



Environment Canada

Environnement Canada

1005959D DEST EE

REF

COPY 02

VOL 5 ISS 35
CLIMATIC PERSPECTIVES

adiar

Climatic Perspectives

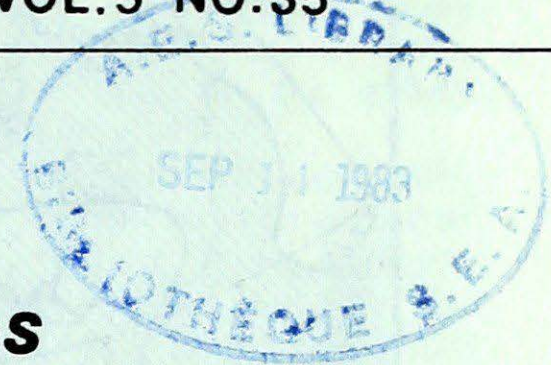
A WEEKLY REVIEW OF CANADIAN CLIMATE

SEPTEMBER 2, 1983

(Aussi disponible en français)

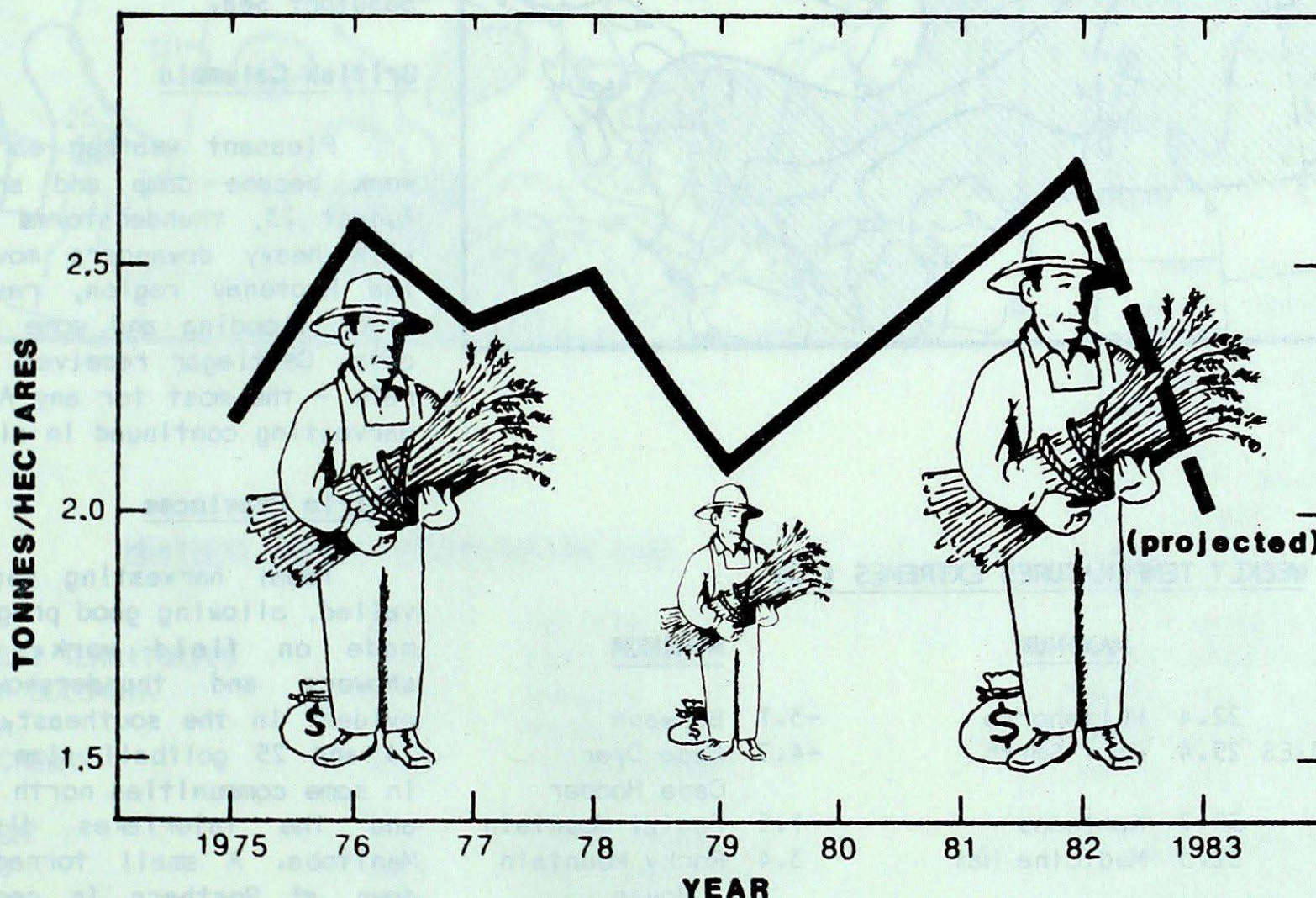
VOL. 5 NO. 35

FOR THE PERIOD AUGUST 23-29, 1983



• Prolonged hot and dry weather expected to reduce crop yields on the Prairies

YIELD OF SPRING WHEAT ACROSS THE PRAIRIES



Below normal rainfall and excessive heat have hastened crop ripening across the Prairies. Swathing and combining was general. Harvesting was about 2 weeks advanced in the South and 1 week ahead of schedule in the North. Owing to the heat stress, yields of grain crops are expected to be below normal - as much as 20 per cent in the drier areas. However, the quality of cereal and wheat may be one of the best in recent years. In southern Alberta, the depleting soil moisture reserves combined with heavy grasshopper infestations have affected the amount of fall crops being planted.

• Forecast of more warm temperatures on the Prairies

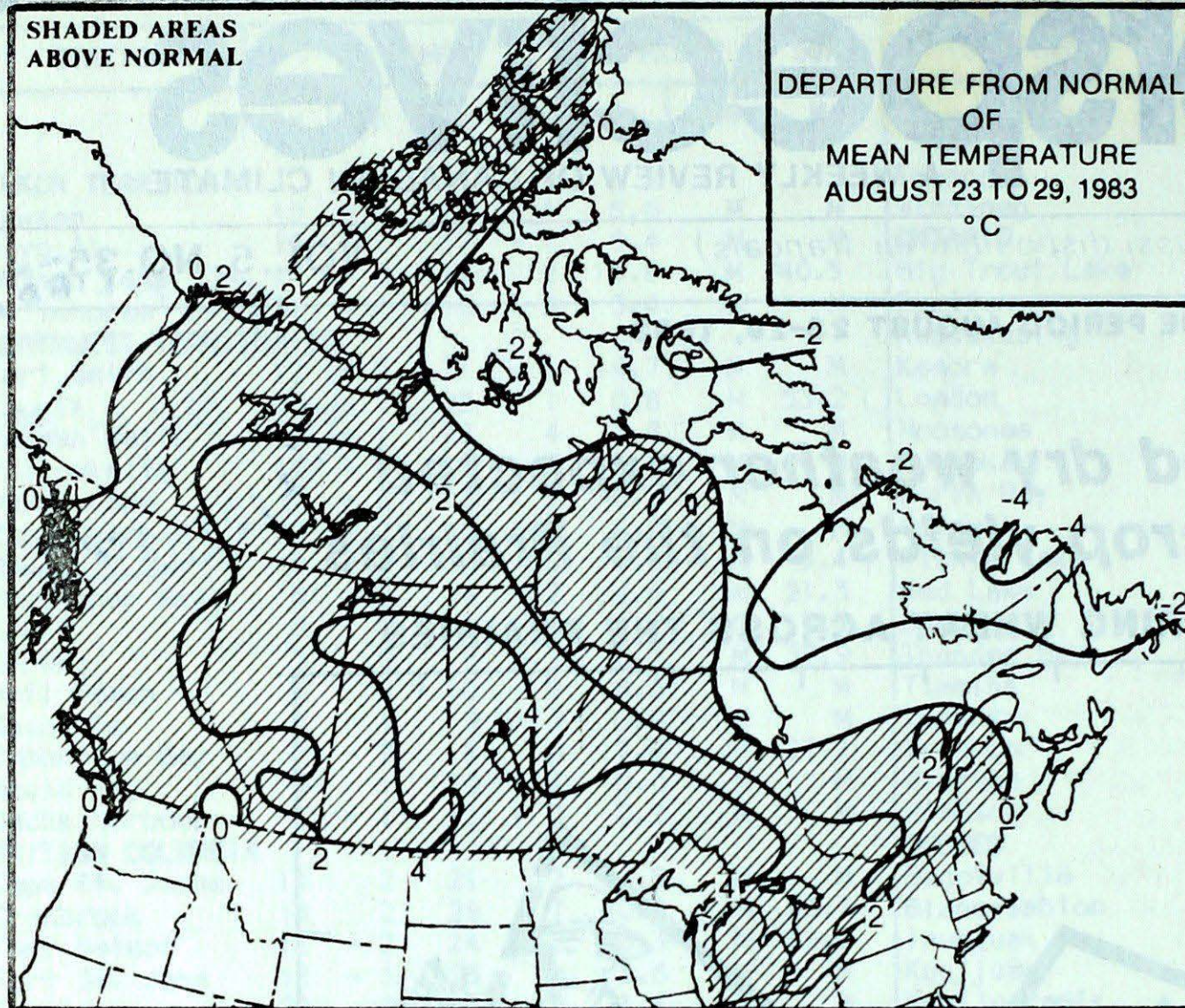
Temperature forecast.....page 4

ISSN 0225-5707
UDC: 551.506.1(71)

NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic stations.



ACROSS THE COUNTRY...



Yukon and Northwest Territories

The weather was notably cool across the Territories; mean temperatures were 2 to 4 degrees below normal. Only Mackenzie District had near normal values. A series of weather systems west of the Mackenzie Valley produced dull and damp weather in the Yukon. Most locations had 10 to 15 mm of rain with Ogilvie receiving the most - 21 mm. In Baffin Bay, the ice cover continued to be more extensive than normal. At times, the pack ice came within 10 km of the drill sites in the Beaufort Sea.

British Columbia

Pleasant weather early in the week became damp and showery. On August 23, thunderstorms associated with heavy downpours moved across the Kootenay region, resulting in minor flooding and some road wash-outs. Castlegar received 27.2 mm of rain - the most for any August day. Harvesting continued in all areas.

Prairie Provinces

Ideal harvesting weather prevailed, allowing good progress to be made on field work. Increased showers and thundershowers were evident in the southeast. On August 24 and 25 golfball size hail fell in some communities north of Dauphin and the Interlakes district of Manitoba. A small tornado touched down at Rosthern in central Saskatchewan.

A mean August temperature of 22.4° at Winnipeg surpassed the previous record of 21.6 set in 1961; in addition, the June to August summer period was the warmest ever.

Ontario

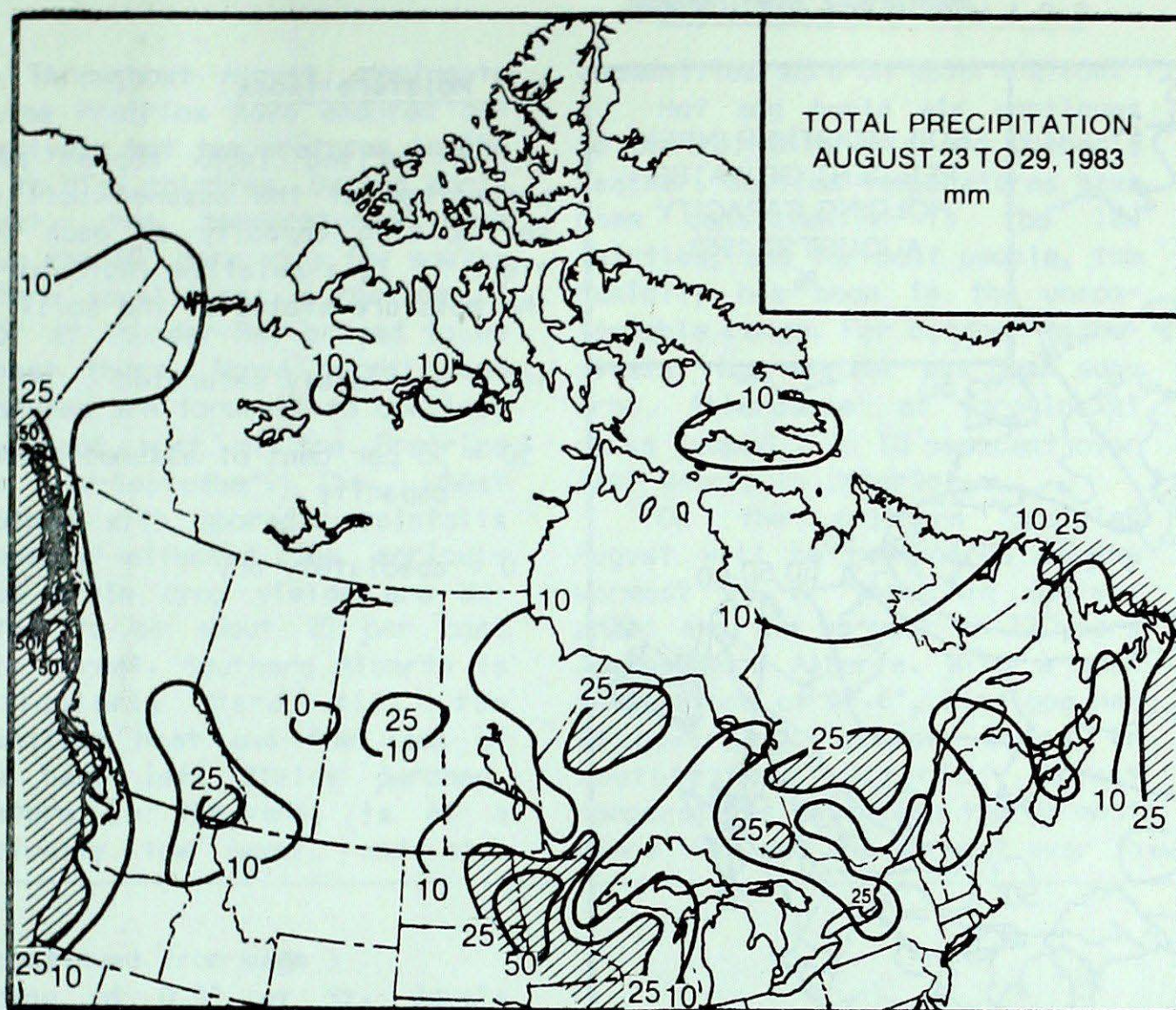
Ontarians continued to enjoy sunny, hot weather. Hours of bright sunshine ranged from 50 to 80 hrs. The weather was ideal for recreation; so for this year, attendance at parks, swimming pools and sports arenas were up significantly from recent years. According to The

WEEKLY TEMPERATURES EXTREMES (°C)

		<u>MAXIMUM</u>		<u>MINIMUM</u>	
YUKON TERRITORY	22.4	Whitehorse	-3.1	Burwash	
NORTHWEST TERRITORIES	25.4	Fort Smith	-4.7	Cape Dyer	
				Cape Hooper	
BRITISH COLUMBIA	30.7	Kamloops	-1.5	Puntzi Mountain	
ALBERTA	32.3	Medicine Hat	3.4	Rocky Mountain House	
SASKATCHEWAN	33.3	Estevan	5.0	Meadow Lake	
MANITOBA	34.1	Pilot Mound	3.9	Churchill	
ONTARIO	32.3	Toronto	3.0	Winisk	
QUEBEC	30.4	Montréal/Dorval	-1.0	Kuujuuaq	
NEW BRUNSWICK	28.3	Chatham	5.7	St. Stephen	
NOVA SCOTIA	26.5	Shelburne	4.4	Inverness	
PRINCE EDWARD ISLAND	24.3	Summerside	8.0	Charlottetown	
NEWFOUNDLAND	24.6	Comfort Cove	0.2	Cartwright	

ACROSS THE NATION

Warmest mean temperature	24.3	Windsor, ONT
Coollest mean temperature	-1.1	Broughton Island, NWT



HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	21.2	Ogilvie
NORTHWEST TERRITORIES	21.0	Fort Smith
BRITISH COLUMBIA	107.1	Langara
ALBERTA	17.1	Vermilion
SASKATCHEWAN	25.0	Prince Albert
MANITOBA	31.0	Pilot Mound
ONTARIO	44.4	Big Trout Lake
QUEBEC	46.6	Chibougamau
NEW BRUNSWICK	3.9	Moncton
NOVA SCOTIA	27.2	Sable Island
PRINCE EDWARD ISLAND	12.0	Summerside
NEWFOUNDLAND	34.2	Comfort Cove
		St. John's

Quiet forest fire season in British Columbia

The forest fire situation remains comparatively quiet for this time of the year. By mid-August, only 95 fires were burning. According to the Provincial Duty Officer: "Compared with the forest fire activity during the past five years, we are doing very well. The biggest fires occurred during the first week in June.

Since then, the weather has been of considerable assistance to the fire crews." To date, 1,341 fires have burned nearly 75,800 hectares of forested land compared to last year's figures of 1,938 fires and 325,300 hectares. The total costs of fighting the blazes dropped from \$34 million last year to about \$19.5 million this year.

Ministry of Natural Resources, there was a 7 to 10 per cent increase over last year's attendance figures at provincial parks. In the Haliburton Highlands, the lack of rain (only 130 mm since June 1) has caused much hardship. Nearly 50 per cent of the wells were dry and numerous trees have lost foliage from dryness. Statistically, this is the driest summer there since 1947.

During the weekend, outbreaks of severe thunderstorms produced heavy rains, strong winds, intense lightning and large hail in the South. In Toronto, lightning injured 12 people at a local baseball game; one man, suffering extensive burns, was hospitalized. High winds knocked down a number of trees near the Albion Hills conservation area north of Bolton.

Québec

Mean temperatures ranged from 3° below normal in the North to nearly 3° above normal in the South. Southwestern Québec was fairly dry; however, thunderstorms dumped 15 to 25 mm of rain at a few localities on August 26. Strong winds accompanying the violent weather uprooted some large trees in the Ottawa-Hull area.

Precipitation was generally light elsewhere. According to Forêt Météo, the number of active forest fires increased from 22 to 49 this week.

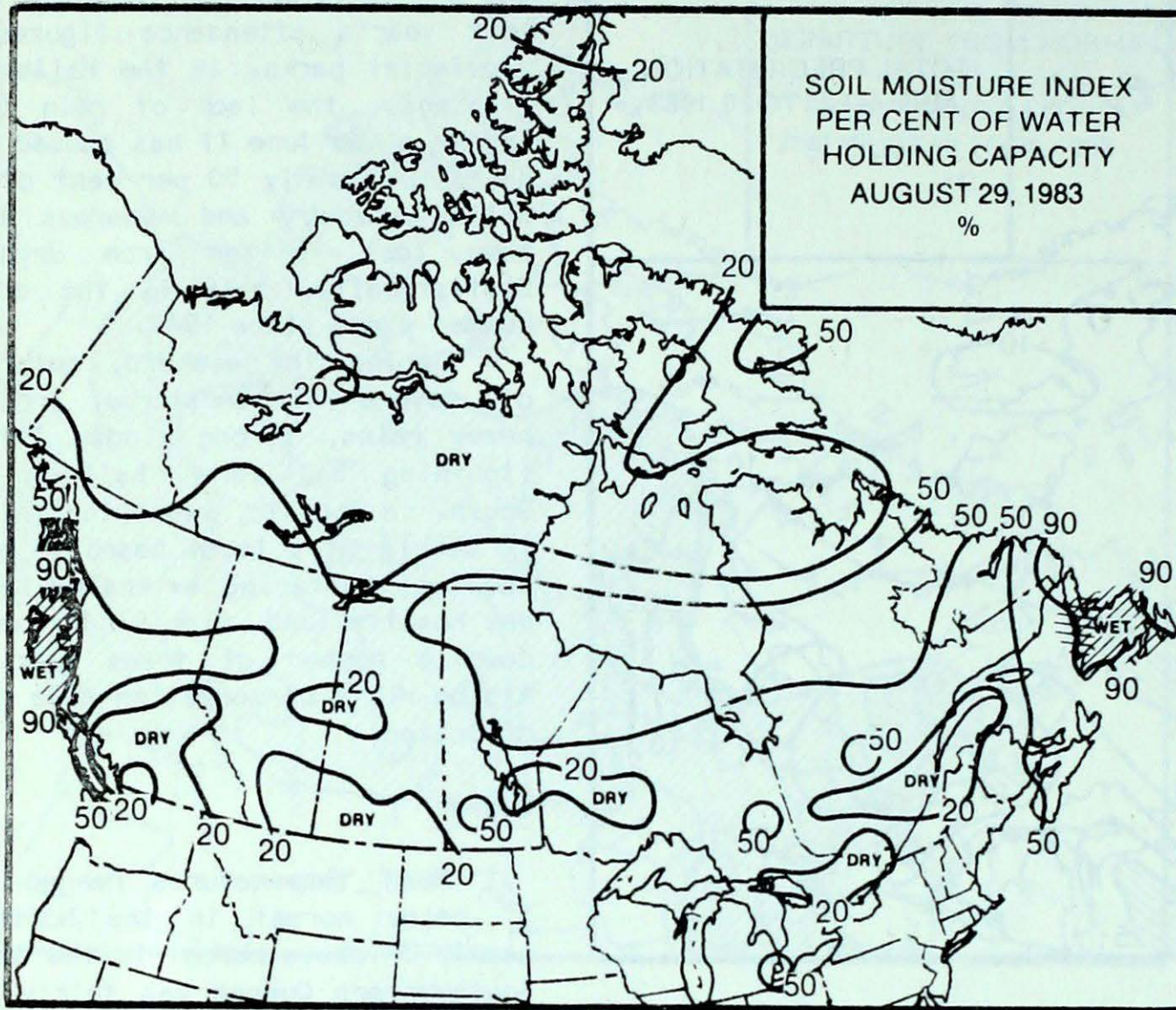
Atlantic Provinces

Dry weather helped harvesting operations in the Maritimes. In Nova Scotia, combining of winter wheat has been finished, and corn should be harvested in the next 10 days. The second cut of the forage crop was complete. In Prince Edward Island, soil moisture reserves dropped to critically low levels, and more rain was needed to help grow potatoes. In contrast, wet fields have hampered the hay harvest in Newfoundland; abundant rainfalls since early June contributed to poor quality in hay.

The temperatures were near normal in the Maritimes and 2 to 5 degrees below normal in Newfoundland. On August 24, an overnight

continued on page 5

SOIL MOISTURE



Soil Moisture Index

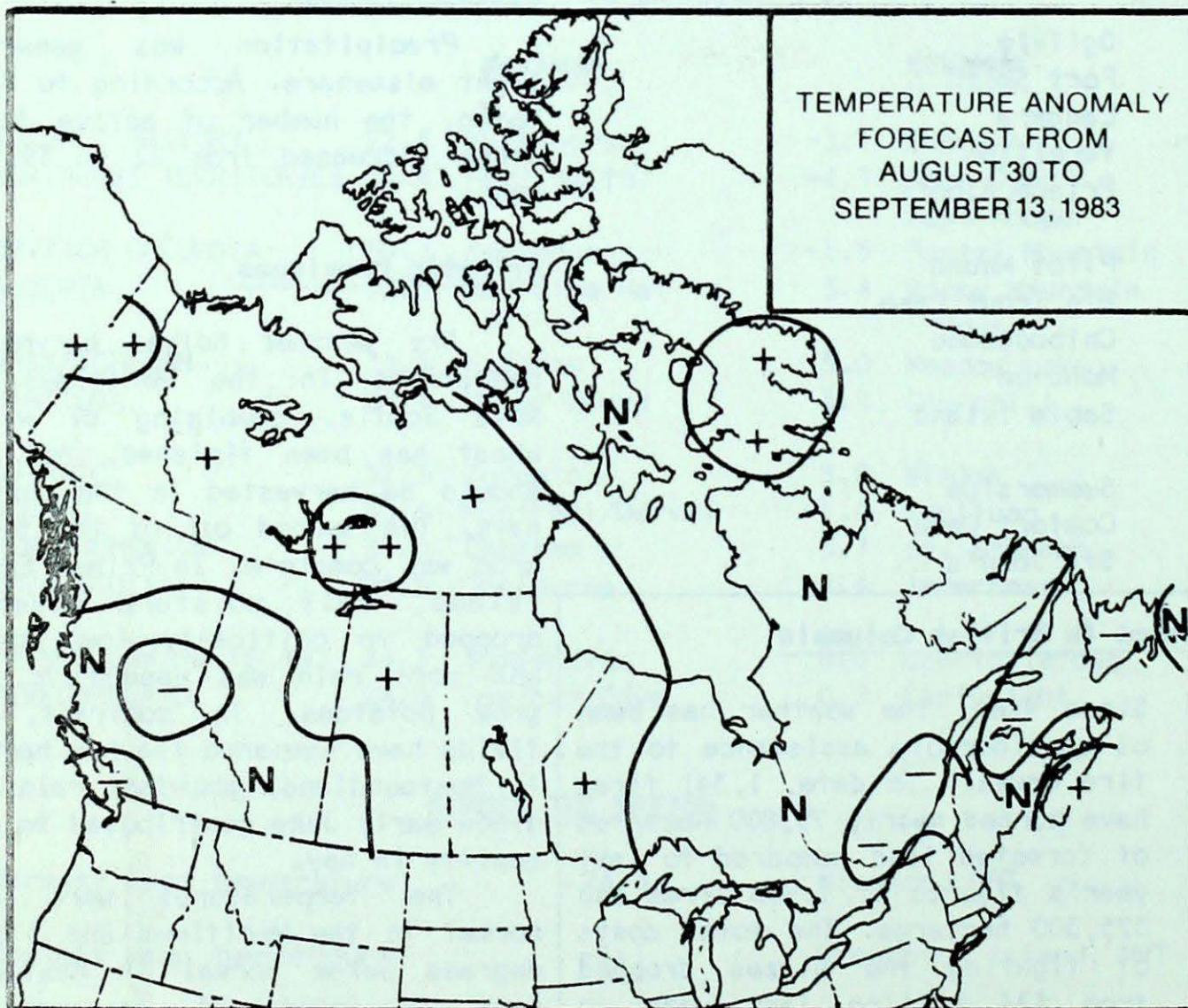
A derived index mapped as a percentage of the assumed soil water holding capacity at each station. It is a relative indicator of the moisture status of the soil.

100 = completely saturated

50 = 50 per cent of assumed holding capacity

0 = absolutely dry

TEMPERATURE ANOMALY FORECAST



Temperature Anomaly Forecast

The temperature anomaly forecast, for each of the 70 Canadian stations, is prepared by searching historical weather maps to find cases similar to the present one. The principle used is that a prediction for the next 15 days may be based on what is known to have actually happened during 15-day periods. After the five best cases are selected, the surface temperature anomalies are calculated. This results in five separate forecasts, which are averaged to provide the forecast depicted.

++ much above normal

+ above normal

N normal

- below normal

-- much below normal

Summer Heat Continues

Throughout August, residents on the Prairies have endured oppressively hot temperatures in the mid to high thirties. During early August, the temperatures rose above the 40° mark at a few southeastern localities; a reading of 40.3° at Thunder Bay proved to be highest there. Above normal temperatures are forecast to continue throughout most of the Prairies into mid-September. The heat combined with sporadic rainfalls adversely affected the agriculture. Grain crop yields are expected to be about 20 per cent below normal. Southern Alberta is particularly hard hit; the relentless heat and the lack of rain have left fields parched. Moisture in the soil is at a critically low level, and some

communities were on water ration.

Hot and humid air continues to control Ontario's and Québec's weather. Daytime temperatures have been consistently in the low thirties, and for most people, the humidity has been in the uncomfortable range. For outdoor enthusiasts, the weather has been superb. Attendance at provincial parks jumped 7 to 10 per cent over last year's in Ontario.

On the southern prairies August will be remembered as the warmest in 22 years in eastern areas and the warmest in 12 years in southern Alberta. With a mean temperature of 20.6°, Winnipeg had its warmest summer ever. In southwestern Ontario, August temperatures have been the warmest since 1959 and the warmest ever in

Northwestern Ontario. In southern Québec, residents will remember August as the warmest in a decade.

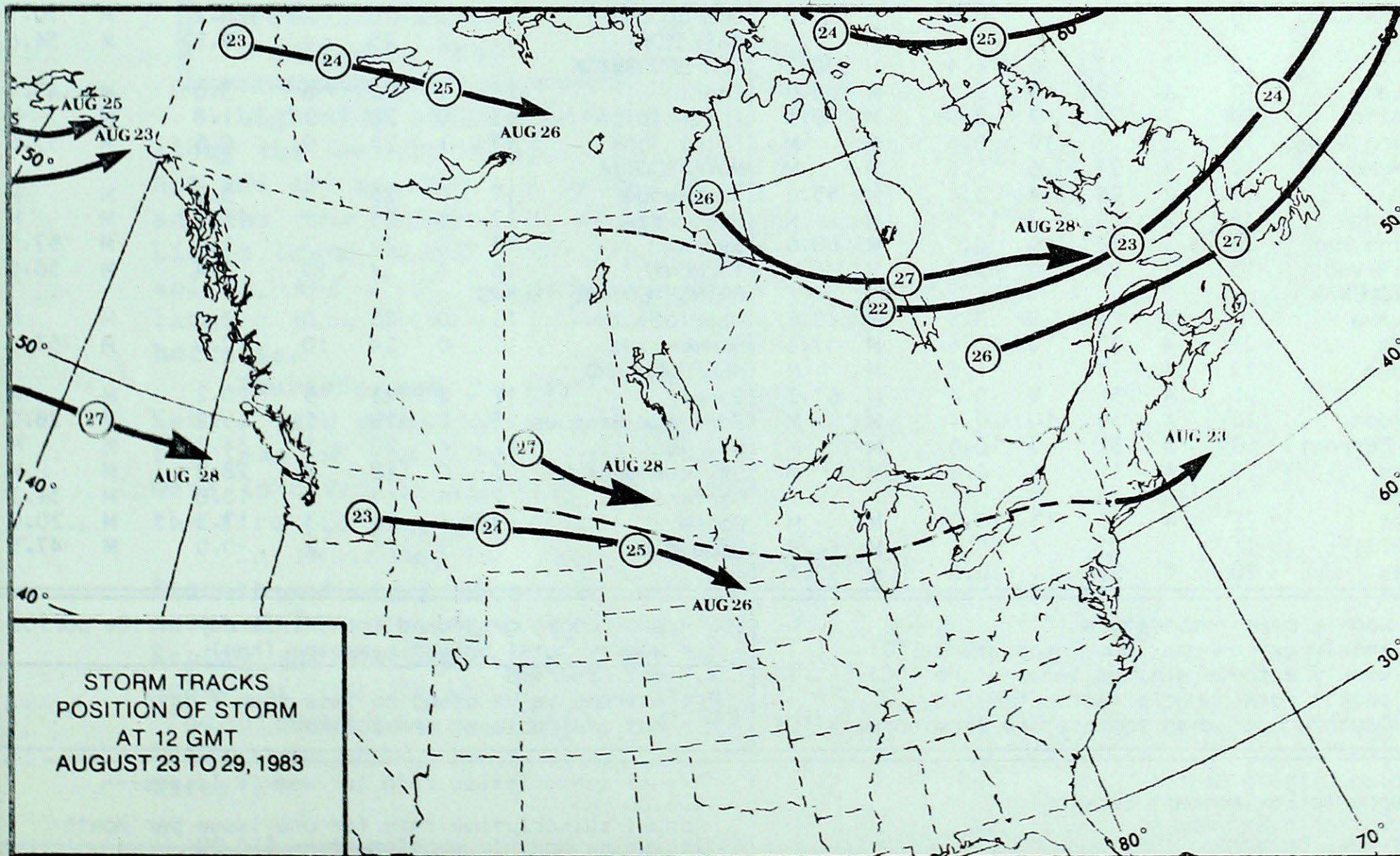
Mean Maximum Temperature for August

	Actual	Departure from Normal
Edmonton	25.5	3.9
Lethbridge	27.9	3.0
Regina	29.4	4.2
Winnipeg	29.6	4.9
Brandon	28.8	4.1
Thunder Bay	27.0	4.2
Windsor	28.2	1.6
Toronto	27.0	1.2
Montréal	26.6	1.8

A. Shabbar

...continued from page 3
reading of 0.5° at St. John's proved to be the lowest temperature for any August since 1976.

STORM TRACKS



TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT AUGUST 30, 1983

STATION	TEMP				PRECIP		SUN	STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H		Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY								Thompson	17	4	28	5	17.8	M	70.2
Dawson	11	0	20	1	17.6	M	M	Winnipeg	23	5	32	15	M	M	65.5
Mayo A	12	1	20	3	14.8	M	M	ONTARIO							
Watson Lake	12	0	22	1	5.6	M	46.4	Big Trout Lake	17	4	23	9	44.4	M	M
Whitehorse	10	-1	22	1	4.4	M	M	Earlton	19	3	31	7	20.9	M	M
NORTHWEST TERRITORIES								Kapusking	18	3	28	6	24.4	M	M
Fort Smith	16	3	25	4	21.0	M	M	Kenora	22	5	30	15	3.3	M	M
Inuvik	10	0	20	1	14.8	M	M	London	22	2	30	13	0.0	M	58.7
Norman Wells	13	2	22	6	0.2	M	M	Moosonee	13	-1	26	4	7.5	M	M
Yellowknife	15	2	21	9	0.6	M	M	Muskoka	20	3	30	10	M	M	M
Baker Lake	9	0	15	2	8.4	M	M	North Bay	20	3	26	11	37.8	M	M
Cape Dyer	1	2	5	-5	1.6	0.0	M	Ottawa	21	3	32	10	8.6	M	72.2
Clyde	2	-2	8	-4	2.6	M	26.9	Pickle Lake	19	4	27	6	11.6	M	M
Frobisher Bay	5	1	10	0	11.1	M	21.5	Red Lake	19	3	30	5	22.1	M	70.1
Alert	0	2	4	-3	2.0	2.0	59.3	Sudbury	21	4	28	11	11.0	M	M
Eureka	3	2	11	0	0.0	M	M	Thunder Bay	20	5	30	11	9.2	M	M
Hall Beach	3	-2	6	-1	1.8	M	M	Timmins	17	3	28	7	23.6	M	M
Resolute	0	-1	6	-4	7.0	M	18.0	Toronto	22	3	32	14	1.8	M	M
Cambridge Bay	6	0	13	-1	0.9	M	M	Trenton	21	2	30	11	3.2	M	M
Mould Bay	3	3	10	-2	1.8	M	48.7	Warton	21	2	29	10	0.2	M	77.3
Sachs Harbour	5	2	12	-2	M	M	46.0	Windsor	24	3	31	17	0.0	M	M
BRITISH COLUMBIA								QUEBEC							
Cape St. James	15	1	20	11	41.0	M	M	Bagotville	18	2	28	5	18.0	M	M
Cranbrook	16	-1	28	7	14.2	M	42.9	Blanc-Sablon	9	-2	15	3	20.2	M	M
Fort Nelson	14	2	25	5	2.6	M	59.3	Inukjuak	8	0	15	2	0.6	M	M
Fort St. John	15	2	25	7	9.6	M	M	Kuujuaq	7	-2	15	-1	4.2	M	M
Kamloops	19	2	31	9	2.8	M	50.3	Kuujuarapik	8	-3	16	1	14.1	M	M
Penticton	19	1	28	10	5.8	M	M	Manawaki	18	2	29	5	4.2	M	67.7
Port Hardy	15	1	22	8	7.2	M	M	Mont-Joli	15	0	25	5	4.6	M	33.5
Prince George	14	2	24	5	6.5	M	M	Montréal	21	2	30	8	0.6	M	M
Prince Rupert	15	2	18	9	71.8	M	M	Natashquan	11	-2	17	2	11.2	M	39.5
Revelstoke	16	0	25	9	10.6	M	33.7	Nitchequon	10	-1	17	5	12.6	M	M
Smithers	14	1	22	4	8.0	M	M	Québec	18	1	30	7	2.4	M	65.7
Vancouver	17	1	24	12	13.8	M	44.8	Schefferville	8	-2	13	2	1.2	M	40.7
Victoria	15	0	22	8	3.2	M	49.9	Sept-Îles	12	-2	21	3	12.0	M	35.7
Williams Lake	15	2	25	5	0.8	M	66.6	Sherbrooke	17	1	28	4	26.2	M	70.1
ALBERTA								Val-d'Or	17	2	25	4	9.2	M	54.6
Calgary	16	3	27	6	4.4	M	50.2	NEW BRUNSWICK							
Cold Lake	18	4	28	9	3.5	M	65.0	Charlo	15	1	26	6	3.0	M	43.1
Coronation	16	2	28	7	2.8	M	59.3	Fredericton	17	0	28	7	1.8	M	M
Edmonton Namao	17	3	27	10	0.4	M	M	Saint John	17	1	25	9	0.6	M	53.6
Fort McMurray	17	4	27	6	0.6	M	M	NOVA SCOTIA							
Jasper	15	2	26	4	3.4	M	53.8	Greenwood	17	0	25	7	3.2	M	M
Lethbridge	18	2	31	7	16.4	M	M	Shearwater	17	0	25	11	10.2	M	M
Medicine Hat	20	3	32	10	0.8	M	68.6	Sydney	15	-2	23	7	1.6	M	57.5
Peace River	15	2	25	6	5.3	M	M	Yarmouth	16	0	24	10	0.4	M	56.0
SASKATCHEWAN								PRINCE EDWARD ISLAND							
Cree Lake	M	X	26	9 ^P	3.6	M	78.6	Charlottetown	17	0	23	8	3.8	M	M
Estevan	21	4	33	10	10.6	M	57.6	Summerside	17	0	24	10	12.0	M	53.6
La Ronge	19	4	27	9	1.6	M	M	NEWFOUNDLAND							
Regina	21	4	31	9	0.4	M	67.8	Gander	11	-4	23	5	20.2	M	M
Saskatoon	20	4	30	10	0.4	M	M	Port aux Basques	13	0	18	7	15.2	M	28.0
Swift Current	19	3	31	7	0.0	M	M	St. John's	11	-4	20	1	34.2	M	M
Yorkton	20	4	31	8	4.0	M	M	St. Lawrence	13	0	18	8	28.2	M	M
MANITOBA								Cartwright	7	-4	17	0	10.8	M	34.3
Brandon	21	4	31	13	13.9	M	M	Goose	9	-4	18	3	17.3	M	20.0
Churchill	11	1	22	4	18.0	M	64.9	Hopedale	7	-3	15	2	0.0	M	47.5
The Pas	20	5	27	11	0.6	M	72.3								

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

M = not available at press time

Canadian Climate Centre
Atmospheric Environment Service
4905 Dufferin Street
Downsview, Ontario
CANADA M3H 5T4 (416) 667-4711/4906

Annual subscription rate for weekly issues---
\$35.00
Annual subscription rate for one issue per month
including monthly supplement--- \$10.00

EDITOR: A. Shabbar

ASSISTANT EDITOR: R. Sarrazin

WRITER: A. Radomski

Subscription enquiries: Supply and Services Canada, Publishing Centre, Ottawa, Ontario, Canada, K1A 0S9