

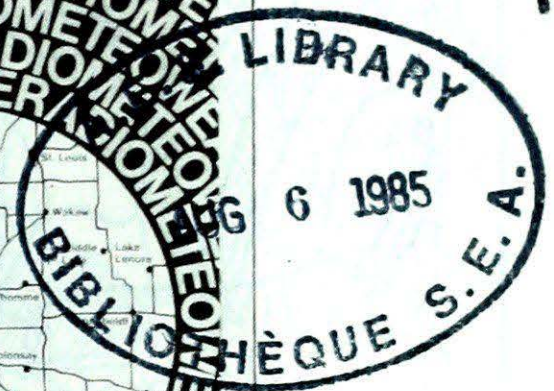
Climatic Perspectives

MONTHLY SUPPLEMENT INCLUDED

A weekly review of Canadian climate

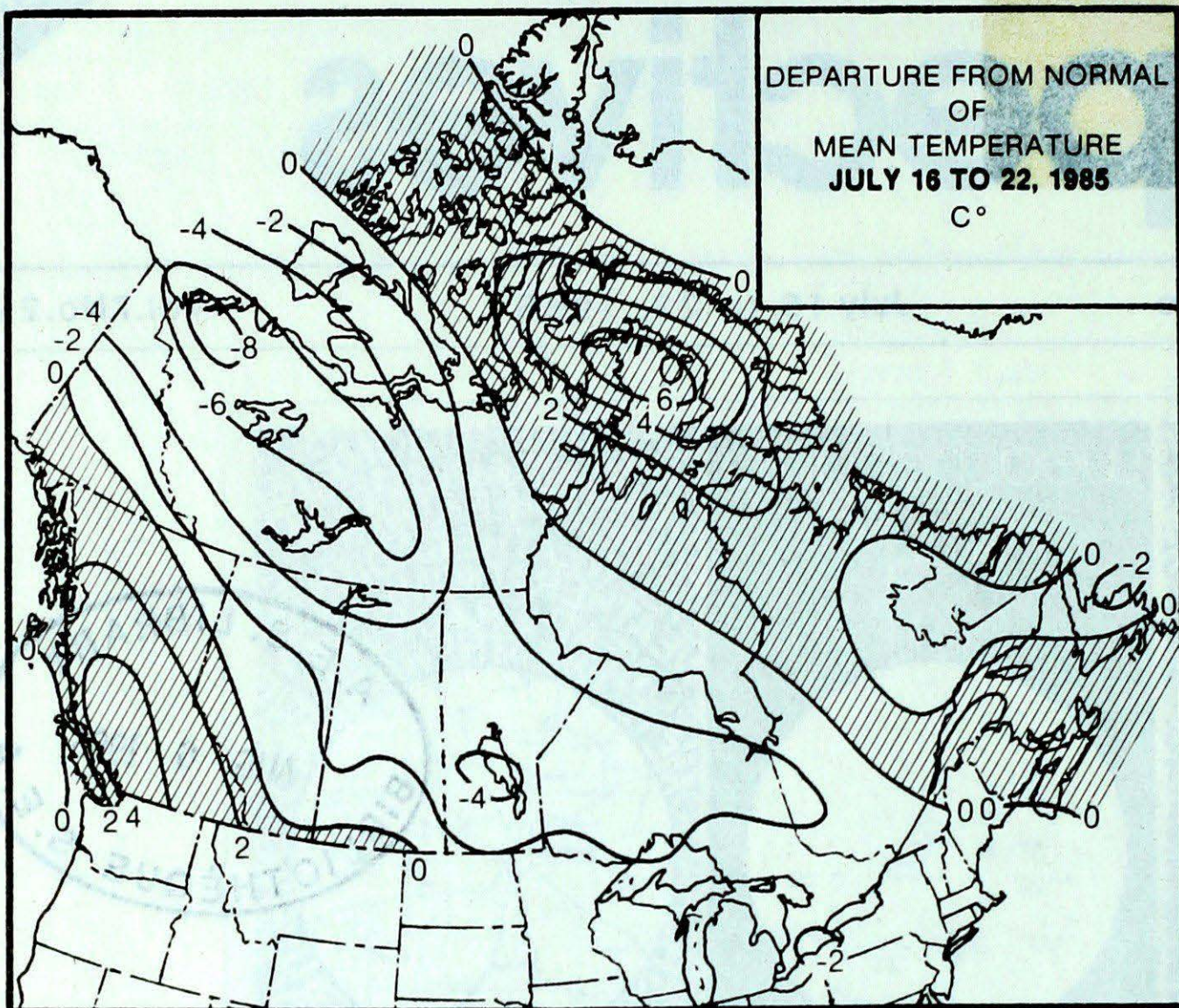
July 16 to 22, 1985

Vol.7 No.29



- **Too dry in the west, too wet in Atlantic Canada**
- **Tropical storm ANA crosses Newfoundland**

ACROSS THE COUNTRY...



Yukon and Northwest Territories

Unseasonably cool weather continued over the western half of the Territories, the only exception was the southern Yukon where the readings were slightly above normal. The mercury reached 27.9°C at Haines Junction on July 17. Baffin Island also experienced temperatures that were several degrees above normal. The weather was excessively wet in the Mackenzie District, some localities received in excess of 38 mm of rain.

British Columbia

Hot and dry weather continued over the southern two thirds of the Province. The temperatures were 2 to 4 degrees above normal and little or no rain fell. No measurable precipitation fell at Castlegar in the last 37 days and Vancouver received only 0.8 mm since June 1. Forest fire danger was rated at extreme, the largest fire was burning in the Fraser Canyon. The town of North Bend was evacuated when fire threatened the lives of the residents. Northern B.C. was cool and wet.

WEEKLY TEMPERATURE EXTREMES (°C)

	<u>MAXIMUM</u>	<u>MINIMUM</u>
YUKON TERRITORY	26.0 Watson Lake	-3.8 Komakuk Beach
NORTHWEST TERRITORIES	24.0 Hay River	-3.1 Cape Hooper
BRITISH COLUMBIA	37.8 Penticton	0.2 Dease Lake
ALBERTA	36.0 Medicine Hat	2.0 Fort Chipewyan Rocky Mountain House
SASKATCHEWAN	39.6 Estevan	1.8 Collins Bay
MANITOBA	31.8 Brandon	1.0 Churchill Thompson
ONTARIO	29.8 Windsor	1.0 Armstrong
QUÉBEC	28.0 Montreal/Dorval	1.4 Quaqtaq
NEW BRUNSWICK	29.8 Chatham	8.9 Miscou Island
NOVA SCOTIA	35.5 Inverness	-1.1 Inverness
PRINCE EDWARD ISLAND	27.7 Summerside	11.0 Summerside
NEWFOUNDLAND	27.6 Deer Lake	2.8 Battle Harbour

ACROSS THE NATION

Warmest mean temperature	19.9	Williams Lake, BC
Coollest mean temperature	3.0	Tuktoyaktuk, NWT

Prairies

The Prairies cooled down this week. Although the temperatures were below normal in the central and northern localities, record-breaking hot weather (30 - 36°C) continued in southern Alberta and southwestern Saskatchewan. Precipitation was once again sparse in the drought-stricken areas of Alberta and Saskatchewan, less than 5 mm of rain fell south of Calgary. On July 16, severe weather struck southern Manitoba. Golf-ball size hail caused some local crop damage and a possible funnel cloud was sighted at Pilot Mound.

Ontario

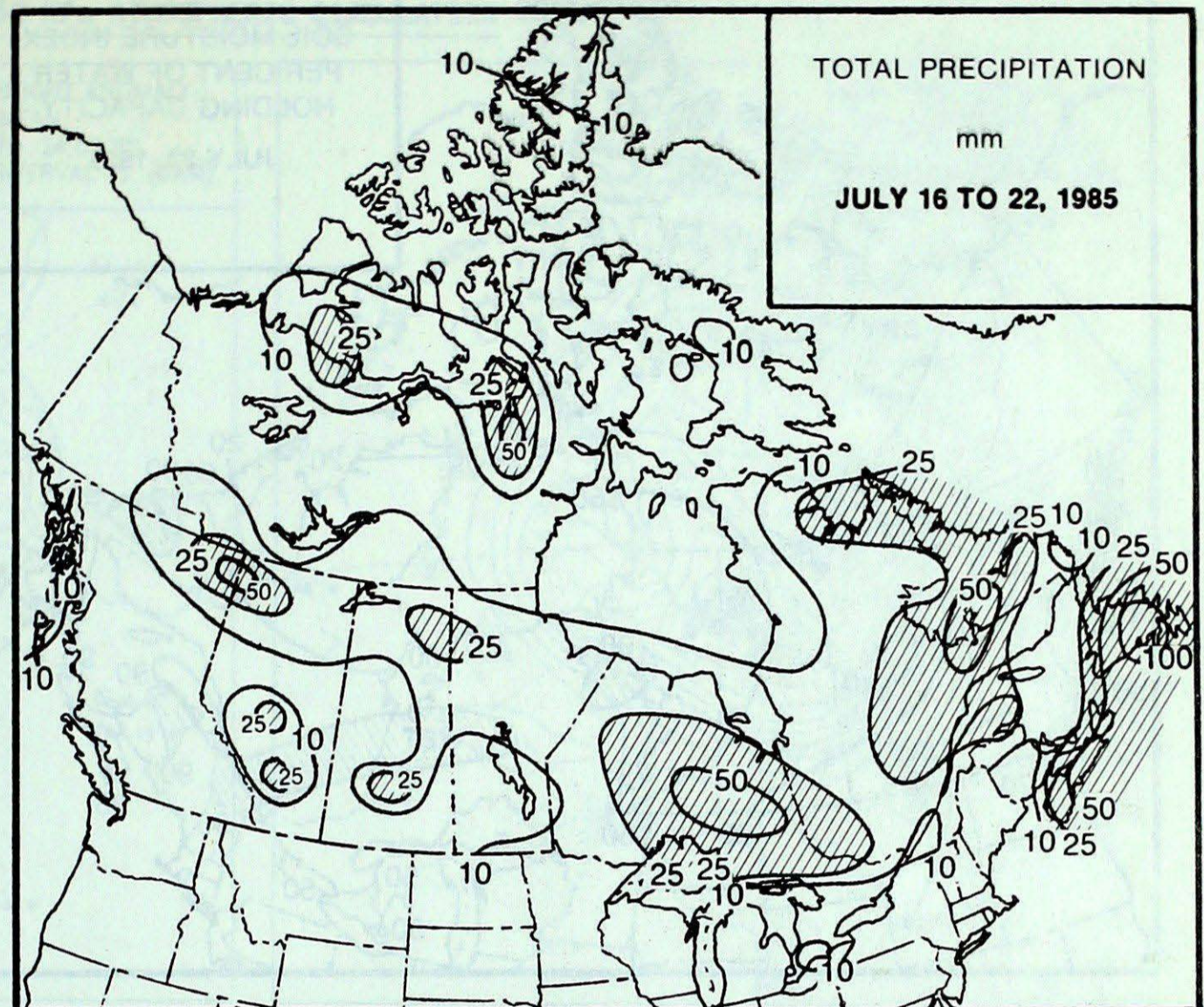
Although the week started with heavy precipitation in southern Ontario, the remainder of the week was sunny with slightly below normal temperatures. On July 15, severe thunderstorms dumped a record 90 mm of rain in Kitchener. Northern Ontario's weather was cloudy and damp. Rainfall amounts ranged from 25 to 45 mm and the temperatures were near normal, but dropped drastically over the weekend. On July 22, a small tornado touched down near Cochrane. One house was damaged, a \$20,000 aeroplane and a \$12,000 mobile home were destroyed. No one was injured.

Quebec

Mean temperatures were near normal. Values varied from 21°C in the Ottawa and Montreal regions to 8-10°C near the shores of Hudson Bay. Precipitation exceeded 30 mm in Saguenay, Maniwaki, Val d'Or and Sept-Isles. So far this month, measurable precipitation, (amounting to 120 mm), fell on 18 days at Val-d'Or. On July 16, 1.5 cm hail was reported at Sherbrooke. No forest fire activity was reported at the end of the week.

Atlantic Provinces

Wet weather continued to cause some problems to the farmers particularly in Nova Scotia. On the 16th and 17th, showers and thundershowers deposited just over 100 mm of rain on Shelburne, 92.2 mm of which fell in a 12-hour period. On the 18th, tropical storm Ana dropped just over 80 mm of rain on Sable Island. Rainfall amounts in Nova Scotia have just about exceeded the July normals. Newfoundland also received large amounts of rain. Drier weather was experienced over Labrador, New Brunswick and Prince Edward Island. The temperatures were near normal throughout the Provinces.

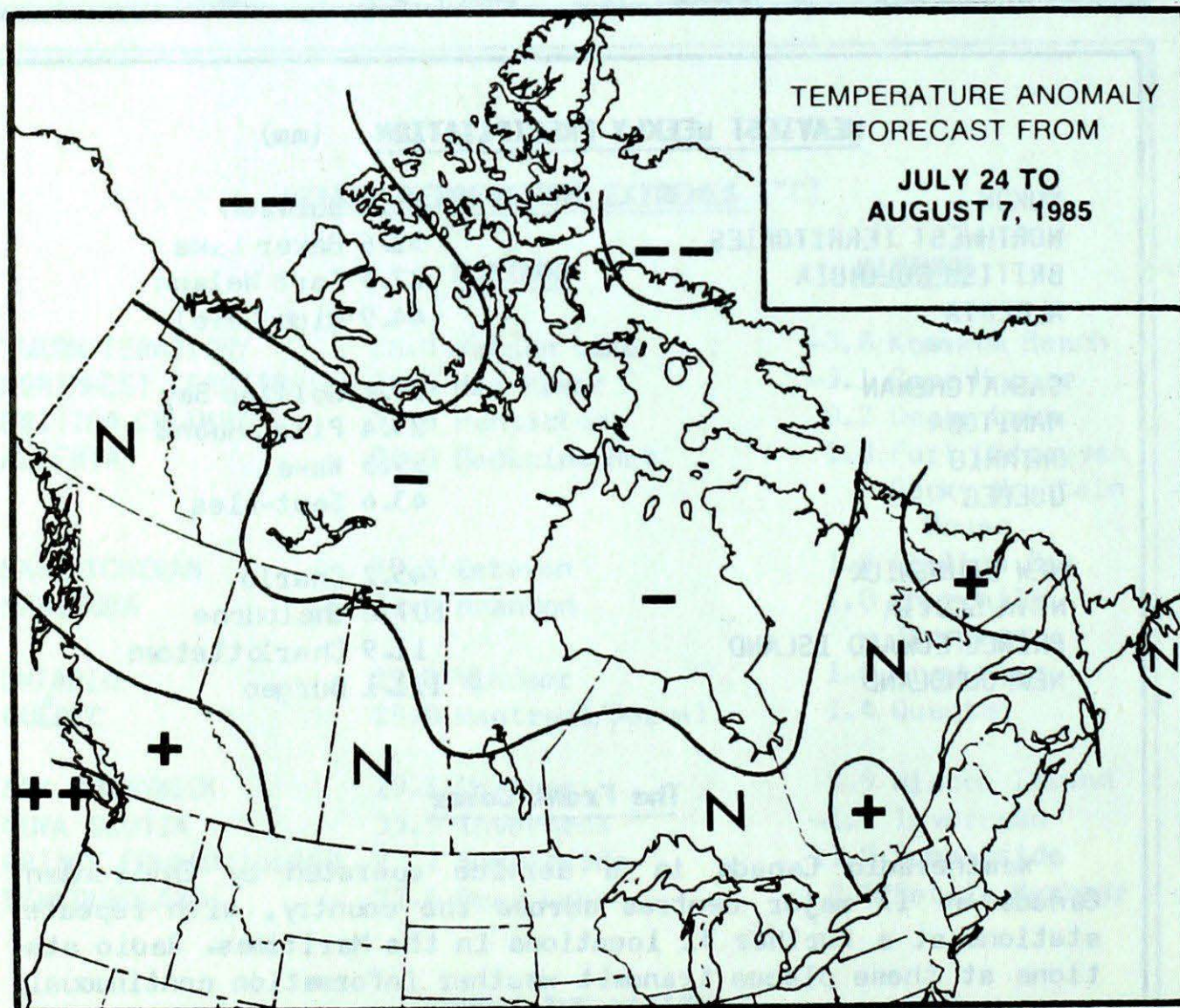
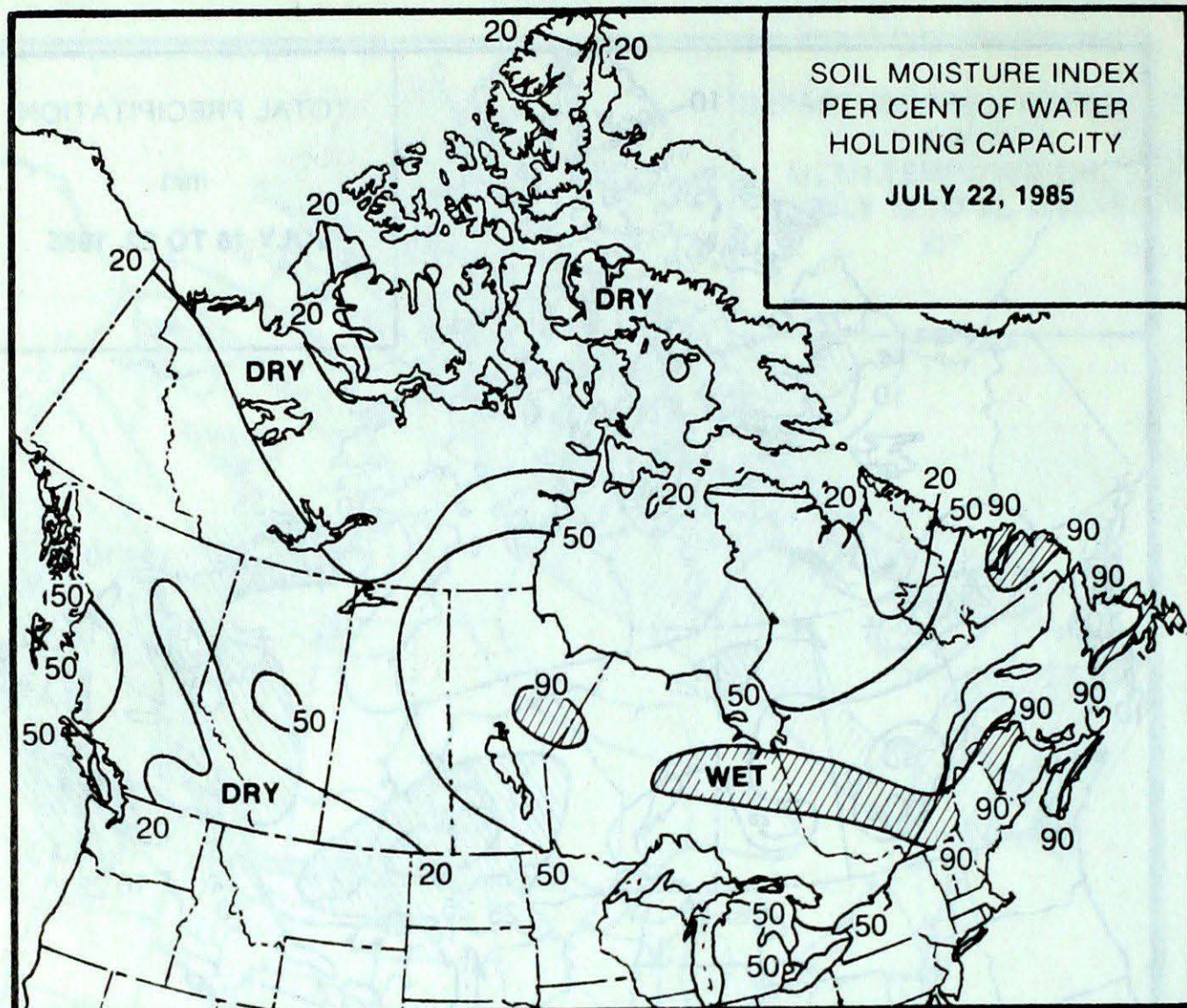


HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	15.2 Burwash
NORTHWEST TERRITORIES	52.6 Baker Lake
BRITISH COLUMBIA	27.5 Fort Nelson
ALBERTA	44.9 High Level
SASKATCHEWAN	39.1 Collins Bay
MANITOBA	23.4 Pilot Mound
ONTARIO	55.5 Wawa
QUEBEC	43.4 Sept-Isles
NEW BRUNSWICK	45.2 Charlo
NOVA SCOTIA	107.0 Shelburne
PRINCE EDWARD ISLAND	11.9 Charlottetown
NEWFOUNDLAND	111.1 Burgeo

The Front Cover

Weatheradio Canada is a service operated by Environment Canada at 13 major centres across the country, with repeater stations at a further 31 locations in the Maritimes. Radio stations at these places transmit weather information continuously over VHF-FM frequencies and provide up-to-the-minute weather forecasts, reports, and warnings. The service alerts users to warnings of severe weather automatically, provided receivers are equipped with suitable warning devices. These receivers emit a loud, continuous tone signal and/or flashing light when warnings are broadcast. For more about Weatheradio Canada, see the article "Tornado Preparedness" on page 8B, and also Climatic Perspectives, vol. 5, no. 24, page 5A.



Temperature Anomaly Forecast

- ++ much above normal
- + above normal
- N normal
- below normal
- much below normal

This forecast is prepared by searching historical weather maps to find cases similar to the present. The historical outcome during the 15 days subsequent to the chosen analogues is assumed to be a forecast for the next 15 days from now.

CLIMATIC PERSPECTIVES VOLUME 7

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It began in 1978 and in 1983 was expanded to include a monthly supplement (formerly known as the *Canadian Weather Review*). The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socioeconomic impact.

Unsolicited articles are welcome but should be at maximum about 1500 words in length. They will be subject to editorial change without notice due to publishing time constraints. Black and white photographs can be used, but not colour. The contents may be reprinted freely with proper credit.

The data shown 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.

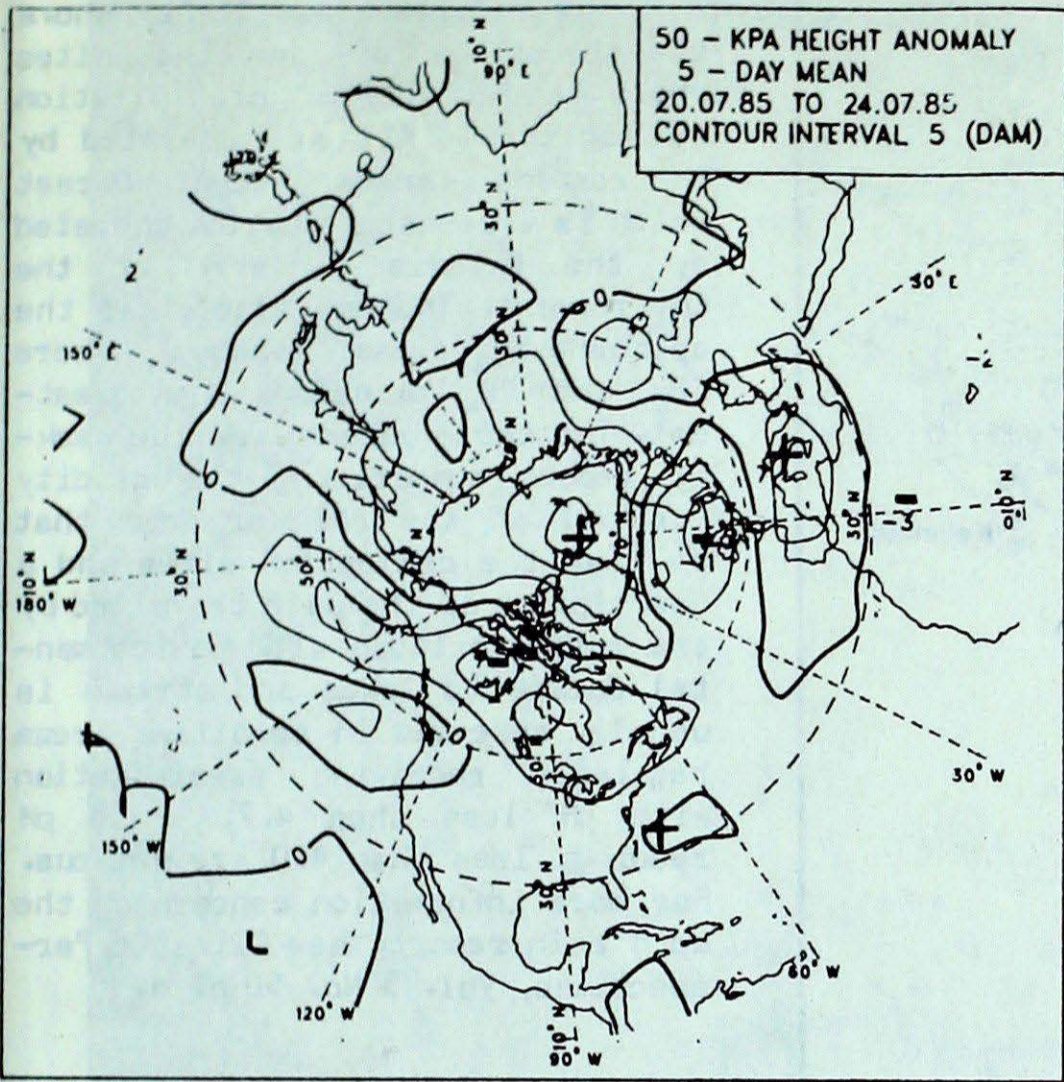
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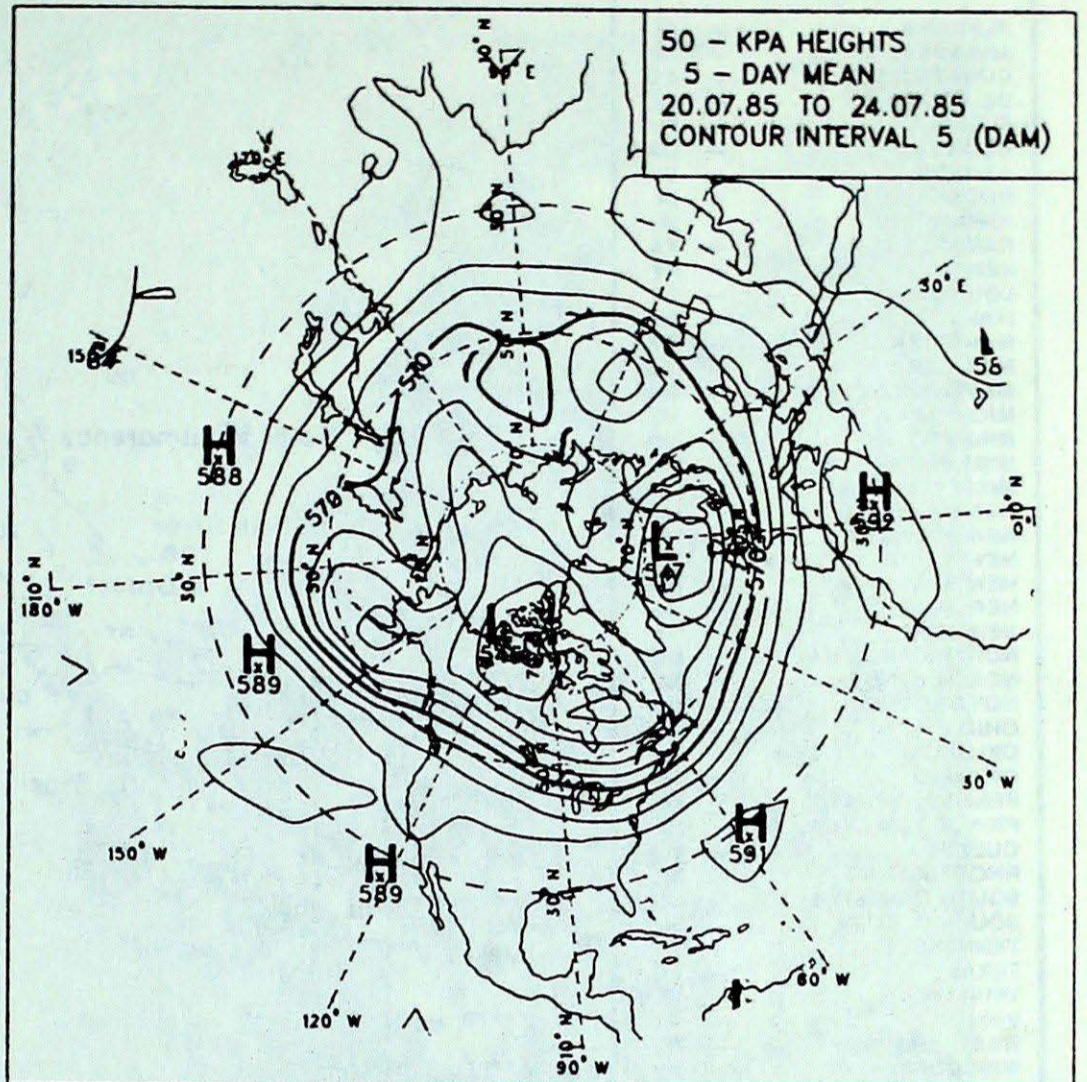
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Note: Climatic Perspectives will not be published next week. Next issue, Vol. 7 No. 30, will be published the week of August 5, 1985.

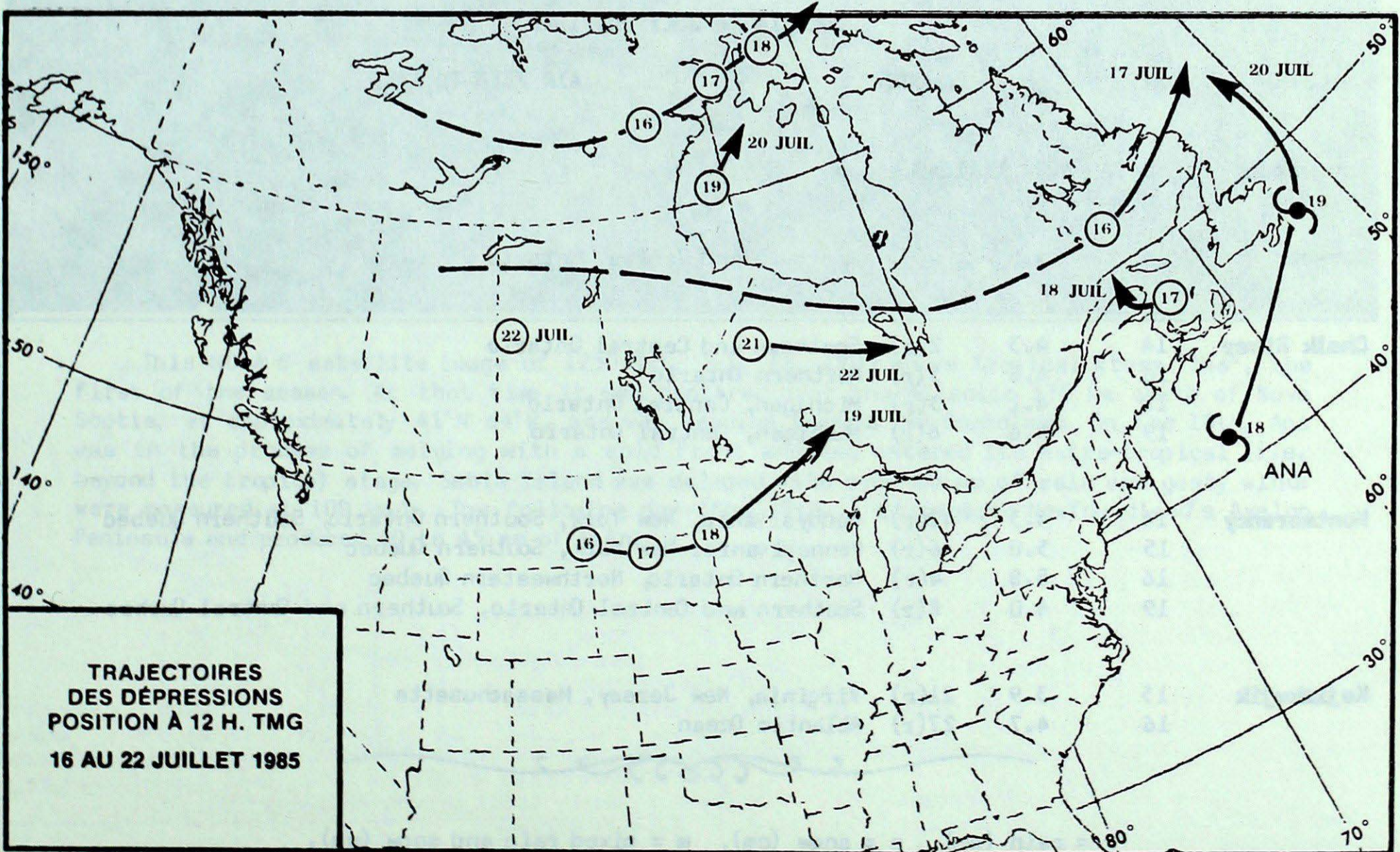
50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)
July 20 to July 24, 1985

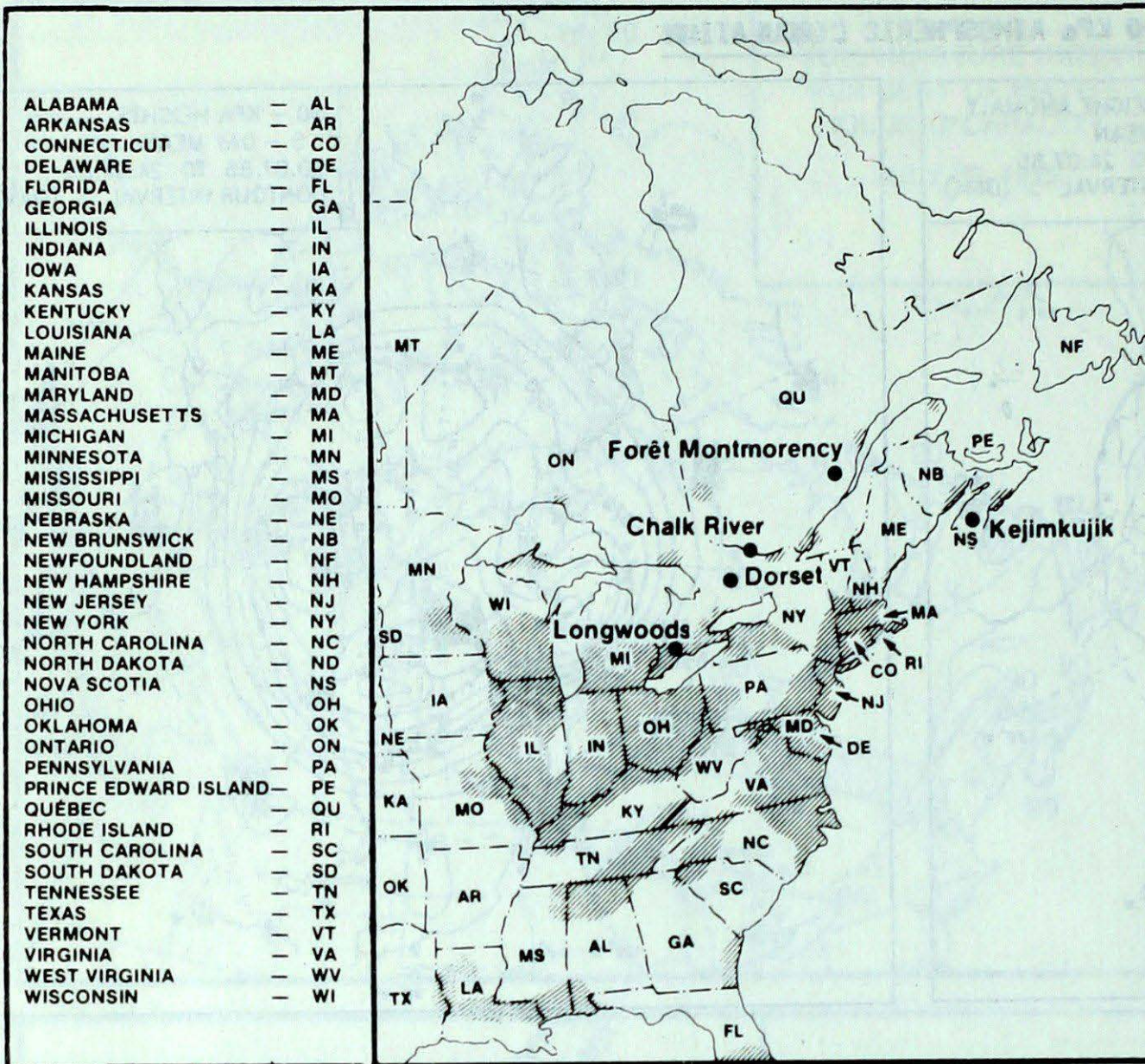


MEAN 50 KPa HEIGHTS (dam)
July 20 to July 24, 1985



TRAJECTOIRES
DES DÉPRESSIONS
POSITION À 12 H. TMG
16 AU 22 JUILLET 1985

ACID RAIN REPORT

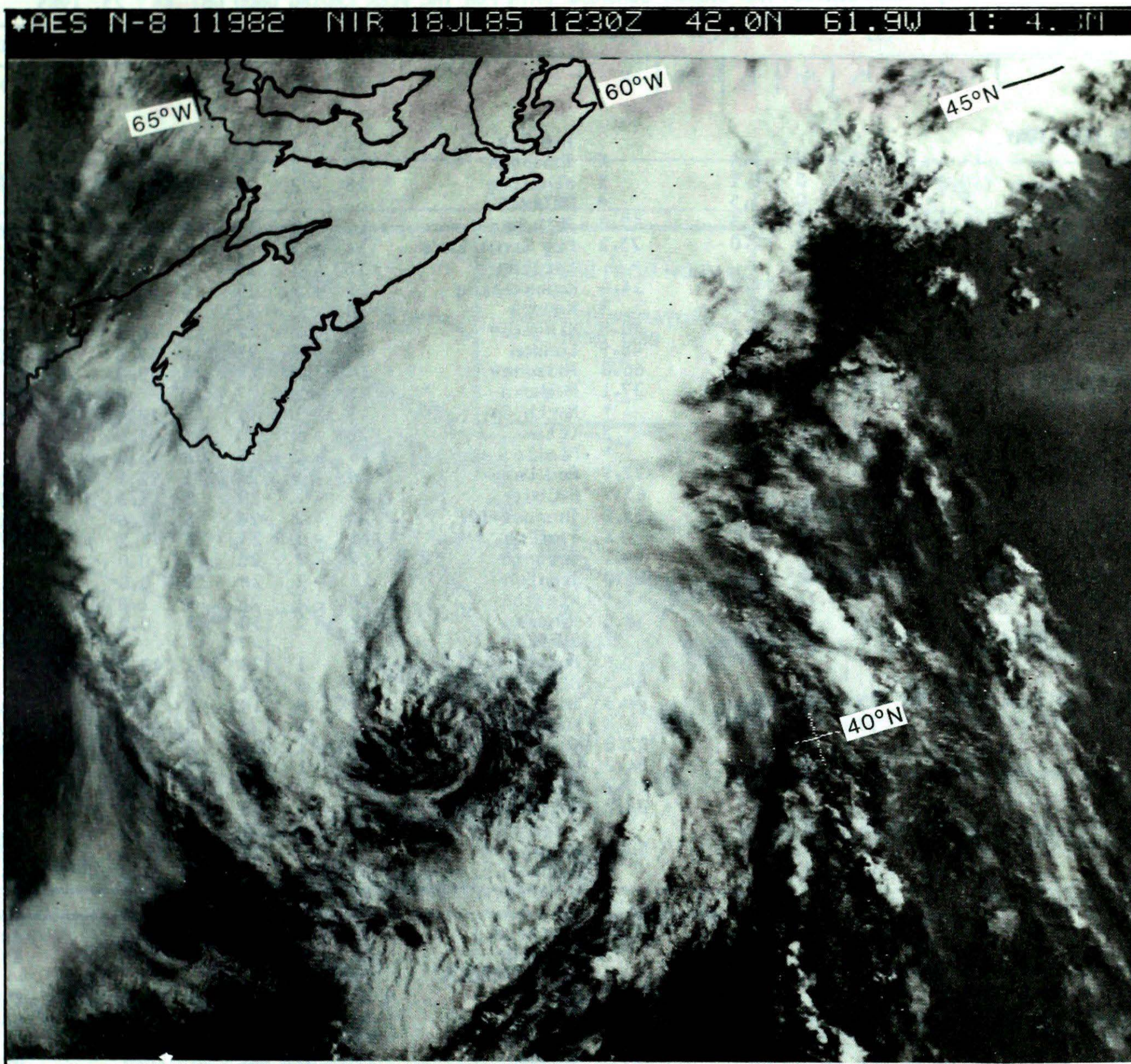


The reference map (left) shows the locations of sampling sites where the acidity of precipitation is monitored. All are operated by Environment Canada except Dorset which is a research station operated by the Ontario Ministry of the Environment. The map also shows the approximate areas (shaded) where SO₂ and NO_x emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the 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 less than 4.7, while pH readings less than 4.0 are serious. For more information concerning the acid rain report, see Climatic Perspectives, Vol. 5 No. 50 p. 6.

JULY 14 to JULY 20, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	DATA NOT AVAILABLE			
Dorset	16	4.8	4(r)	Northern and Central Ontario
Chalk River	14	4.3	2(r)	Southern and Central Ontario
	16	4.8	5(r)	Northern Ontario
	18	4.1	3(r)	Michigan, Central Ontario
	19	4.6	6(r)	Michigan, Central Ontario
Montmorency	14	4.3	42(r)	Pennsylvania, New York, Southern Ontario, Southern Quebec
	15	5.0	6(r)	Pennsylvania, New York, Southern Quebec
	16	5.8	4(r)	Northern Ontario, Northwestern Quebec
	19	4.0	8(r)	Southern and Central Ontario, Southern and Central Quebec
Kejimikujik	15	3.9	21(r)	Virginia, New Jersey, Massachusetts
	16	4.7	27(r)	Atlantic Ocean

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



This NOAA 8 satellite image of 1230 GMT, July 18, 1985 shows Tropical storm "Ana", the first of the season. At that time it was centered over the Atlantic 370 km south of Nova Scotia, at approximately 41°N 64°W, and was heading towards Newfoundland. On the 18th, Ana was in the process of merging with a cold front and had entered its extra-tropical (i.e. beyond the tropics) stage. Sable Island was deluged with over 80 mm of rain and gusty winds were measured at 100 km/h. The following day (the 19th,) it crossed Newfoundland's Avalon Peninsula and produced 40 to 45 mm of rain.



TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT JULY 23, 1985

STATION	TEMP				PRECIP	SUN	STATION	TEMP				PRECIP	SUN
	Av	Dp	Mx	Mn				Av	Dp	Mx	Mn		
YUKON TERRITORY							The Pas	15	-3	24	7	10.5	77.9
Dawson	14	-2	25	0	3.4	X	Thompson	13	-3	22	1	15.4	71.6
Mayo A	14	-1	23	5	6.2	X	Winnipeg	18	-2	29	8	*	*
Shingle Point	5	-7	11	0	3.5	*	ONTARIO						
Watson Lake	15	-1	26	3	8.3	62.8	Atikokan	16	-2	25	2	13.2	68.4
Whitehorse	14	0	25	3	2.0	73.2	Big Trout Lake	14	-2	23	6	28.6	73.8
NORTHWEST TERRITORIES							Earlton	16	-2	25	7	*	X
Coppermine	5	-5	11	1	37.6	14.4	Kapuskasing	15	-2	25	8	55.0	*
Fort Smith	12	-5	23	2	10.3	*	Kenora	18	-2	27	9	9.8	X
Inuvik	7	-8	16	2	2.2	30.8	Kingston	19	-2	27	12	0.0	79.1
Norman Wells	11	-6	20	3	2.8	48.9	London	19	-2	28	10	12.6	70.5
Yellowknife	12	-5	20	5	2.6	66.8	Mosonoe	14	-2	24	4	39.8	*
Baker Lake	10	-2	19	4	52.6	37.1	Muskoka	18	-1	27	10	*	X
Coral Harbour	11	2	22	5	0.6	*	North Bay	17	-1	26	9	30.4	56.4
Cape Dyer	7	1	15	-1	1.8	X	Ottawa	20	-1	29	13	21.4	*
Clyde	5	1	13	-2	0.0	*	Pickle Lake	16	-2	25	6	41.8	X
Frobisher Bay	10	1	20	2	4.6	72.9	Red Lake	16	-3	26	5	22.5	62.8
Alert	4	-1	11	-2	18.8	63.7	Sudbury	17	-2	28	8	16.6	67.5
Eureka	5	0	12	1	12.3	62.8	Thunder Bay	16	-2	26	6	21.6	72.6
Hall Beach	7	1	17	1	0.2	X	Timmins	15	-3	23	6	47.2	X
Resolute	6	1	12	1	3.1	44.2	Toronto	19	-2	28	11	0.0	X
Cambridge Bay	6	-3	11	2	5.0	25.4	Trenton	19	-2	28	12	0.0	X
Mould Bay	3	0	8	0	2.6	0.0	Warton	18	-1	28	9	1.8	76.2
Sachs Harbour	2	-4	6	-1	13.1	4.8	Windsor	22	-1	30	13	0.2	X
BRITISH COLUMBIA							QUEBEC						
Cape St. James	12	0	16	2	7.7	*	Bagotville	19	1	28	11	43.1	X
Cranbrook	22	3	37	7	5.0	84.3	Blanc-Sablon	13	1	21	7	12.4	*
Fort Nelson	15	-2	25	2	27.5	54.6	Inukjuak	9	0	18	5	6.4	34.3
Fort St. John	16	-1	28	7	0.8	X	Kuujuaq	13	2	25	5	25.0	47.3
Kamloops	25	4	36	13	5.6	92.8	Kuujuarapik	9	-1	24	2	6.6	54.8
Penticton	23	3	38	10	0.0	84.2	Maniwaki	17	-1	26	7	38.8	*
Port Hardy	15	1	21	9	0.0	60.7	Mont-Joli	18	1	26	12	13.8	65.3
Prince George	18	3	31	5	0.8	84.2	Montréal	20	-1	28	11	0.2	80.6
Prince Rupert	13	1	18	8	8.8	*	Natashquan	15	1	23	7	21.2	56.5
Revelstoke	22	4	37	11	1.4	80.6	Nitchequon	14	0	22	6	14.0	42.7
Smithers	17	3	28	6	1.8	*	Quebec	20	0	28	11	6.6	63.7
Vancouver	20	3	28	13	0.0	*	Schefferville	12	0	21	5	25.6	*
Victoria	18	2	30	9	0.0	103.2	Sept-Iles	16	0	25	10	43.4	49.3
Williams Lake	20	5	32	8	0.0	*	Sherbrooke	19	1	27	11	23.2	68.0
ALBERTA							Val-d'Or	15	-3	23	6	37.8	45.4
Calgary	17	0	32	6	28.2	72.1	NEW BRUNSWICK						
Cold Lake	16	-1	28	7	7.8	64.1	Charlo	18	0	27	10	45.2	81.0
Coronation	16	-2	33	6	10.8	67.0	Chatham	20	0	30	10	9.0	54.9
Edmonton Namao	17	-1	29	8	36.3	*	Fredericton	20	1	30	10	0.3	*
Fort McMurray	15	-2	28	2	21.5	70.3	Moncton	19	0	28	11	28.8	42.0
High Level	14	-1	26	3	44.9	58.7	Saint John	18	1	27	9	3.0	47.1
Jasper	18	2	32	5	0.0	79.3	NOVA SCOTIA						
Lethbridge	18	-1	35	6	3.8	*	Greenwood	20	0	28	10	37.4	X
Medicine Hat	20	0	36	7	3.6	82.7	Shearwater	18	0	27	12	54.6	*
Peace River	16	0	29	5	4.0	X	Sydney	19	0	26	12	58.8	39.2
SASKATCHEWAN							Yarmouth	16	-1	23	12	15.8	39.7
Cree Lake	13	X	21	4	7.0	72.4	PRINCE EDWARD ISLAND						
Estevan	21	0	40	10	4.0	72.9	Charlottetown	19	1	27	11	11.9	*
La Ronge	15	-1	25	6	8.1	*	Summerside	20	0	28	11	4.2	39.2
Regina	18	-1	37	7	4.8	74.3	NEWFOUNDLAND						
Saskatoon	18	-1	34	9	37.0	*	Gander	15	-2	25	9	90.8	14.4
Swift Current	18	-1	37	8	5.1	*	Port aux Basques	15	2	20	11	50.2	24.4
Yorkton	16	-3	34	5	4.2	69.5	St. John's	16	1	25	10	73.6	*
MANITOBA							St. Lawrence	13	1	23	10	87.8	X
Brandon	17	-3	32	6	8.6	*	Cartwright	14	1	27	5	25.2	49.3
Churchill	12	-1	19	1	20.6	64.2	Churchill Falls	13	-1	23	4	44.8	43.6
Lynn Lake	12	-3	24	3	21.4	66.8	Goose	16	0	27	8	45.0	45.6

Av = weekly mean temperature (°C)
Mx = weekly extreme maximum temperature (°C)
Mn = weekly extreme minimum temperature (°C)
Tp = weekly total precipitation (mm)
Dp = Departure of mean temperature from normal (°C)

SOG = snow depth on ground (cm), last day of the period
H = weekly total bright sunshine (hrs)
X = not observed
P = extreme value based on less than 7 days
* = missing