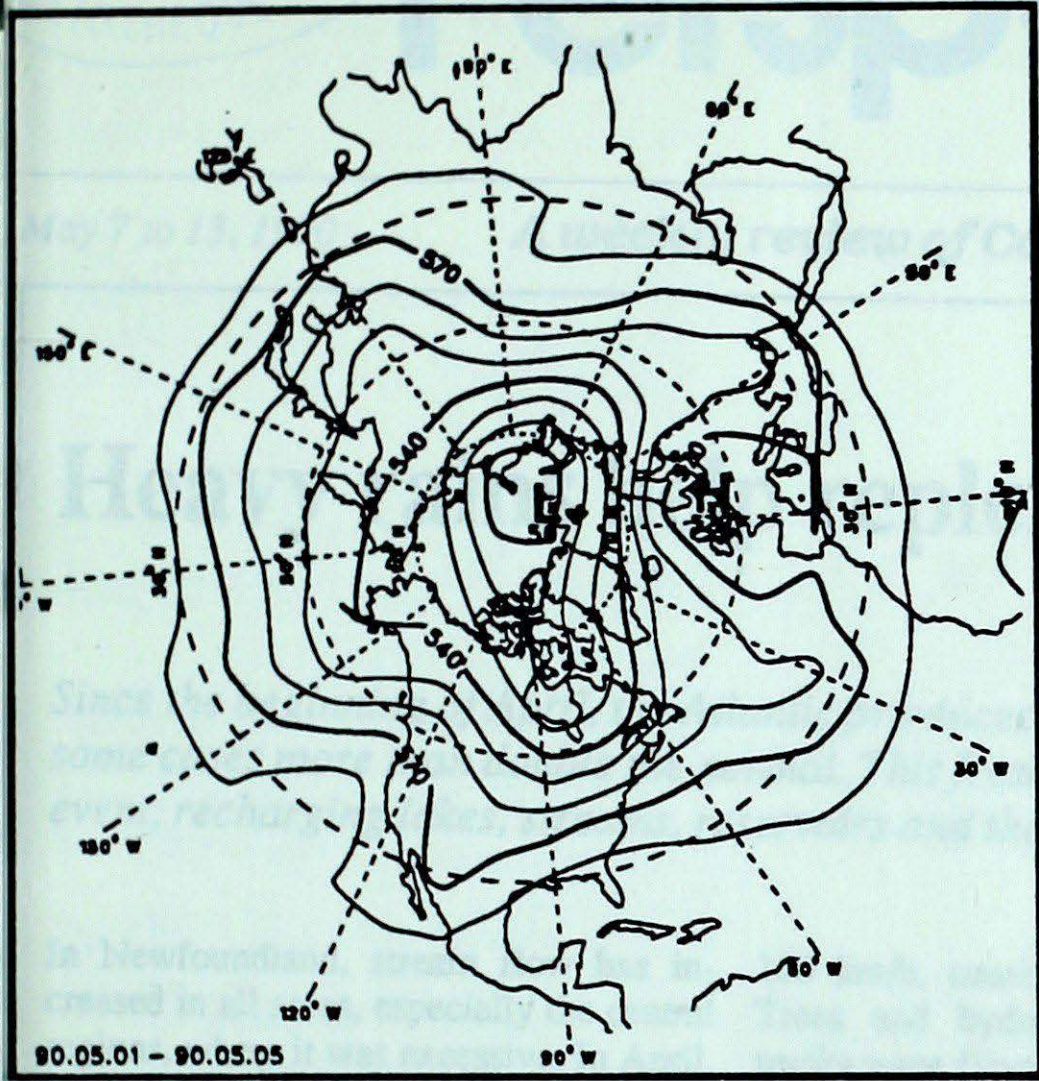
STATION	temperature				precip.		wind max		STATION	temperature				precip.		wind max	
	mean	anom	max	min	ptot	st	dir	vel		mean	anom	max	min	ptot	st	dir	vel
<b>British Columbia</b>									<b>Ontario</b>								
Cape St James	8	0	11	4	22	1	280	130	Big Trout Lake	0	-1	8	-9	1	1	120	52
Cranbrook A	12	2	26	-4	0	***		X	Gore Bay A	7	0	17	-1	1	***	270	52
Fort Nelson A	9	3	21	0	24	***	300	41	Kapuskasing A	4	-1	21	-7	6	***	240	52
Fort St John A	10P	3P	25P	1P	0P	***	230	83	Kenora A	6	-2	22	-5	3	***	260	44
Kamloops A	14	2	33	-1	0	***	220	65	London A	9	-1	21	0	16	***	070	76
Penticton A	14	2	28	-1	1	***	300	57	Moosonee	3	1	23	-6	5	***	240	52
Port Hardy A	10	1	16	0	47	***		X	North Bay A	9	1	21	-2	0	***	250	48
Prince George A	11P	4P	27P	0P	8P	***	170	41	Ottawa Int'l A	11	1	23	2	3	***	260	54
Prince Rupert A	9	2	12	3	53	***	270	70	Petawawa A	9	1	22	-4	0	***	280	59
Revelstoke A	12	1	28	-1	2	***	280	65	Pickle Lake	3	-1	15	-7	3	1	300	41
Smithers A	9P	2P	21P	1P	5P	***	250	82	Red Lake A	4P	-2P	20P	-7P	11P	***	310	52
Vancouver Int'l A	13	2	23	3	3	***	230	50	Sudbury A	8	1	22	-2	2	***	240	50
Victoria Int'l A	12	1	23	2	4	***	260	69	Thunder Bay A	4	-2	14	-6	4	***	240	57
Williams Lake A	10	3	25	-4	4	***	170	69	Timmins A	6	0	22	-4	4	***	240	56
<b>Yukon Territory</b>									<b>Toronto (Pearson Int'l A)</b>								
Komakuk Beach A	-12	-2	-3	-21	0	30		X	Trenton A	10	0	22	-1	26	***	020	54
Teslin (aut)	4P	*	10P	-4P	0P	***		X	Warton A	8P	0P	23P	-1P	1P	***	120	33
Watson Lake A	5	2	14	-2	22	1	230	52	Windsor A	12	0	23	4	31	***	090	59
Whitehorse A	5	1	12	-5	0	***	170	57	<b>Québec</b>								
<b>Northwest Territories</b>									Bagotville A	9	2	26	-3	10	***		X
Alert	-12P	4P	-6P	-16P	0P	40	230	83	Blanc Sablon A	0	*	10	-7	8	5		X
Baker Lake A	-11	0	-3	-19	0	26	340	70	Inukjuak A	-7	-2	1	-13	12	42	240	67
Cambridge Bay A	-13	2	-5	-22	0	35	240	57	Kuujuuaq A	-4	-1	8	-10	3	1	270	54
Cape Dyer A	-12	-2	-3	-19	4	100		X	Kuujuuarapik A	-3	-1	9	-11	8	7	120	63
Clyde A	-15P	-3P	-7P	-22P	2P	31	140	41	Maniwaki	9	1	24	-4	2	***	230	52
Coppermine A	-10	1	-1	-20	0	56	180	46	Mont Joli A	8	2	23	-3	32	***	150	50
Coral Harbour A	-11	-1	-4	-20	8	38	050	65	Montréal Int'l A	11	1	23	2	18	***	240	50
Eureka	-12P	5P	-7P	-20P	0P	25	170	82	Natashquan A	3	0	12	-5	13	1	250	50
Fort Smith A	5	1	20	-6	0	1		X	Québec A	10	3	24	-1	3	***	270	44
Hall Beach A	-13	0	-7	-25	4	48	300	50	Schefferville A	-2P	1P	11P	-16P	12P	29	240	43
Inuvik A	-7	-2	2	-19	0	27	310	61	Sept-Îles A	4	0	12	-4	24	***	300	67
Iqaluit A	-10	-3	-4	-18	12	24	140	83	Sherbrooke A	9	2	25	-4	13	***	270	43
Mould Bay A	-9	7	-3	-21	2	19	280	70	Val-d'Or A	7	2	24	-4	1	***	250	44
Norman Wells A	2	1	13	-5	2	***	300	50	<b>New Brunswick</b>								
Resolute A	-14	1	-6	-24	6	33	200	48	Charlo A	7	2	20	-3	19	1	270	56
Yellowknife A	1	1	12	-7	1	***	070	39	Chatham A	9	3	23	-1	24	***	070	63
<b>Alberta</b>									Fredericton A	10	2	22	-1	12	***	050	41
Calgary Int'l A	10	3	26	-4	3	***	330	74	Moncton A	9	2	24	0	36	***	070	57
Cold Lake A	8	1	26	-5	2	***	330	52	Saint John A	8	2	21	-1	21	***	070	56
Edmonton Namao A	10	3	25	-2	2	***	300	72	<b>Nova Scotia</b>								
Fort McMurray A	8	1	25	-4	17	***	090	65	Greenwood A	9	1	25	-1	14	***	130	63
High Level A	9	2	23	0	15	***	090	52	Shearwater A	8	1	16	1	21	***	080	80
Jasper	9	3	24	-4	2	***		X	Sydney A	6	1	23	-5	32	4	190	61
Lethbridge A	11	2	27	-3	0	***	250	44	Yarmouth A	8	1	21	1	7	***	100	74
Medicine Hat A	12	2	28	-3	0	***	330	63	<b>Prince Edward Island</b>								
Peace River A	9	3	25	-1	1	***	230	41	Charlottetown A	7	1	20	-2	28	3	010	52
<b>Saskatchewan</b>									Summerside A	8	2	21	0	26	***	210	44
Cree Lake	2	-2	19	-11	1	1	030	61	<b>Newfoundland</b>								
Estevan A	8	-1	30	-7	2	***	290	65	Cartwright	1	0	14	-7	6	107	190	44
La Ronge A	4	-1	22	-11	2	***	320	46	Churchill Falls A	2	2	17	-10	16	51	310	48
Regina A	9	1	29	-7	2	***	250	74	Gander Int'l A	6	2	20	-3	17	1	170	41
Saskatoon A	8	0	27	-8	1	***	340	48	Goose A	4	1	13	-5	17	13	190	39
Swift Current A	7P	0P	25P	-8P	5P	***	330	74	Port Aux Basques	2	-1	11	-5	22	197	310	59
Yorkton A	7	0	27	-6	1	231	320	56	St John's A	5	2	20	-4	26	***	100	63
<b>Manitoba</b>									St Lawrence	5	1	14	-3	42	***		X
Brandon A	6	-2	28	-6	2	***	300	56	Wabush Lake A	1	2	17	-11	13	1	320	33
Churchill A	-7	-2	5	-15	7	16	310	65	<b>90/04/30-90/05/06</b>								
Lynn Lake A	-1	-4	16	-16	6	***	340	52									
The Pas A	3	-2	21	-12	3	***	360	43									
Thompson A	-1	-3	15	-15	4	***	040	48									
Winnipeg Int'l A	5	-3	26	-6	0	***	300	56									

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

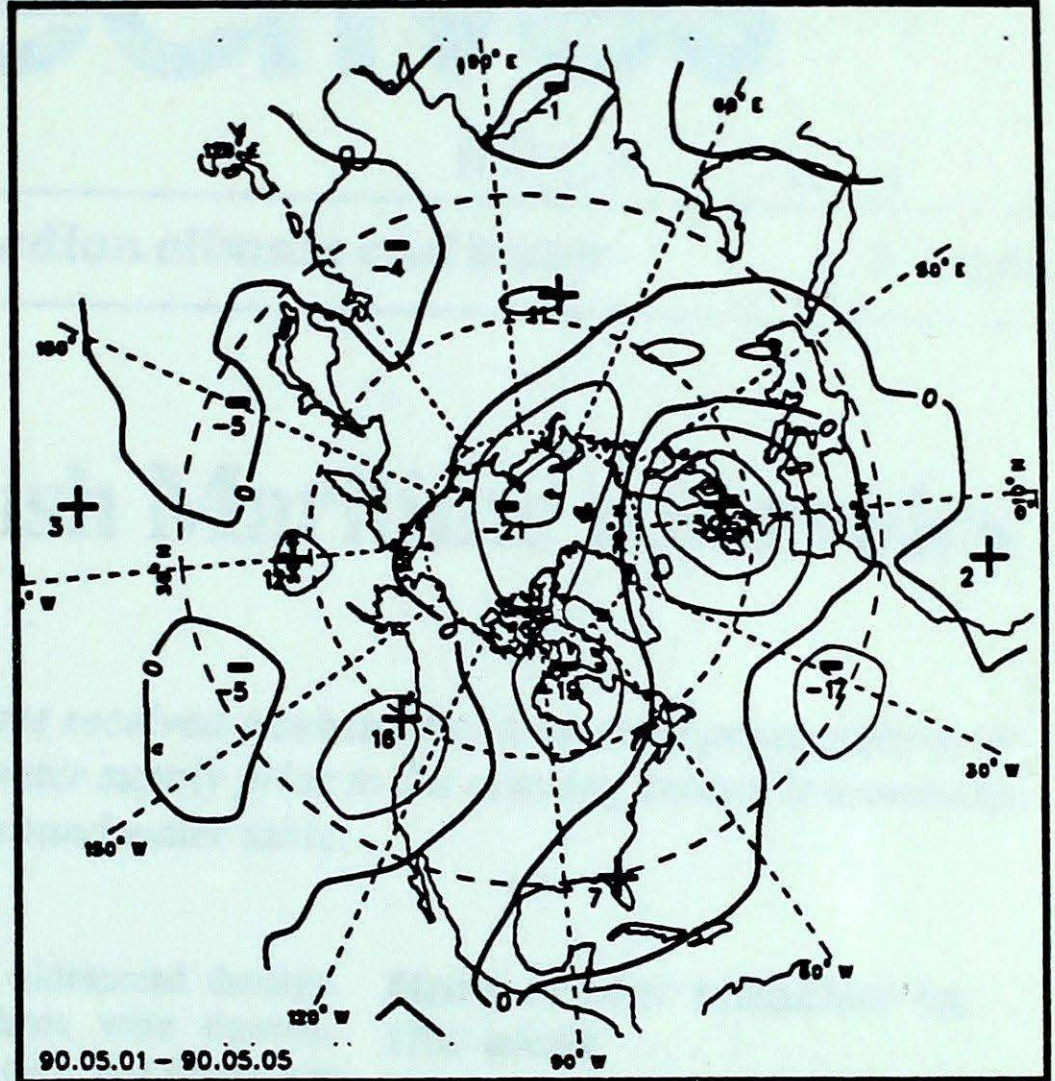
ptot = weekly precipitation total in mm  
 st = snow thickness on the ground in cm  
 dir = direction of max wind, deg. from north.  
 vel = wind speed in km/h

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

### ATMOSPHERIC CIRCULATION



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



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

