



Climatic Perspectives

ARCH. C2.

July 16 to 22, 1990

A weekly review of Canadian climate and water

Vol. 12 No 29

Hot, Dry Weather Fuels Forest Fires in the Yukon and British Columbia

A continuation of the hot, dry weather touched off numerous forest fires in many areas of the Yukon and British Columbia, while in other areas, the risk of fire is now rated as high to extreme.

Across the Yukon, record-breaking heat and smoke characterized the third week of the month. By mid-week, a ridge of high pressure dominating the Yukon produced 39 tied or broken daily maximum temperatures between the 19th and 22nd. The hot spot for the week was Mayo with 32°C on the 21st, breaking the daily maximum of 28°C established in 1982. Smoke from 29 forest fires made for very uncomfortable conditions across the central and northern parts of the Yukon. The acrid smoke caused residents of Old Crow to be evacuated over the weekend. By the end of the week, 16 fires were under observation and 13 fires were being fought. There have been 90 fires so far this year (destroying 52,317 hectares of forest), compared to the 171 fires which raged across the Yukon in 1989.

Across B.C. the threat of forest fires was moderate to high with extreme conditions in a few areas as indicated on the map. There were 161 fires burning across the province by the end of the week, with only two out of control. So far this year, there have been 816 fires claiming 4,537 hectares of forest.

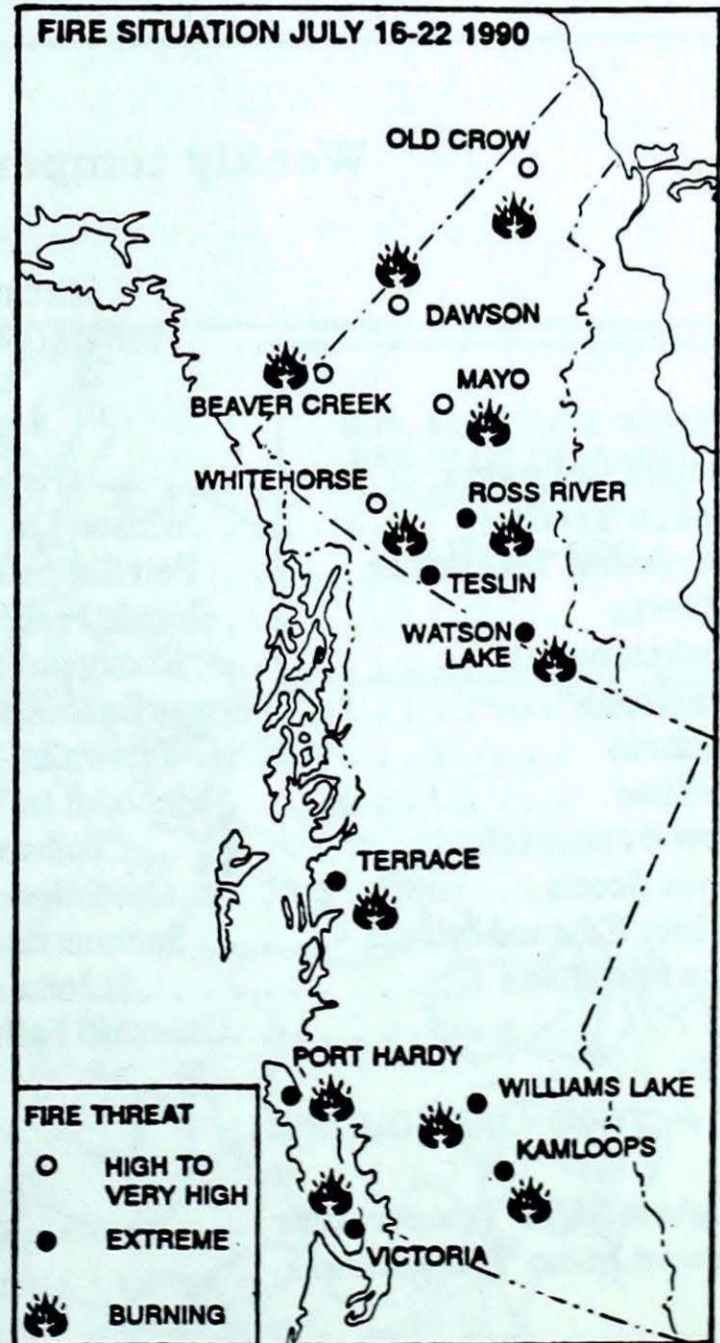
Prairie Agriculture Generally Good

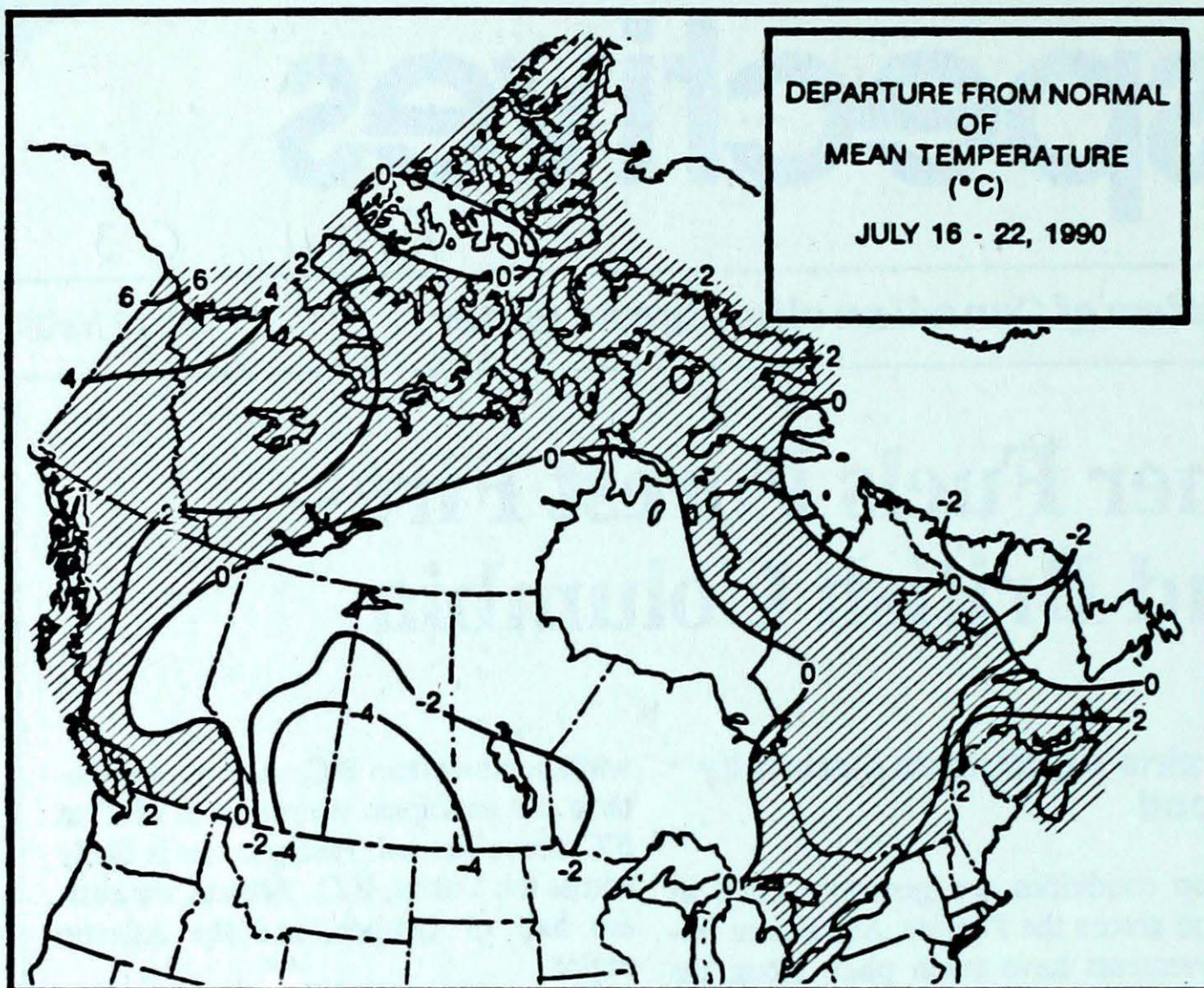
Crop conditions are generally rated as good across the Prairies. Significant improvements have taken place along the northern border between Alberta and Saskatchewan from Cold Lake to Vegreville, Alta., to Biggar, Sask. Parts of southeastern Alberta, the southern border region of Alberta and Saskatchewan and southwestern Saskatchewan have reported crop stress due to a lack of moisture in the soil. Soil moisture reserves are well below normal in the Lethbridge and Brooks areas of Alberta and the Saskatoon, Wynyard and Kindersley areas of Saskatchewan. Isolated thunderstorms caused severe hail and wind damage in parts of southern Saskatchewan on the 16th.

Hot weather shifts into the Prairies...

For the week of July 30, above-normal temperatures are expected for all of Canada except near to slightly below-normal temperatures are expected for the Arctic Islands. Manitoba and Saskatchewan may soar to temperatures of 5° to 7°C above normal,

while southwestern B.C., Alberta, and Ontario can anticipate temperatures of 2° to 5°C above normal. Precipitation is likely across the Yukon, B.C., Alberta, the eastern half of Quebec, and the Atlantic region.





Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	19.8	8.1
Iqaluit A	11.9	4.2
Yellowknife A	21.5	12.5
Vancouver Int'l A	22.2	12.9
Victoria Int'l A	22.1	11.1
Calgary Int'l A	24.0	9.9
Edmonton Int'l A	22.6	9.3
Regina A	27.0	12.2
Saskatoon A	26.2	12.1
Winnipeg Int'l A	26.7	14.0
Ottawa Int'l A	26.8	15.5
Toronto (Pearson Int'l A)	27.5	15.0
Montréal Int'l A	26.9	16.3
Québec A	25.5	13.9
Fredericton A	26.2	13.6
Saint John A	22.7	12.0
Halifax (Shearwater)	22.3	13.5
Charlottetown A	23.2	14.2
Goose A	21.3	10.2
St John's A	20.4	11.1

Weekly temperature and precipitation extremes

	Maximum temperature (°C)	Minimum temperature (°C)	Heaviest precipitation (mm)
British Columbia	Hope A 35	Smithers A 2	Fort St John A 26
Yukon Territory	Watson Lake A 31	Komakuk Beach A 6	Watson Lake A 32
Northwest Territories	Fort Simpson A 32	Alert -3	MacKar Inlet 35
Alberta	Grande Prairie A 29	Edson A 2	Edmonton Int'l A 28
Saskatchewan	Rockglen (aut) 32	Estevan A 4	Collins Bay 14
Manitoba	Portage La Prairie A 28	Thompson A 3	Gillam A 33
Ontario	Ottawa Int'l A 32	Moosonee 1	Upsala (aut) 66
Québec	Montréal Int'l A 30	Kuujuuaq A -1	Sherbrooke A 58
New Brunswick	Chatham A 33	St-Léonard A 9	St-Léonard A 9
Nova Scotia	Greenwood A 32	Western Head (aut) 9	Greenwood A 15
Prince Edward Island	Summerside A 30	Charlottetown A 13	Charlottetown A 3
Newfoundland	St John's A 26	Nain A 2	Churchill Falls A 36
	Churchill Falls A 26		

Across The Country...

Highest Mean Temperature	Greenwood A(NS) 24
Lowest Mean Temperature	Mould Bay A(NWT) 3

90/07/16-90/07/22

CLIMATIC PERSPECTIVES
VOLUME 11

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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.

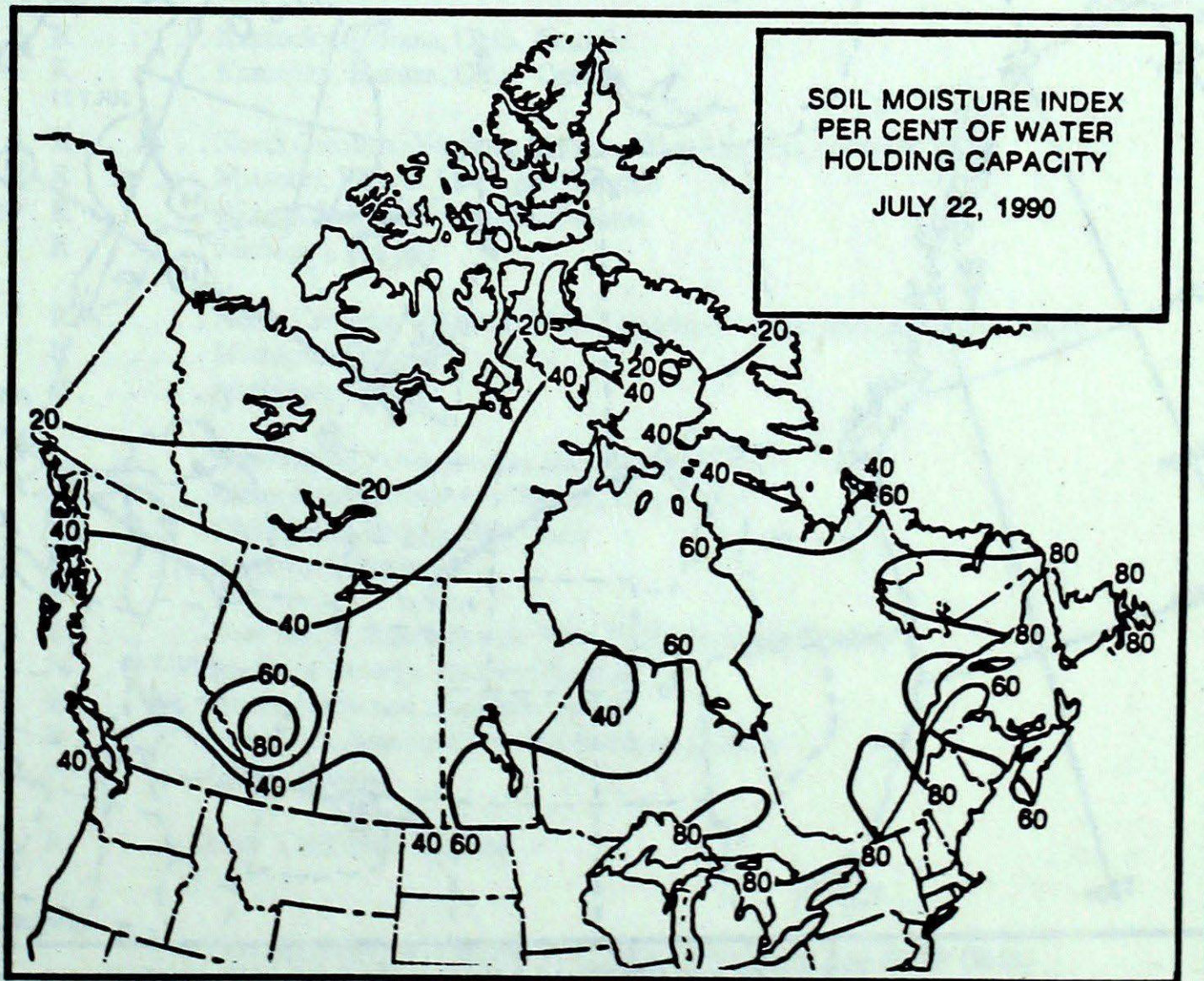
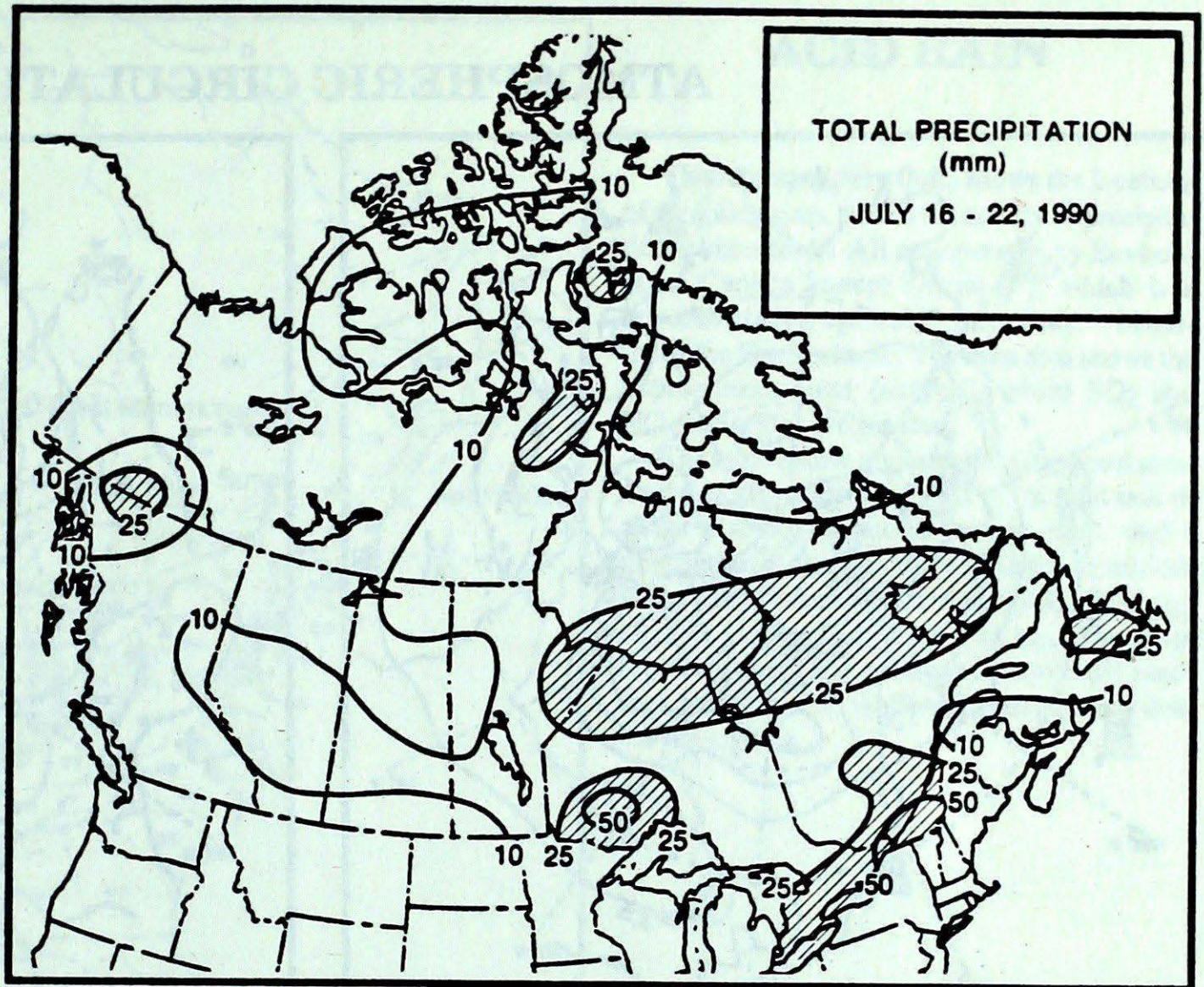
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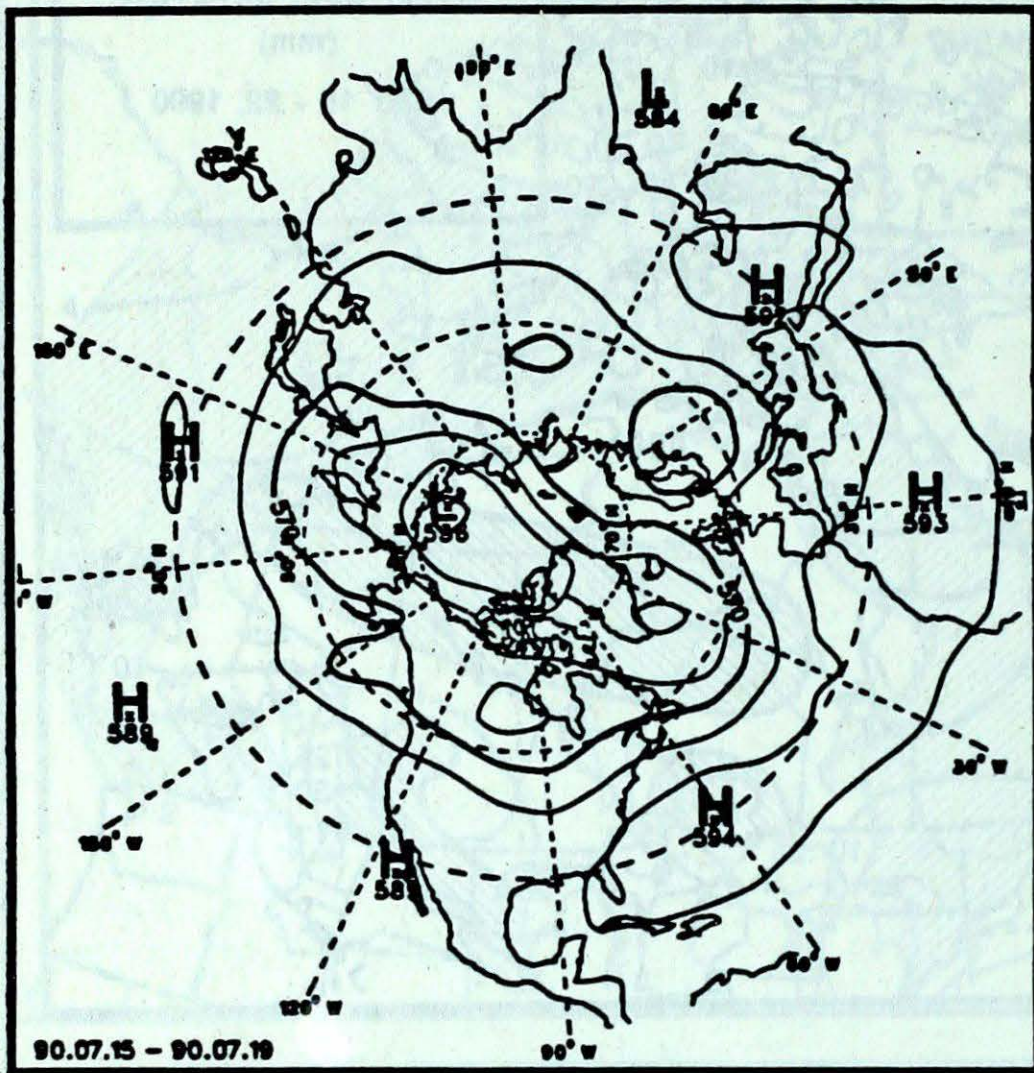
weekly and monthly : \$35.00
foreign: \$42.00
monthly issue: \$10.00
foreign: \$12.00

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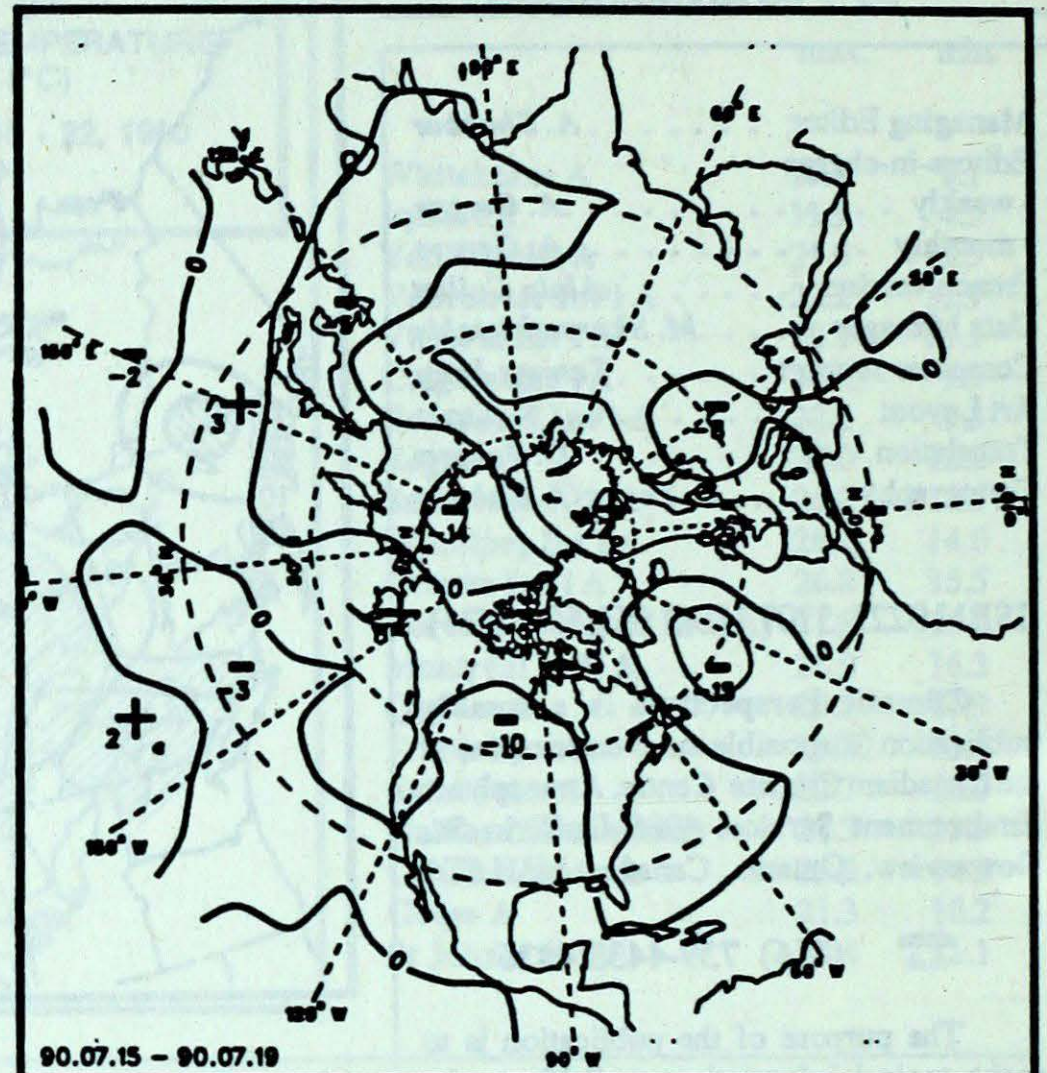
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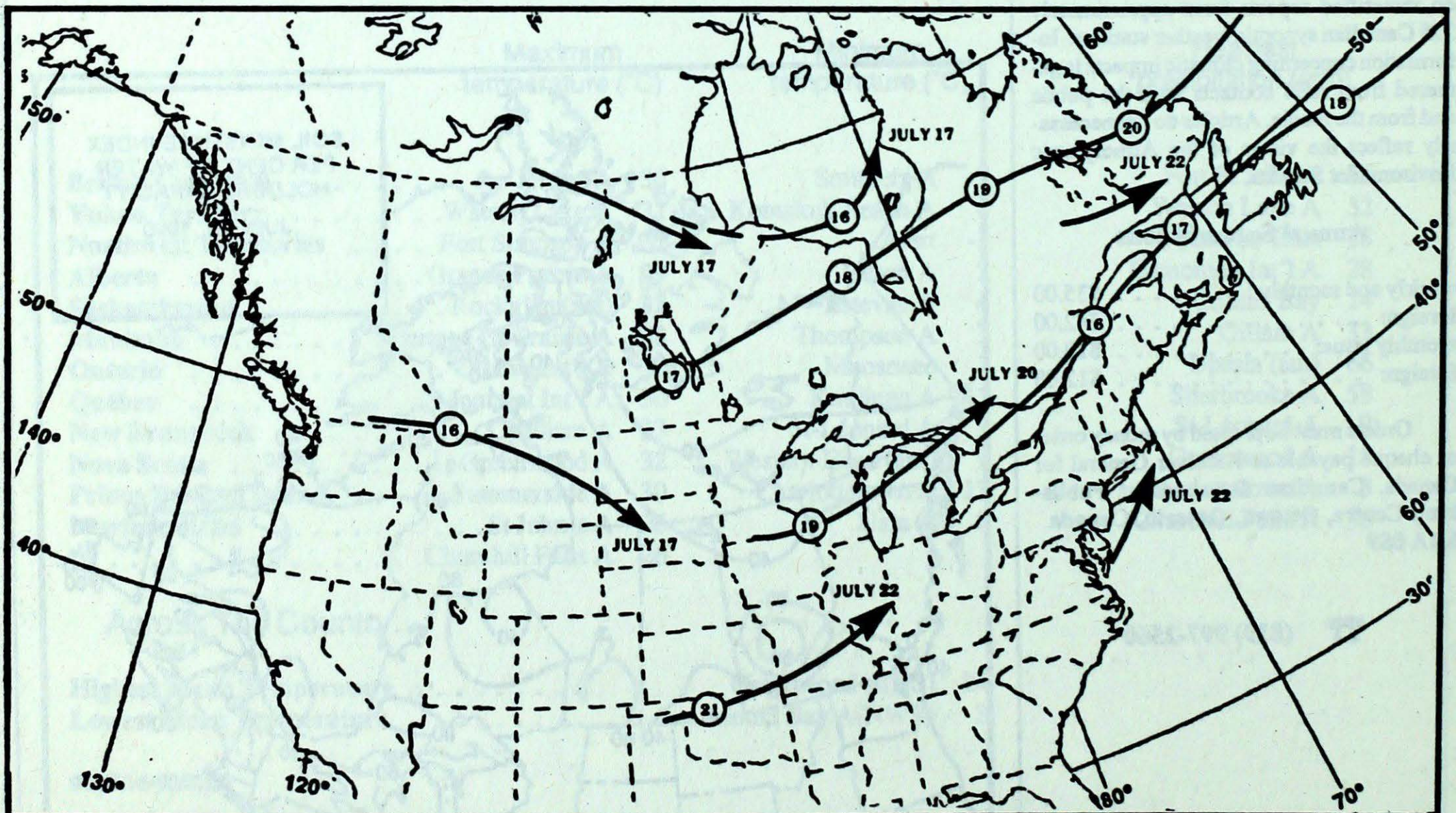
ATMOSPHERIC CIRCULATION



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

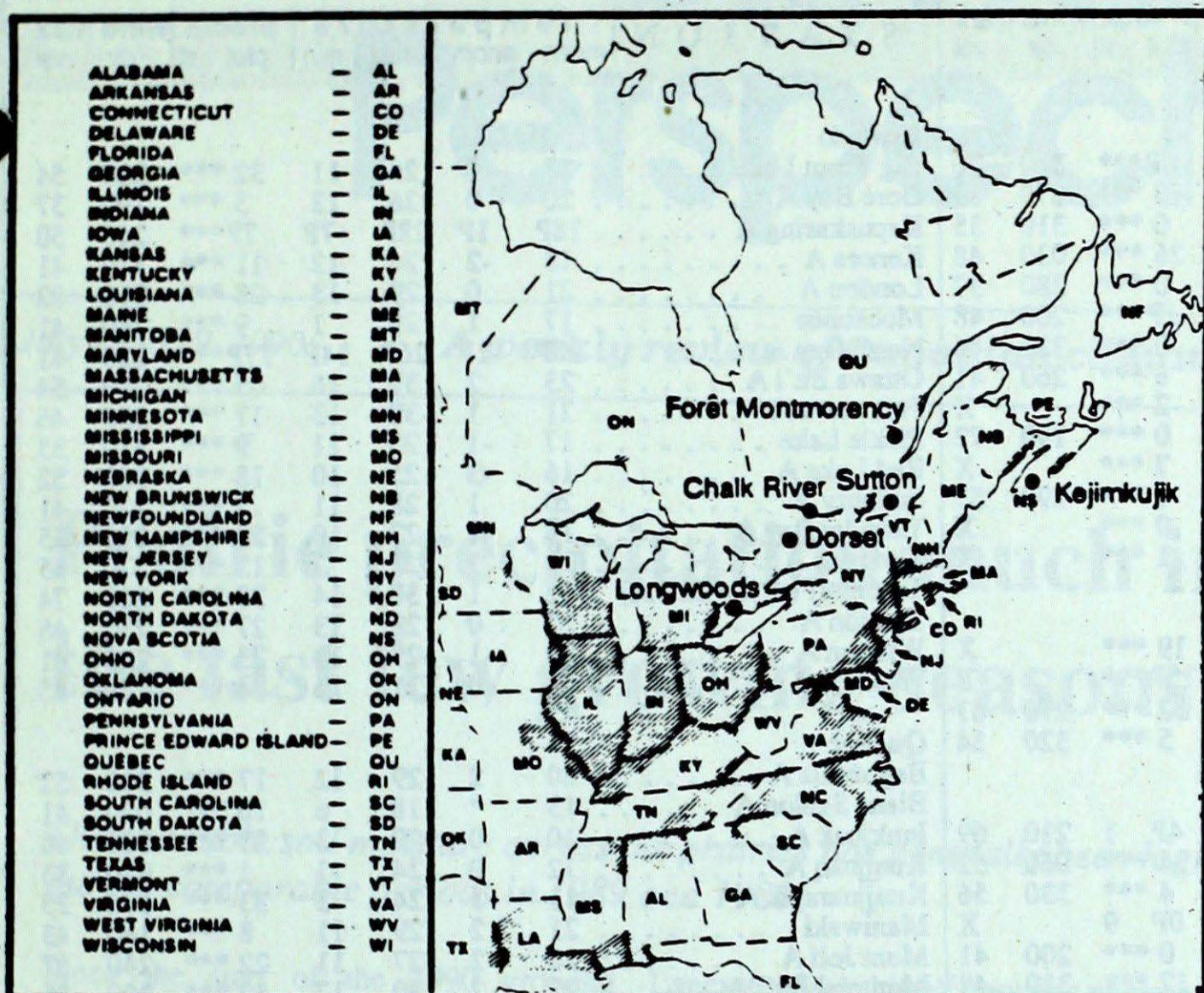


Mean geopotential height anomaly
50-kPa level (10 decametre intervals)



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

ACID RAIN



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 SO₂ 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	July 15 to 21, 1990
Longwoods	18	4.0	2 R	.....	Kentucky, Indiana, Ohio, Ontario
	19	3.3	6 R	.....	Kentucky, Indiana, Ohio, Ontario
Dorset *	15	4.2	5 R	.....	North Carolina, Virginia, Ontario, West Virginia, Pennsylvania
	17	4.6	3 R	.....	Missouri, Illinois, Michigan, Ontario
	19	4.6	19 R	.....	Illinois, Indiana, Michigan, Ontario
	20	4.5	6 R	.....	Michigan, Ontario
Chalk River	15	4.3	7 R	.....	North Carolina, Virginia, West Virginia, Pennsylvania, Southern Ontario
	19	4.4	7 R	.....	Michigan, Ontario
	20	4.9	1 R	.....	Michigan, Ontario
Sutton	15	4.4	4 R	.....	New Jersey, Pennsylvania, New York
	17	3.8	9 R	.....	Pennsylvania, Southern Ontario, New York
	19	3.8	6 R	.....	Ohio, Pennsylvania, New York
	20	4.3	18 R	.....	Southern Ontario
Montmorency	15	4.7	8 R	.....	New Jersey, Pennsylvania, New York, Southern Quebec
	16	4.9	11 R	.....	Southern Ontario, Southern Quebec
	17	4.8	6 R	.....	Southern Ontario, Southern Quebec
	18	4.3	17 R	.....	New York, Southern Ontario, Southern Quebec
	20	4.9	5 R	.....	Ontari, Quebec
Kejimkujlk	20	3.6	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									
	mean	anom	max	min	ptot	st	dir	vel		mean	anom	max	min	ptot	st	dir	vel								
British Columbia									Ontario																
Cape St James	14P	1P	19P	11P	0P***		300	76	Big Trout Lake	17	0	26	11	32***		280	54								
Cranbrook A	19	0	30	7	0***		270	39	Gore Bay A	20	0	26	13	3***		190	37								
Fort Nelson A	18	2	31	7	0***		310	35	Kapuskasing A	18P	1P	28P	7P	7P***		240	50								
Fort St John A	15	-1	27	8	26***		030	48	Kenora A	18	-2	26	12	11***		310	41								
Kamloops A	22	1	34	12	0***		280	37	London A	21	0	29	13	28***		310	82								
Penticton A	22P	1P	32P	11P	1P***		200	48	Moosonee	17	1	29	1	9***		240	41								
Port Hardy A	16	2	25	9	0***		321	46	North Bay A	20P	1P	26P	14P	17P***		220	41								
Prince George A	15	0	28	4	6***		260	41	Ottawa Int'l A	23	2	32	16	65***		210	54								
Prince Rupert A	15	2	26	8	2***		X		Petawawa A	21	1	30	13	17***		250	46								
Revelstoke A	21	2	30	11	0***		190	72	Pickle Lake	17	-1	25	11	9***		310	35								
Smithers A	15	1	30	2	7***		X		Red Lake A	16	-3	25	10	18***		300	52								
Vancouver Int'l A	20	2	30	13	0***		290	57	Sudbury A	20	1	28	11	2***		220	41								
Victoria Int'l A	19	2	32	8	0***		X		Thunder Bay A	18	-1	27	10	39***		090	65								
Williams Lake A	15	0	29	6	1***		X		Timmins A	19	1	28	7	12***		270	65								
Yukon Territory									Toronto (Pearson Int'l A)																
Komakuk Beach A	14	7	24	6	19***		X		Trenton A	22	0	28	13	27***		230	46								
Teslin (aut)	17P	*	28P	7P	15P***		X		Warton A	20	1	29	13	23***		230	61								
Watson Lake A	17	2	31	6	32***		270	67	Windsor A	23	0	31	16	34***		240	65								
Whitehorse A	17	3	30	6	5***		320	54	Québec																
Northwest Territories									Bagotville A																
Alert	4P	0P	13P	-3P	4P 1		210	69	Blanc Sablon A	13	*	18	6	10***		080	41								
Baker Lake A	10	-2	20	3	34***		060	52	Inukjuak A	10	0	20	3	23***		060	48								
Cambridge Bay A	9	1	17	3	4***		330	56	Kuujuuaq A	12	0	24	-1	1***		070	33								
Cape Dyer A	8P	3P	16P	2P	0P 9		X		Kuujuarapik A	11	1	24	3	33***		170	35								
Clyde A	8	3	20	1	0***		200	41	Maniwaki	21	2	29	11	8***		160	43								
Coppermine A	12	4	23	4	17***		310	48	Mont Joli A	20	2	27	11	22***		240	57								
Coral Harbour A	9	-1	18	3	7***		070	56	Montréal Int'l A	23	2	30	17	49***		300	85								
Eureka	6	0	11	2	4***		190	57	Natashquan A	14P	-1P	21P	8P	4P***		290	46								
Fort Smith A	16	-1	31	8	4***		X		Québec A	21	1	29	12	44***		300	63								
Hall Beach A	7	2	17	2	11***		310	61	Schefferville A	14	2	24	6	40***		260	41								
Inuvik A	19	4	27	10	6***		300	35	Sept-Îles A	16	1	24	10	24***		080	48								
Iqaluit A	8	0	21	1	2***		X		Sherbrooke A	20	2	28	14	58***		230	33								
Mould Bay A	3	0	13	0	2***		280	56	Val-d'Or A	19	2	27	9	13***		230	46								
Norman Wells A	20	3	32	10	0***		X		New Brunswick																
Resolute A	4	0	10	0	16***		020	50	Charlo A	21P	3P	29P	11P	2P***		290	48								
Yellowknife A	18	1	27	11	1***		X		Chatham A	22	3	33	11	2***		220	37								
Alberta									Fredericton A																
Calgary Int'l A	14	-4	25	4	24***		030	54	Moncton A	22	2	31	11	2***		290	44								
Cold Lake A	14	-4	24	8	23***		030	50	Moncton A	22	3	31	11	0***		330	59								
Edmonton Namao A	14	-4	25	6	10***		270	44	Saint John A	20	3	29	11	2***		230	41								
Fort McMurray A	15	-2	29	5	2***		X		Nova Scotia																
High Level A	15	-1	29	3	1***		350	43	Greenwood A	24	4	32	14	15***		260	63								
Jasper	14	-2	28	4	16***		X		Shearwater A	21	4	31	13	4***		250	43								
Lethbridge A	15	-4	28	6	3***		320	57	Sydney A	20	2	32	11	8***		260	46								
Medicine Hat A	17	-4	28	6	22***		030	39	Yarmouth A	19	2	26	14	1***		230	39								
Peace River A	15	-1	26	7	5***		X		Prince Edward Island																
Saskatchewan									Charlottetown A																
Cree Lake	14	-2	27	8	7***		290	37	Summerside A	23	3	30	15	1***		210	50								
Estevan A	16	-5	29	4	8***		320	56	Newfoundland																
La Ronge A	16	-1	27	8	13***		330	41	Cartwright	9	-4	19	4	14***		X									
Regina A	16	-4	27	7	0***		320	63	Churchill Falls A	14P	0P	26P	6P	36P***		300	33								
Saskatoon A	15	-4	27	5	6***		310	41	Gander Int'l A	16	0	25	6	24***		320	46								
Swift Current A	15	-4	27	5	4***		320	39	Goose A	12	-4	22	6	29***		X									
Yorkton A	15	-4	27	6	11***		290	44	Port Aux Basques	14P	0P	21P	9P	18P***		090	46								
Manitoba									St John's A																
Brandon A	16	-4	26	7	3***		350	78	St Lawrence	15	2	22	8	35***		160	52								
Churchill A	12	-1	23	7	8***		330	56	Wabush Lake A	15	2	22	8	35***		X									
Lynn Lake A	16	0	27	9	15***		310	48	Environment Canada / Environnement																
The Pas A	17	-2	28	8	3***		340	39	CLIMATIC PERSPECTIVES																
Thompson A	15	-1	28	3	8***		290	56	Vol: 12 No: 29 Date: 900722																
Winnipeg Int'l A	18	-2	27	11	10***		030	50	1005959D REF 2																

mean = mean weekly temperature, °C
 max = maximum weekly temperature, °C
 min = minimum weekly temperature, °C
 anom = mean temperature anomaly, °C
 ptot = weekly precipitat
 st = snow thickness or
 dlr = direction of max wi
 vel = wind speed in km

CLIMATIC PERSPECTIVES

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