Environment Canada Environnement Canada

Climatic Perspectives

March 29 to April 4, 1993 ***A weekly review of Canadian climate and water*** *Vol. 13 No. 14*

Old Man Winter just won't give up

Another snowstorm affected eastern Canada. The slow moving weather system produced a mixture of heavy snow, ice pellets and freezing rain.

An early spring storm on April 1 and 2, was no April Fool's joke for residents living in Ontario, as freezing rain and wet snow covered southern and central portions of the province. With the temperature hovering near zero, the freezing rain coated trees and wires with ice 10 to 20 millimetres thick, bringing down branches and power lines. In addition, areas near Georgian Bay and in eastern Ontario had to dig out from under 10 and 30 centimetres of snow, respectively.

Southwestern Quebec was also hard hit by the storm, as the low pressure system tracked slowly eastwards. The Montreal - Sherbrooke region were buried under 30 to 40 centimetres of the white stuff.

Atlantic Canada was hit by a mixed bag of precipitation during the latter half of the period. In addition to freezing rain, 10 to 30 centimetres of snow covered portions of Nova Scotia, New Brunswick and P.E.I. In New Brunswick, west of Saint John, a heavy build-up of ice toppled high voltage transmission towers.

The sap is running!

In Ontario, the maple sugar bush season is in full swing. The sap started to run in earnest at the end of March, with a brief outburst reported earlier in the month.

This year's season got off to a relatively late start, when compared to the last few years; during the late 1980s spring-like weather conditions seemed to arrive early, generally by the beginning of March. This year's maple syrup season seems to be more in line with the long-term average. Although it has only been in the last week and a half, that warmer, sunnier spring weather finally arrived, some Ontario producers are already approaching 75 percent of their normal production quotas. The quality of the syrup is good and the sap has been running well.

It is expected that in Ontario the season will conclude with the Easter weekend, while in southern Quebec, the season, which starts later, will go on for a few more weeks.

Gulf of St. Lawrence

It has been a cold winter in this part of the country, and as a result, the ice is thicker and more extensive than normal. At this time of year, the wind plays a very important role in the distribution and severity of the ice conditions in the Gulf of St. Lawrence. Brisk northerly winds, this past week, have pushed and compressed the mobile ice pack tightly against the south shore, resulting in very heavy ice conditions throughout the southern two thirds of the Gulf.

The heavily congested ice, one to three metres thick, has kept five Canadian Coast Guard icebreakers working around the clock, freeing and escorting ships across the Gulf and in and out of harbours. Sydney harbour became impenetrable this week. Even the powerful ocean-going ice breaking ferries that cross Cabot Strait to Newfoundland had a difficult time entering and leaving North Sydney, N.S. One ferry was damaged and required ice breaker assistance.

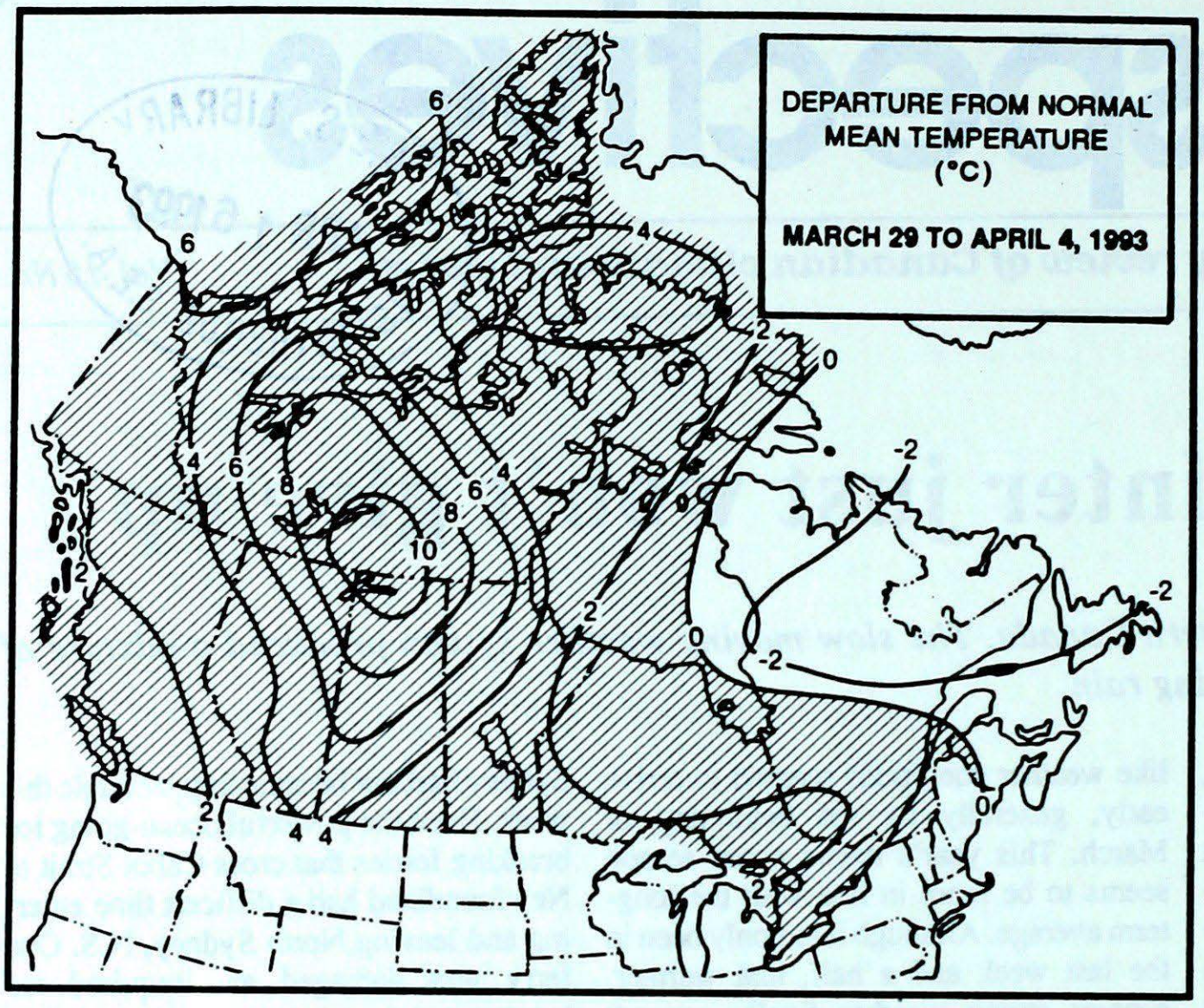
Elsewhere...

The Yukon enjoyed sunny, spring weather, with temperatures climbing to 10°C. In the southern Mackenzie, ice roads are continuing to deteriorate. Colder temperatures by the middle of the week prolonged the life of the busy Mackenzie River ice crossing. Temperatures in the eastern Arctic climbed to a balmy -8°C under sunny skies.

In B.C. it was more unsettled than last week. The mosquito season has begun along the north coast. It was unsettled and mild across the Prairies, with temperatures climbing into the teens. Colder air and snow affected northern Alberta towards the end of the period. In Newfoundland, the middle of the week was unsettled and damp. In western Newfoundland temperatures have been averaging below normal now for fifteen consecutive weeks.

A look ahead...

The week of April 12, will see the temperature across south-central Canada and Ontario change from above normal to a cooler temperature regime. In eastern Quebec and Atlantic Canada, mild temperatures will continue.



Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	2.5	-8.3
Iqaluit A	-12.8	-22.9
Yellowknife A	-7.2	-19.6
Vancouver Int'l A	11.4	3.6
Victoria Int'l A	11.6	3.0
Calgary Int'l A	6.1	-5.6
Edmonton Int'l A	3.7	-7.2
Regina A	3.2	-7.6
Saskatoon A	2.7	-7.8
Winnipeg Int'l A	2.4	-7.6
Ottawa Int'l A	5.4	-3.3
Toronto (Pearson Int'l A)	7.4	-2.0
Montréal Int'l A	5.7	-2.5
Québec A	3.3	-5.1
Fredericton A	6.1	-4.1
Saint John A	5.0	-4.2
Halifax (Shearwater)	5.3	-2.1
Charlottetown A	3.4	-4.1
Goose A	0.3	-9.9
St John's A	2.6	-3.8

Weekly temperature and precipitation extremes

	Maximum temperature (°C)		Minimum temperature (°C)		Heaviest precipitation (mm)	
British Columbia	Blue River A	17	Dease Lake	-13	Abbotsford	61
Yukon Territory	Watson Lake A	9	Komakuk Beach A	-26	Watson Lake A	4
Northwest Territories	Fort Smith A	15	Eureka	-40	Baker Lake A	7
Alberta	Medicine Hat A	18	Cold Lake A	-6	Grande Prairie A	18
			Lloydminster A	-6		
Saskatchewan	Swift Current A	20	Broadview	-17	Wynyard	13
Manitoba	The Pas A	16	Churchill A	-24	Portage La Prairie A	3
Ontario	Petawawa A	19	Lansdowne House	-25	Ottawa Int'l A	34
Quebec	Maniwaki	16	La Grande IV A	-28	Sherbrooke A	39
New Brunswick	St Stephen (aut)	14	St-Léonard A	-13	Fredericton A	37
Nova Scotia	Truro	17	Sydney A	-9	Shearwater A	44
			Truro	-9		
Prince Edward Island	Charlottetown A	11	Charlottetown A	-9	Charlottetown A	31
Newfoundland	St Lawrence	10	Wabush Lake	-25	St John's A	21

Across The Country...

Highest Mean Temperature	Simcoe (Ont.)	10
Lowest Mean Temperature	Eureka (N.W.T.)	-34

93/03/29-93/04/04

CLIMATIC PERSPECTIVES
VOLUME 15

Managing editor . . . . . *A.Saulesleja*
Editor English version *Andrew Radomski*
French version . . . *Alain Caillet*
Long-range forecasts . . . . *Aaron Gergy*
Data manager . . . . . *M. Skarpathiotakis*
Computer support . . . . . *Robert Eals*
Art layout . . . . . *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

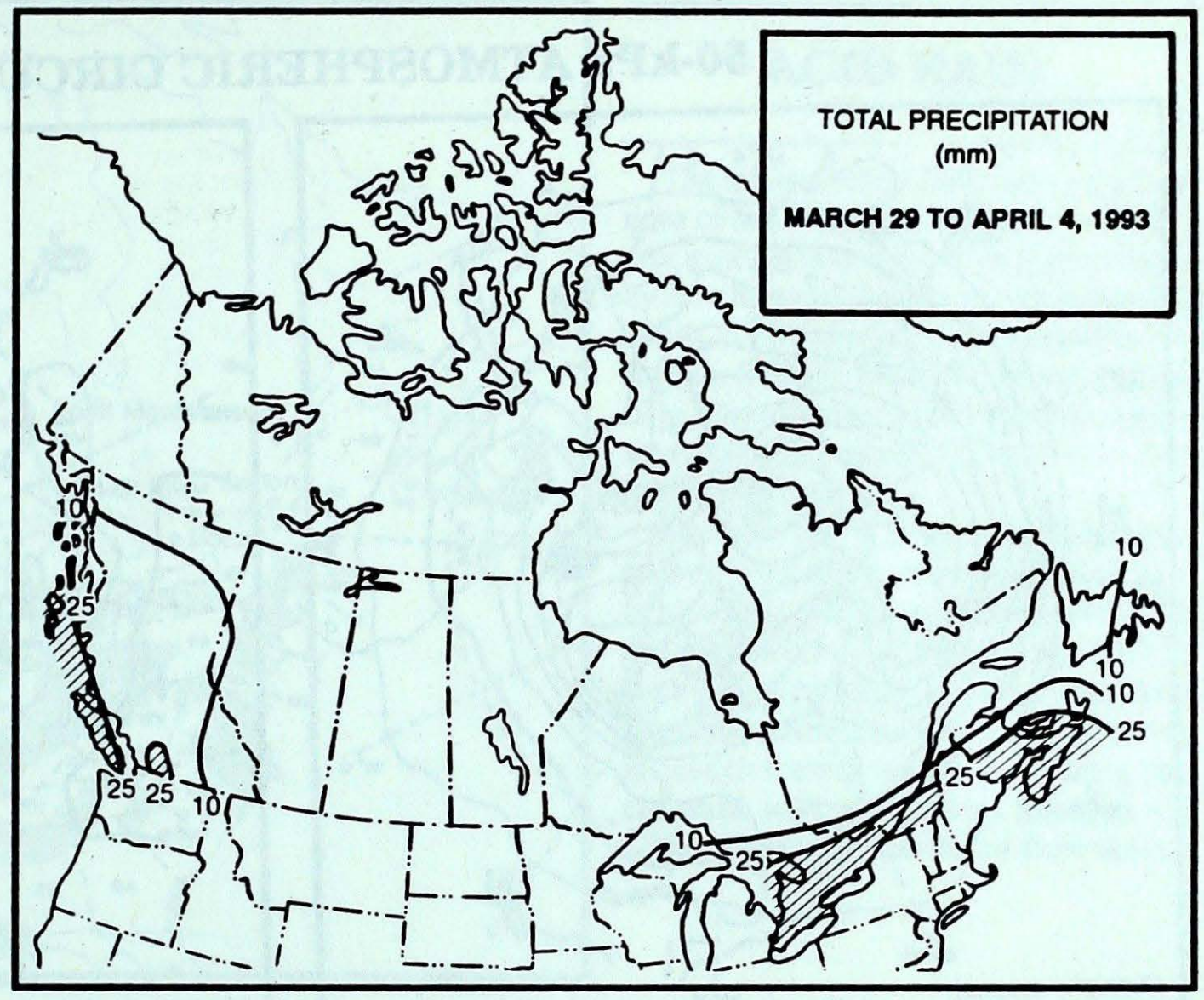
☎ **(416) 739-4438/4330**
Network Email:
CCCOPS@aestor.dots.doe.CA

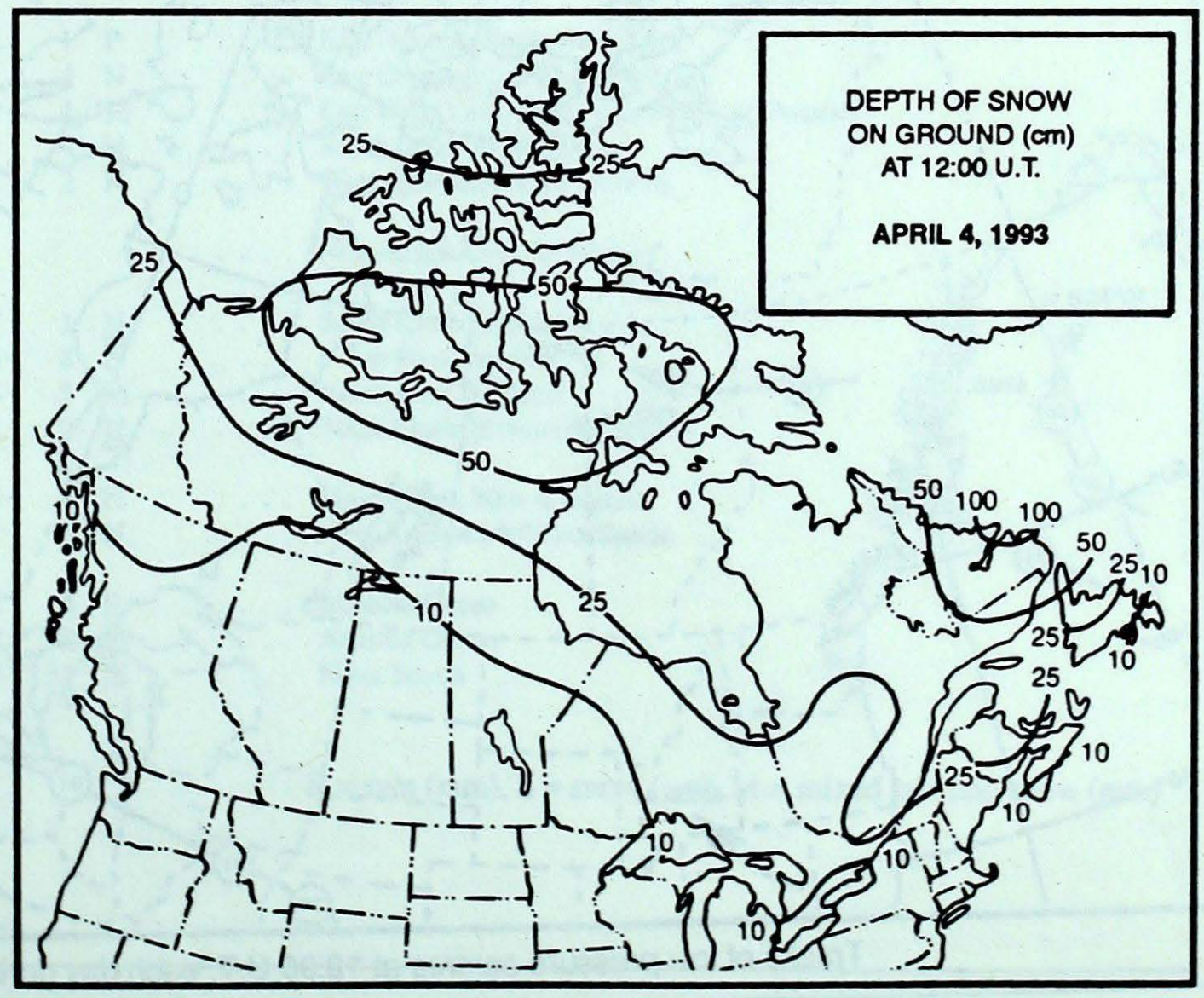
The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socio-economic impact.

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.

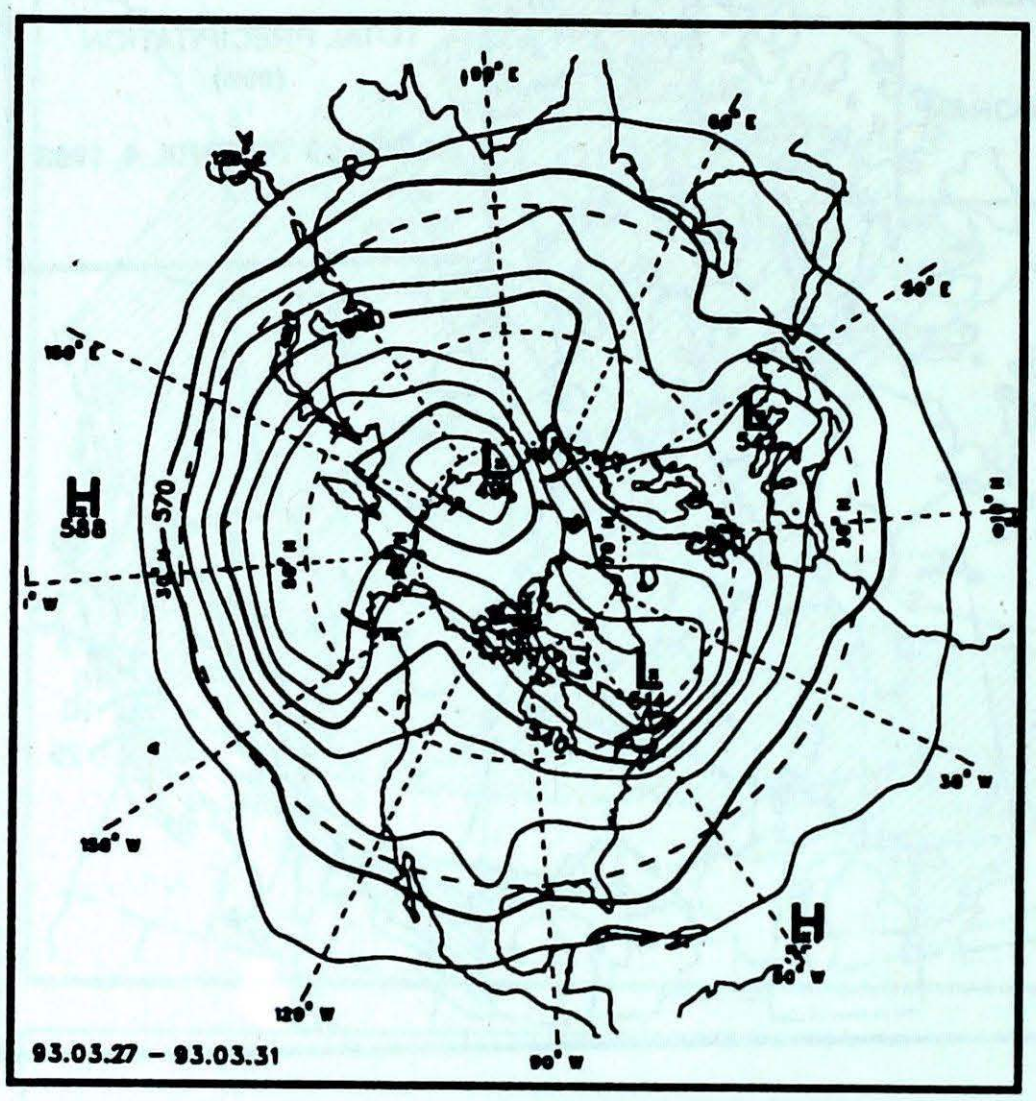
Annual Subscriptions and changes:

Albert Wright (416) 739-4446

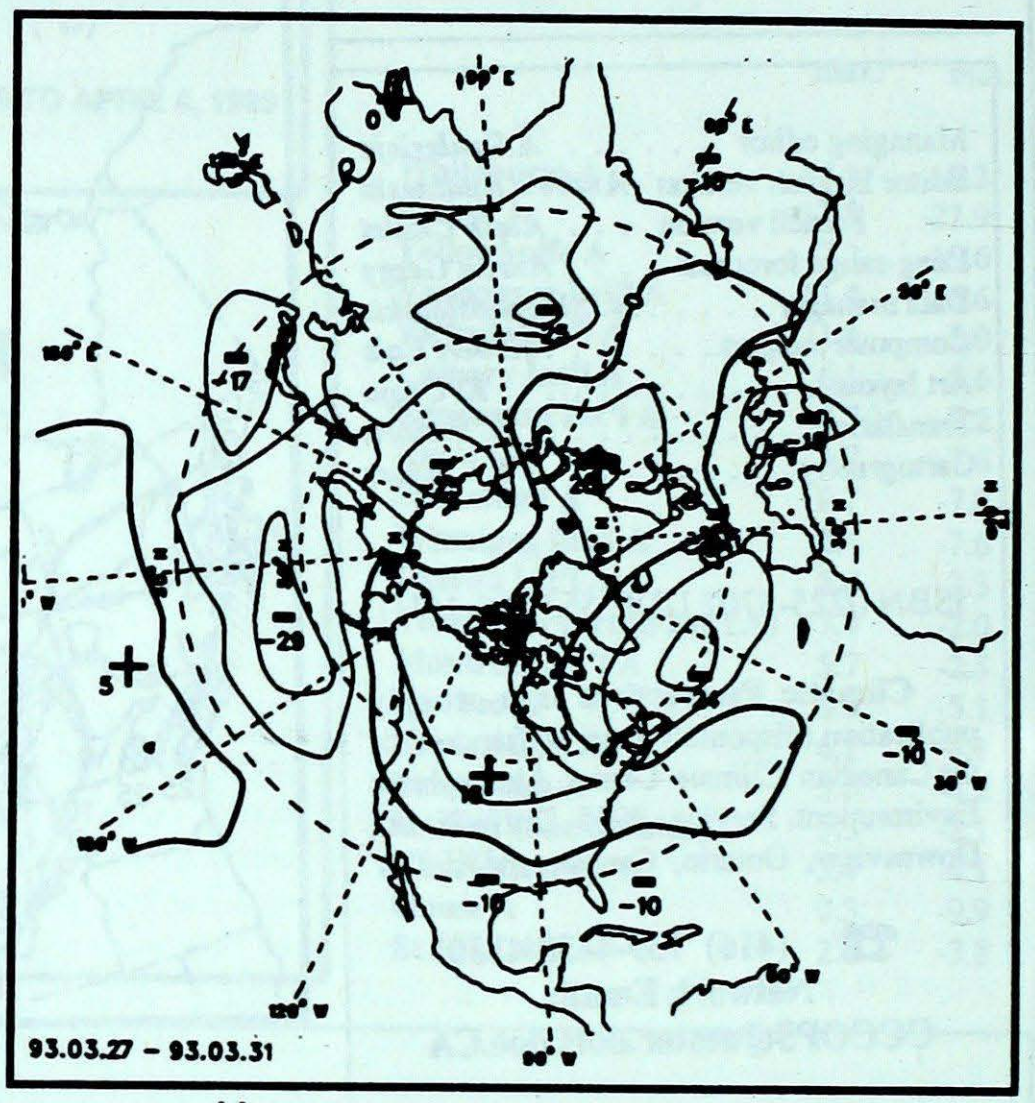




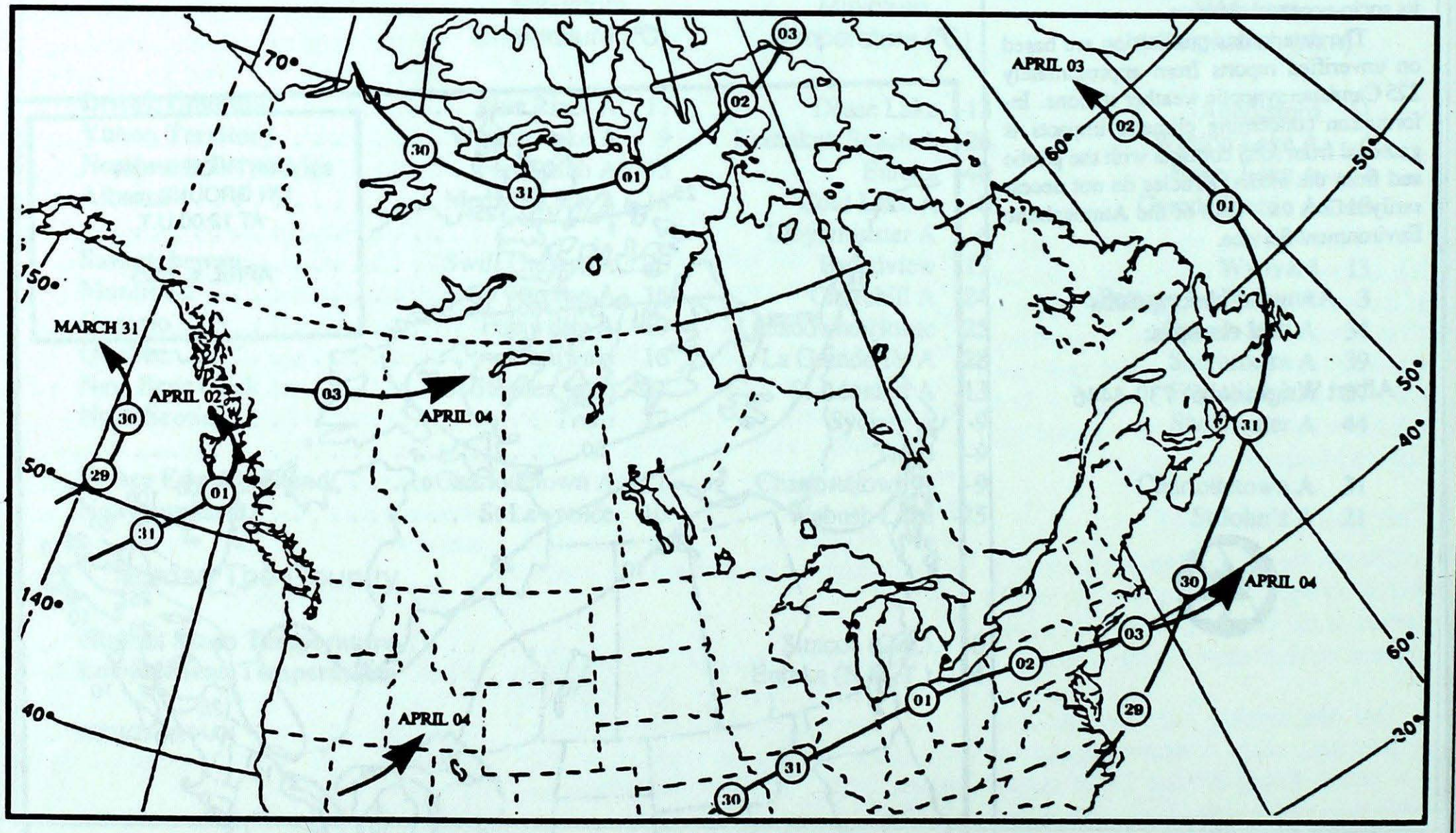
50-kPa ATMOSPHERIC CIRCULATION



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

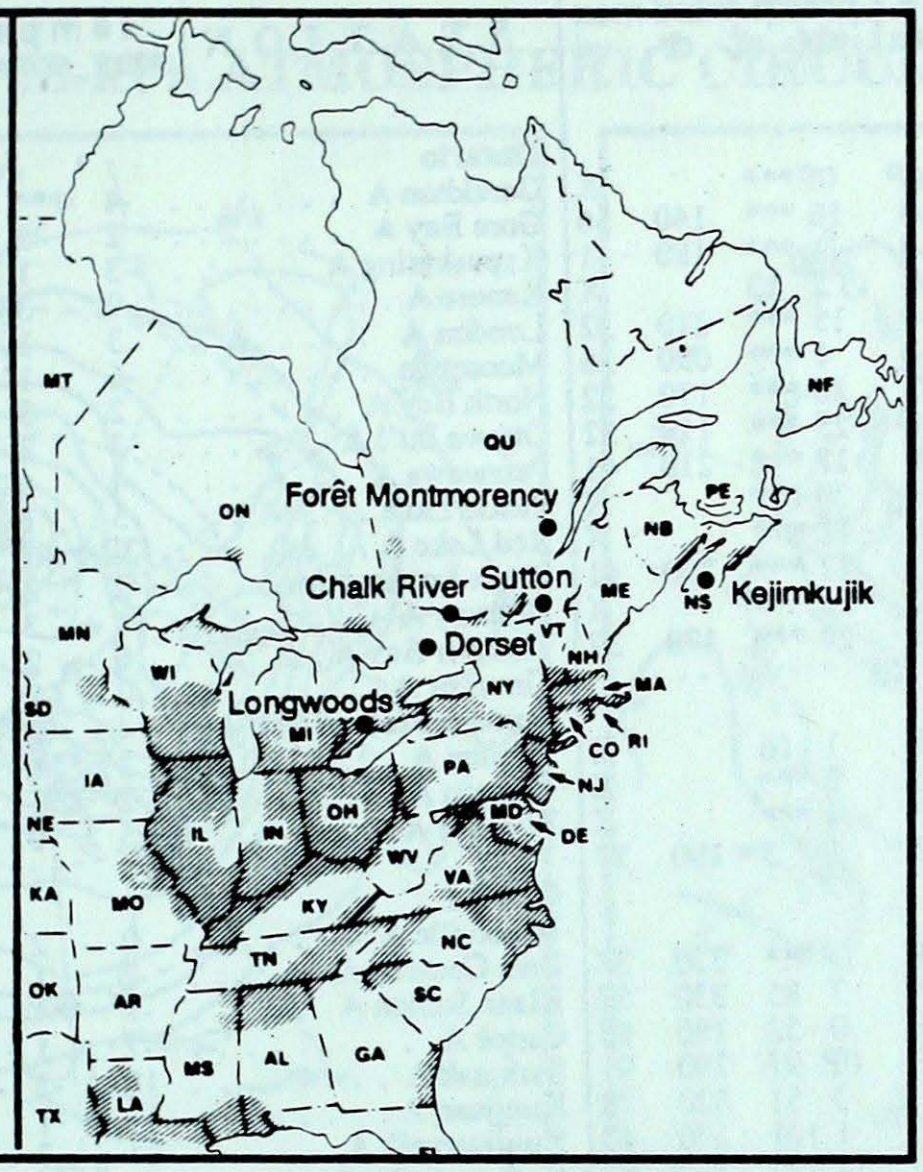


Mean geopotential height anomaly
50-kPa level (10 decametre intervals)



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

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 Environment and Energy. 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.

SITE	day	pH	amount		AIR PATH TO SITE
					March 28 - April 03, 1993
Longwoods					. . . . No precipitation this week
Dorset *	28	4.2	1	P	. . . . East Ontario/North New York
	31	4.1	4	N	. . . . East Ontario/East New York
	01	4.1	4	M	. . . . East New York/South Quebec/East Ontario
	02	4.1	4	N	. . . . South Quebec/East Ontario
	03	4.2	2	N	. . . . West Quebec/Centre Ontario
Chalk River					. . . . No precipitation this week
Sutton	31	3.7	1	N	. . . . South Quebec/Maine
	01	4.8	8	N	. . . . North New England
	02	4.6	5	M	. . . . North New England
	03	4.5	2	N	. . . . South Quebec/New-Brunswick
Montmorency	01	4.6	4	N	. . . . Maine/West New-Brunsick
	02	4.7	2	N	. . . . New-Brunswick/Nova Scotia
Kejimkujik	29	4.4	4	P	. . . . Atlantic Ocean
	01	5.0	30	M	. . . . Atlantic Ocean
	03	4.3	31	M	. . . . Nova Scotia

R = rain (mm), S = snow (cm), M = mixed rain and snow (mm)

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
British Columbia								
Blue River A	7P	5P	17P	-4P	0P	***		X
Comox A	8	2	14	3	16	***	140	56
Cranbrook A	7	4	17	-3	1	***	180	41
Fort Nelson A	3	6	13	-5	2	13		X
Fort St John A	4	5	11	-3	15	***	210	32
Kamloops A	7	0	15	-2	1	***	090	56
Penticton A	8	1	15	-3	16	***	170	52
Port Hardy A	6	1	12	0	25	***	110	52
Prince George A	5	2	14	-6	12	***	210	41
Prince Rupert A	6	2	12	-1	20	***		X
Smithers A	5	3	14	-7	12	***		X
Vancouver Int'l A	8	1	13	2	17	***	260	41
Victoria Int'l A	8	1	15	2	15	***		X
Williams Lake A	4	2	13	-5	24	***	170	37
Yukon Territory								
Komakuk Beach A	-19	5	-13	-26	1	16		X
Teslin (aut)	-2	***	8	-16	0	***		X
Watson Lake A	0	5	9	-22	4	***		X
Whitehorse A	0	3	8	-10	1	3	190	37
Northwest Territories								
Alert	-29P	3P	-22P	-33P	1P	***	330	37
Baker Lake A	-22	2	-3	-31	7	85	330	57
Cambridge Bay A	-25	3	-11	-33	0	52	180	65
Cape Dyer A	-15P	4P	-11P	-19P	0P	97	290	91
Clyde A	-21	2	-13	-31	3	51	320	78
Coppermine A	-19	9	-2	-33	1	101	200	43
Coral Harbour A	-18	3	-5	-29	4	32	360	52
Eureka	-34	1	-21	-40	1	19		X
Fort Smith A	3	12	15	-3	1	3	190	46
Hall Beach A	-21	4	-12	-30	6	56	290	52
Inuvik A	-14	7	-3	-26	1	71		X
Iqaluit A	-19	-1	-7	-28	2	22	320	65
Mould Bay A	-24	7	-16	-32	2	17		X
Norman Wells A	-9	6	6	-21	3	17		X
Resolute A	-23	6	-13	-30	1	19	050	56
Yellowknife A	-4	9	6	-14	1	16	160	43
Alberta								
Calgary Int'l A	4	4	16	-3	0	***	010	52
Cold Lake A	5	7	16	-6	1	***		X
Edmonton Namao A	3	4	15	-2	2	3	300	57
Fort McMurray A	5	8	16	-3	4	***	160	39
Grande Prairie A	4	6	13	-3	18	***	240	33
High Level A	4	10	15	-4	1	3	110	37
Lethbridge A	6	4	17	-3	0	***	230	52
Medicine Hat A	7	4	18	-1	7	***	200	41
Peace River A	4	7	14	-5	12	***	020	33
Saskatchewan								
Cree Lake	1	11	13	-13	1	4	190	44
Estevan A	2	2	14	-5	2	***	160	54
La Ronge A	2	9	15	-9	1	***	160	37
Regina A	1	3	15	-6	2	3	140	56
Saskatoon A	4	6	17	-4	3	***	180	44
Swift Current A	4	5	20	-2	3	***	190	48
Yorkton A	-2	2	11	-13	12	3	150	46
Manitoba								
Brandon A	0	3	12	-8	1	***	160	46
Churchill A	-9	6	7	-24	1	8	220	44
Lynn Lake A	-2	9	12	-21	0	12	180	33
The Pas A	1	6	16	-12	1	***	140	48
Thompson A	-3	7	12	-21	1	4	200	54
Winnipeg Int'l A	1	4	10	-7	1	3	050	46

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
Ontario								
Geraldton A	-4	***	10	-16	2	10	060	50
Gore Bay A	2	3	16	-5	13	9	070	82
Kapuskasing A	-3	1	11	-16	1	18	040	46
Kenora A	0	3	10	-10	1	3	040	41
London A	3	1	18	-3	12	***	080	80
Moosonee	-6	1	5	-16	0	28	030	32
North Bay A	2	3	15	-7	8	9	060	59
Ottawa Int'l A	3	2	15	-4	34	28	060	61
Petawawa A	4	4	19	-4	23	17	060	44
Pickle Lake	-5	1	11	-19	4	5		X
Red Lake A	-3P	1P	8P	-13P	0P	***	060	48
Sioux Lookout A	-2	2	11	-14	0	5	060	43
Sudbury A	1	3	13	-8	5	6	030	63
Thunder Bay A	0	2	11	-11	3	3	040	33
Timmins A	-2	2	12	-17	3	27	040	52
Toronto(Pearson Int'l A)	4	2	17	-1	22	3	070	46
Trenton A	3	0	16	-3	29	14	060	74
Wiarton A	2	1	12	-3	32	16	060	63
Windsor A	5	0	18	-2	24	***	050	44
Québec								
Bagotville A	0	2	10	-12	1	7	130	48
Baie Comeau A	-2	1	4	-10	1	32	320	41
Blanc Sablon A	-7	***	2	-15	1	32	260	67
Gaspé A	-2	1	6	-10	1	22	280	46
Inukjuak A	-18	-2	-8	-27	2	27		X
Kuujjuaq A	-14	-1	-2	-26	2	29	300	46
Kuujjuarapik A	-15	-3	0	-22	1	18	350	54
La Grande Rivière A	-11	-1	3	-25	1	39		X
Mont Joli A	-2	-1	8	-8	1	12	050	56
Montréal Int'l A	2	0	14	-6	36	20	050	44
Natashquan A	-7P	-3P	4P	-19P	1P	51	270	46
Québec A	1	2	10	-4	3	37	070	65
Schefferville A	-13	-2	1	-23	1	***	320	59
Sept-Îles A	-4	-1	4	-14	1	25	330	61
Sherbrooke A	1	2	15	-6	39	41	060	33
Val-d'Or A	-1	3	12	-11	3	8	050	41
New Brunswick								
Fredericton A	1	0	12	-6	37	27	060	63
Miscou Island (aut)	-3P	-1P	2P	-10P	0P	***		X
Moncton A	-2	-2	10	-10	35	32	020	59
Saint John A	1	0	14	-6	26	18	080	48
St Leonard A	0	***	14	-13	6	44	060	44
Nova Scotia								
Greenwood A	1	-1	15	-7	19	9	070	54
Shearwater A	1	-1	9	-7	44	12	090	67
Sydney A	0P	1P	11P	-9P	11P	14	340	43
Yarmouth A	3	0	12	-3	37	5	100	56
Prince Edward Island								
Charlottetown A	-2	-1	11	-9	31	30	020	63
East Point (auto)	-2	***	3	-8	10	***		X
Newfoundland								
Cartwright	-7	-2	3	-17	7	178	310	104
Churchill Falls A	***		***	-***	0P	***	290	54
Gander Int'l A	-4	-3	5	-13	6	24	270	59
Goose A	-7	-2	5	-18	1	41	270	50
Stephenville A	-2	-2	6	-10	1	22	320	52
St John's A	-3	-3	7	-10	21	11	020	52
St Lawrence	-1	-1	10	-9	11	8		X
Wabush Lake A	-11	-2	3	-25	1	19	310	37

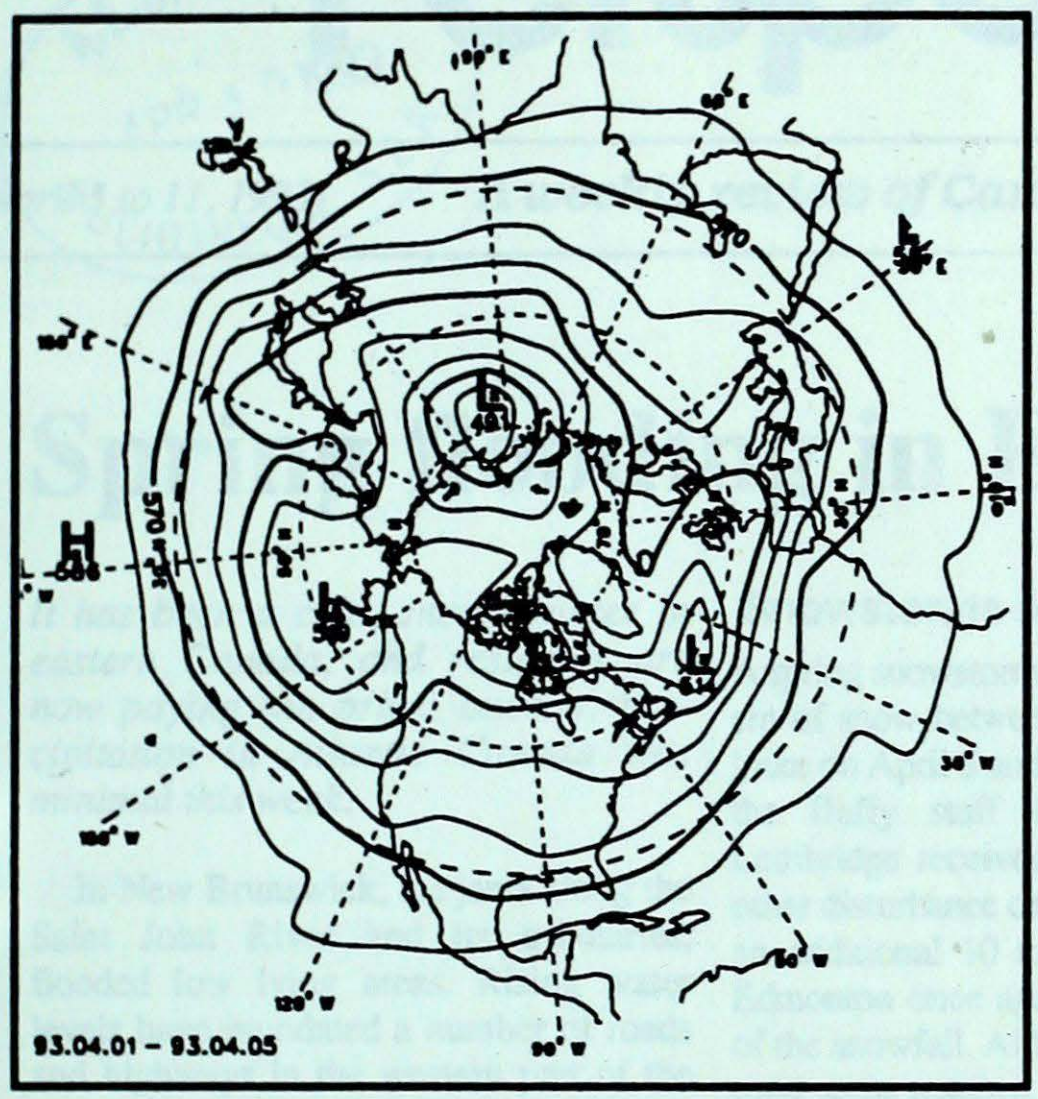
93/03/29-93/04/04

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

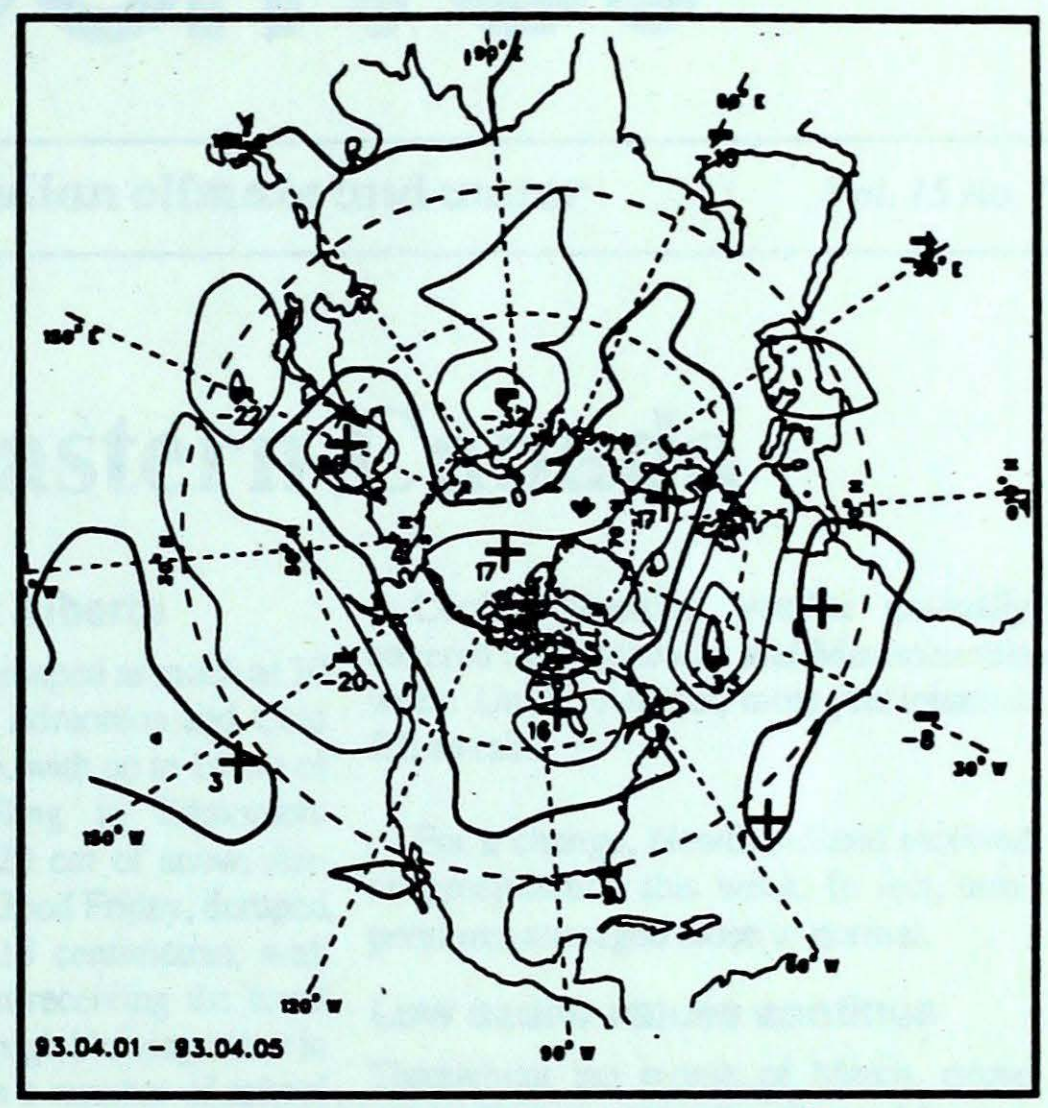
ptot = weekly precipitation total in mm
st = snow thickness on the ground in cm
dir = direction of max wind, deg. from north.
vel = wind speed in km/h

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

50-kPa ATMOSPHERIC CIRCULATION



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



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

Environmental Citizenship

Compact fluorescent light bulbs use 20 to 30 percent of the energy of regular incandescent lights. They may cost more, but last 10 times longer! The energy you save can help pay for the cost of the bulb, and will also reduce carbon dioxide emissions.

An environmental citizenship message from Environment Canada.