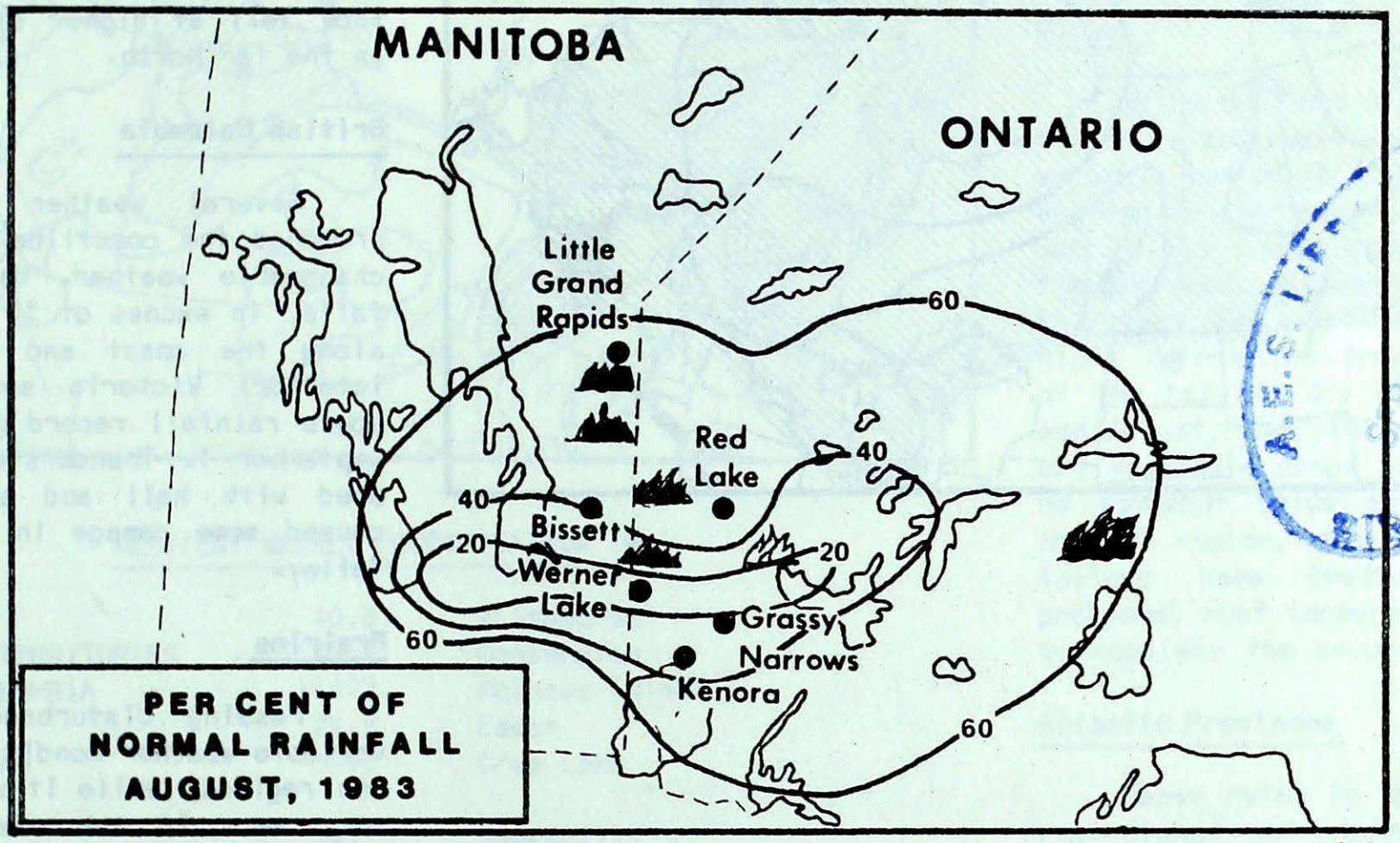
Climatic Perspectives

A WEEKLY REVIEW OF CANADIAN CLIMATE

SEPTEMBER 9,1983 (Aussi disponible en français) VOL.5 NO.36

FOR THE PERIOD AUGUST 30 TO SEPTEMBER5, 1983

• Major forest fires raging out of control in Northwestern Ontario and Manitoba



Lightning strikes started major fires in the tinder-dry forests along the Ontario-Manitoba border. The fires, which were assisted by hot and dry weather and fanned by the strong gusty winds, encompassed an area from Bissett to Vermilion Bay north to Red Lake and then to Little Grand Rapids. In Northwestern Ontario, 80 forest fires were ablaze, and 3 of them were major fires raging out of control. The largest fire labelled Kenora-73 near Werner Lake covered over 85,000 hectares.

Tourists and residents of Grassy Narrows Indian Reserve near Kenora were evacuated to safety. Several camps and cottages north of the Lake of the Woods area were destroyed. More than 500 fire crew were involved in fighting the blazes, but the strong winds hampered the fire fighting efforts.

In Manitoba, at least 25 forest fires were burning between Bissett and Little Grand Rapids. The largest fire at Long Lake south-east of Bissett engulfed 23,500 hectares. Residents of Little Grand Rapids and Pauingassi were on evacuation alert. According to Paul McBay of the Canadian Interagency Forest Fire Centre in Winnipeg, "The situation is serious, but not as bad as the one caused by the 1980 fires. In Ontario, over $200,000 are spend each day to fight the fires".

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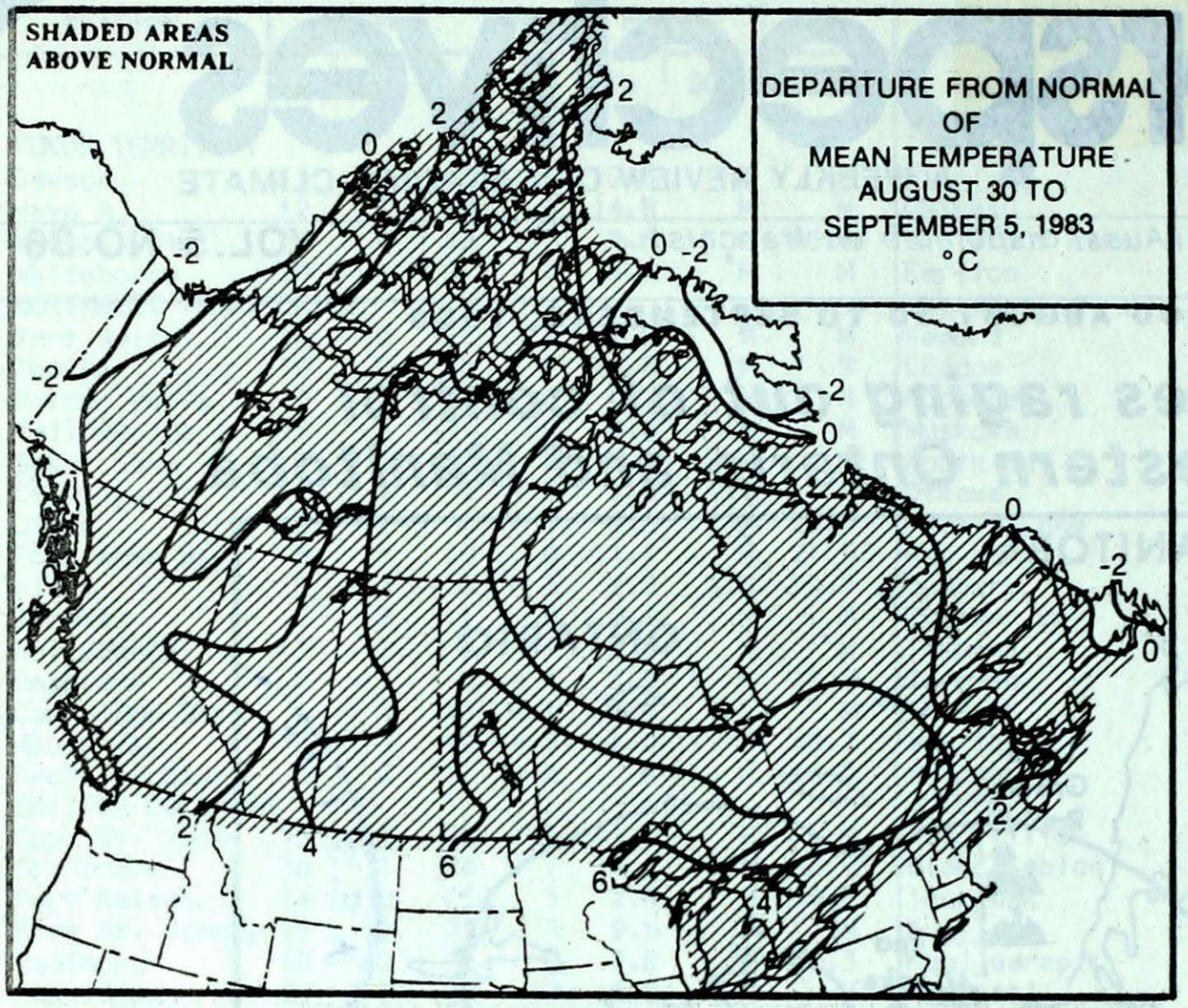
NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic stations.

Canada



WEEKLY TEMPERATURES EXTREMES (°C)

	MAXIMUM		MINIMUM	
YUKON TERRITORY	20.7	Mayo	-7.5	Dawson
NORTHWEST TERRITORIES	27.0	Fort Simpson	-6.8	Broughton Island
BRITISH COLUMBIA	33.5	Lytton	-0.3	Burns Lake
ALBERTA	34.9	Medicine Hat	0.7	Edson
				Red Deer
SASKATCHEWAN	38.6	Moose Jaw	5.3	La Ronge
MANITOBA	38.8	Winnipeg	3.0	Grand Rapids
ONTARIO	34.6	Kenora	2.5	Moosonee
QUÉBEC	31.4	Bagotville	1.8	Schefferville
		Montreal/Dorval		
NEW BRUNSWICK	32.4	Fredericton	5.1	St. Stephen
NOVA SCOTIA	30.4	Eddy Point	7.8	Truro
PRINCE EDWARD ISLAND	29.0	Summerside	10.0	Summerside
NEWFOUNDLAND	23.8	Badger	1.1	Badger

ACROSS THE NATION

Warmest mean temperature	22.7	Winnipeg, MAN.
Coolest mean temperature	-2.8	Broughton Island, NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

Mean temperatures ranged from 4° above normal in the Mackenzie District to 4° below normal over Baffin Island. Precipitation was light in the Northwest Territories, but moderate in the Yukon. On September 4, Whitehorse received 25 mm of rain - the highest 24 hours rainfall amount in September. The average September rainfall is 25.9 mm. Snow fell at higher elevations and in the far North.

British Columbia

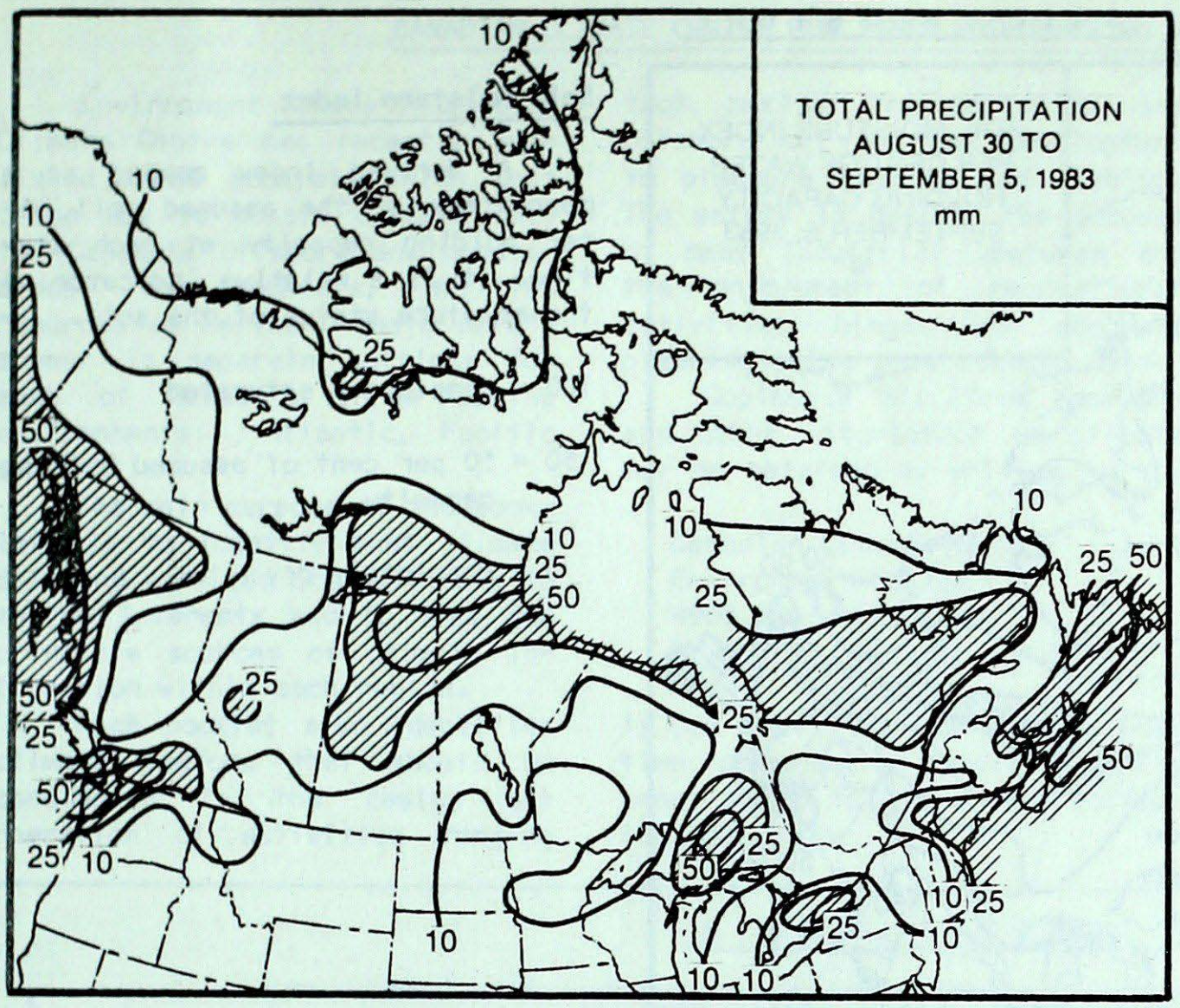
Several weather systems approached the coastline resulting in changeable weather. Heaviest rainfalls, in excess of 50 mm, occurred along the coast and the southern interior. Victoria set a new 24 hours rainfall record of 45.2 mm on September 1. Thunderstorms, associated with hail and strong winds, caused some damage in the Okanagan Valley.

Prairies

Passing disturbances produced variable weather conditions in western regions, while it was sunny and very warm in the east. Many new maximum temperature records were established on September 1 and 2, in Saskatchewan and Manitoba, respectively. The readings in most communities reached into the mid to high thirties. On September 1 Winnipeg established a monthly maximum temperature record of 38.8° surpassing the previous record of 33° set in 1925. The hot and dry conditions across central Manitoba have allowed for an "extreme" forest fire readings. Numerous forest fires were burning in central Manitoba near the Ontario border, several of them out of control.

Ontario

Lightning strikes in the hot and dry weather ignited major forest fires in Northwestern Ontario. By the week's end more than 140 seperate forest fires were reported in Ontario. Residents in the south enjoyed another excellent hot and sunny week. The fine weather was



HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	40.8	Whitehorse
NORTHWEST TERRITORIES	42.7	Coppermine
BRITISH COLUMBIA	114.2	McInnes Island
ALBERTA	25.8	Edson
SASKATCHEWAN	59.3	Cree Lake
MANITOBA	74.7	Churchill
ONTARIO	51.4	Trenton
QUEBEC	71.1	La Grande Rivière
NEW BRUNSWICK	28.0	Chatham
NOVA SCOTIA	88.2	Eddy Point
PRINCE EDWARD ISLAND	31.1	Charlottetown
NEWFOUNDLAND	124.6	St. Lawrence

HEAT WAVE IN THE UNITED STATES

Warmer than normal temperatures and very dry weather over most of the United States throughout the summer have seriously damaged crops. Corn yields are expected to be 20 to 25 per cent below average, soybeans 10 to 20 per cent below normal, cotton 5 to 15 per cent below normal, tobacco 10 to 30 per cent below average, spring wheat 5 to 10 per cent below normal and peanuts 10 to 25 per cent below average. Agriculture losses are expected to be near $7 billion U.S.

Due to excessive heat, energy consumption went up considerably. Air conditioning cost was $1 billion more than average. About 220 people have died from heat stroke during the heat wave. The heat stroke deaths reflect 10 to 15 per cent of the increase in mortality associated with unusually high temperatures.

Information provided by NOAA

credited for record attendances at many outdoor events including the Canadian National Exhibition. On August 30, golfball size hail pelted Simcoe, Woodstock and Elmstead near Windsor as a series of severe thunderstorms struck southern Ontario. Several funnel clouds were also sighted that day. The June-July drought was blamed for the poor grain harvest this year, some farmers have ploughed their crops under the ground rather than waste more money and time.

Québec

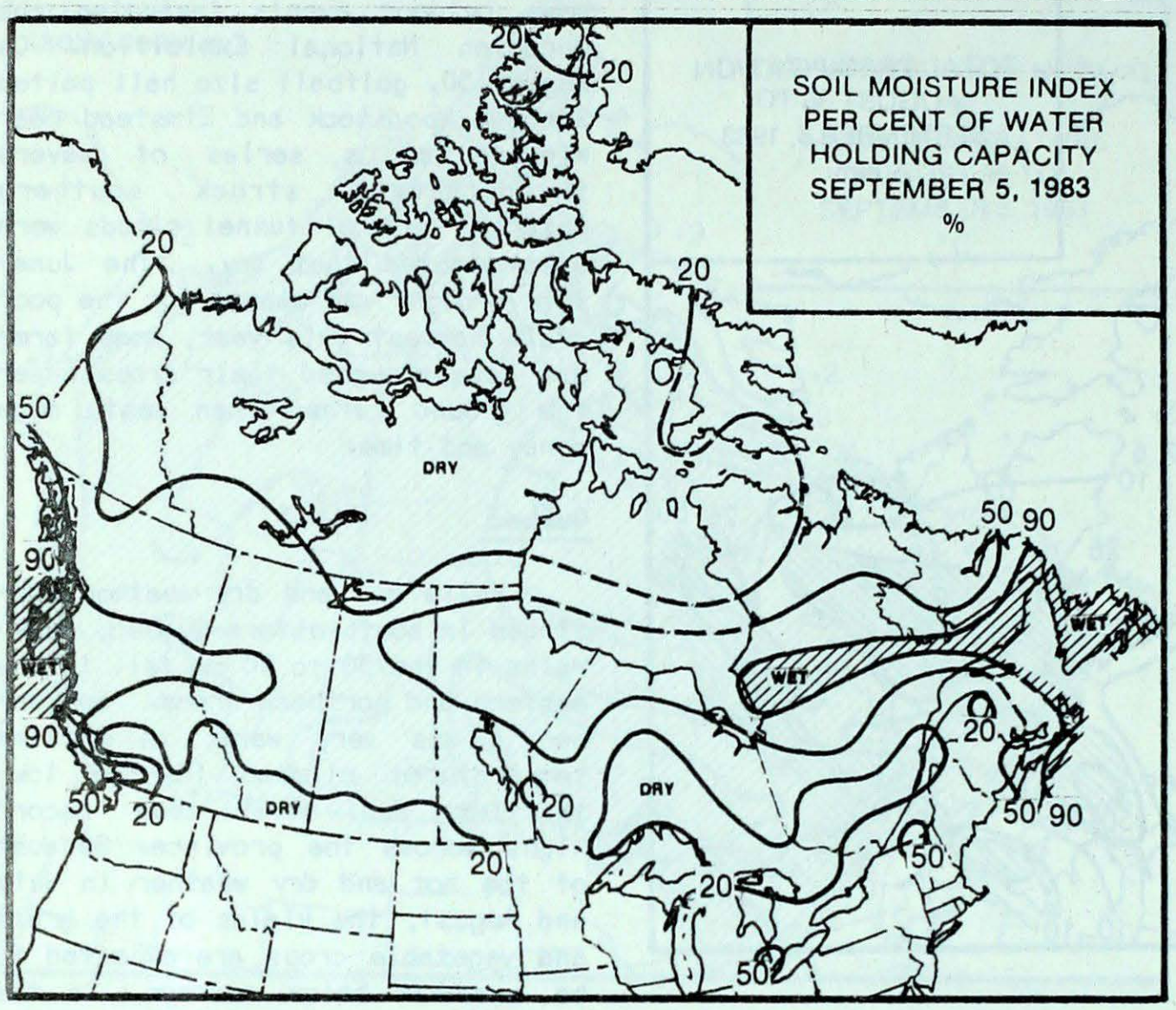
While hot and dry weather continued in southwestern Québec, heavy rains in the 30 to 50 mm fell in the eastern and northern areas. September 4 was very warm, as daytime temperatures climbed in the low-thirties and established record highs across the province. Because of the hot and dry weather in July and August, the yields of the grain and vegetable crops are expected to be somewhat below average. In the Abitibi region, grasshoppers infestations have created additional problems; most farmers do not expect to complete the second hay harvest.

Atlantic Provinces

Heavy rains in the 30 to 80 mm replenished soil moisture reserves in the Maritimes, but worsened wet fields in Newfoundland. The weather became sunny and hot on the labour-day weekend. On September 5, the temperatures climbed into the low-thirties, at several Maritime communities, establishing record for that day. At Sydney, a daytime reading of 29° proved to be the hottest September 5 in 101 years of record.

In Nova Scotia, the cool and wet spring and warm, dry summer helped produced a bumper blueberry crop. However, the spring grain harvest was expected to be below average. The cool, wet spring weather contributed to scab infections in apples. About 5 per cent of the apple crop was expected to be lost to the disease. In Newfoundland, dry weather was urgently needed to complete harvesting. Despite the frost damage in mid-August, wild blueberries harvest was about average.

SOIL MOISTURE



Soil Moisture Index

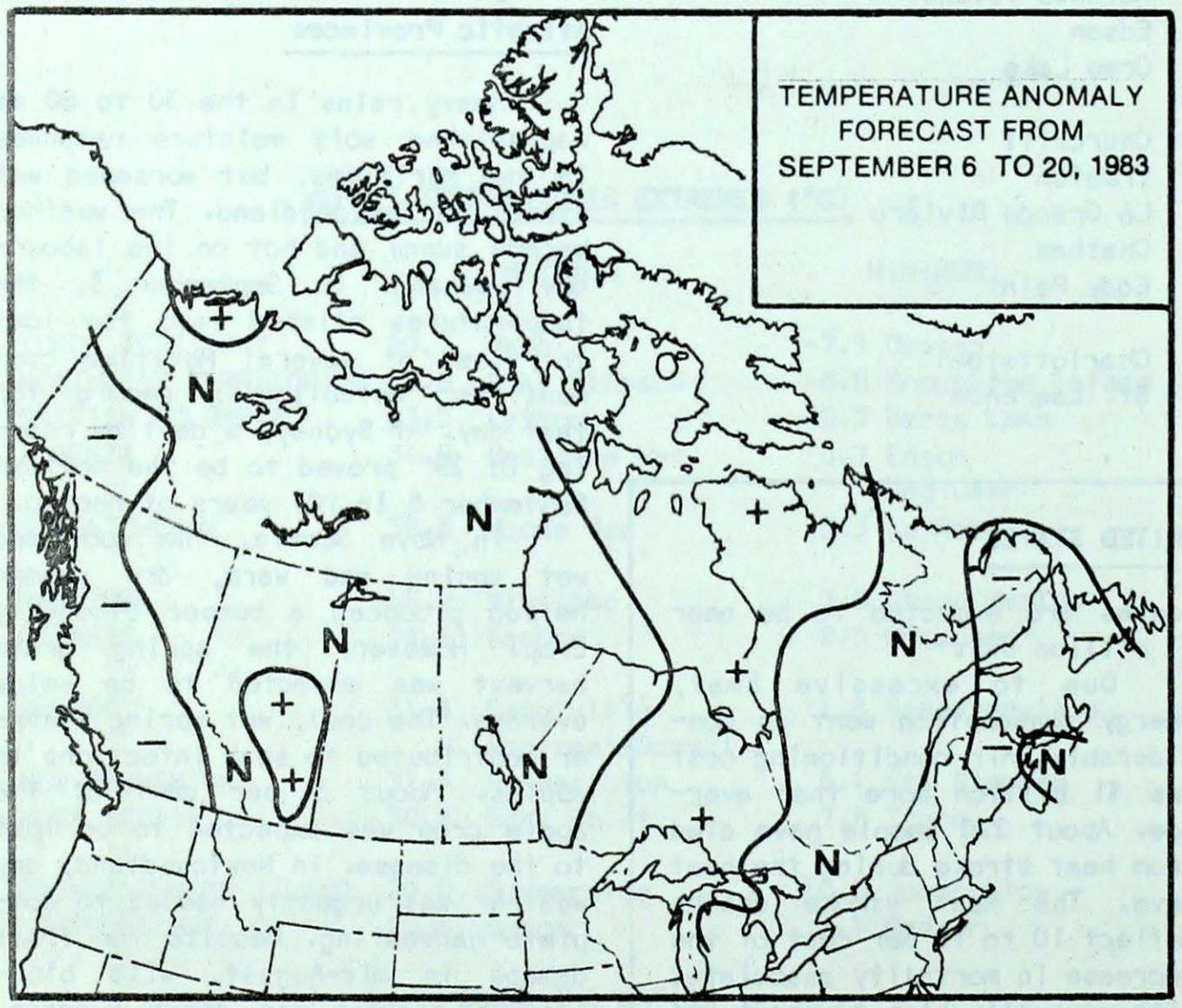
A derived index mapped as a percentage of the assumed soil water holding capacity at each station. It is a relative indicator of the moisture status of the soil.

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 the 15-day anomaly periods. After the five best sets are selected, the surface temperature anomalies are calculated. This results in five separate forecasts, which are averaged to provide the consensus forecast depicted.

++ much above normal

\+ above normal

N normal

\- below normal

\-- much below normal

CANADIAN CLIMATE CENTRE PUBLISHES BROCHURES ON MARINE CLIMATE

Environment Canada's Canadian Climate Centre has recently published three booklets which describe how to obtain climate data for Canada's offshore and coastal areas. The booklets, entitled "Sources of Marine Climate Data", appear in separate editions for each of Canada's three marine environments: Atlantic, Pacific and Arctic.

The main purpose of the booklets is to identify what climate data and services are available to marine interests and to list the principle sources of climate information within each region.

Each booklet also identifies climate factors that should be considered in the design and operation of activities ranging from marine transportation and offshore oil and gas development to pleasure boating and fishing. The safety in design, the success of many industrial ventures and the enjoyement of recreational activities hinges on adequate planning using good climate data.

Copies of all three booklets and other information on climate may be obtained by writing to the

Canadian Climate Centre
Environment Canada
4905 Dufferin Street
Downsview, Ontario M5H 5T4

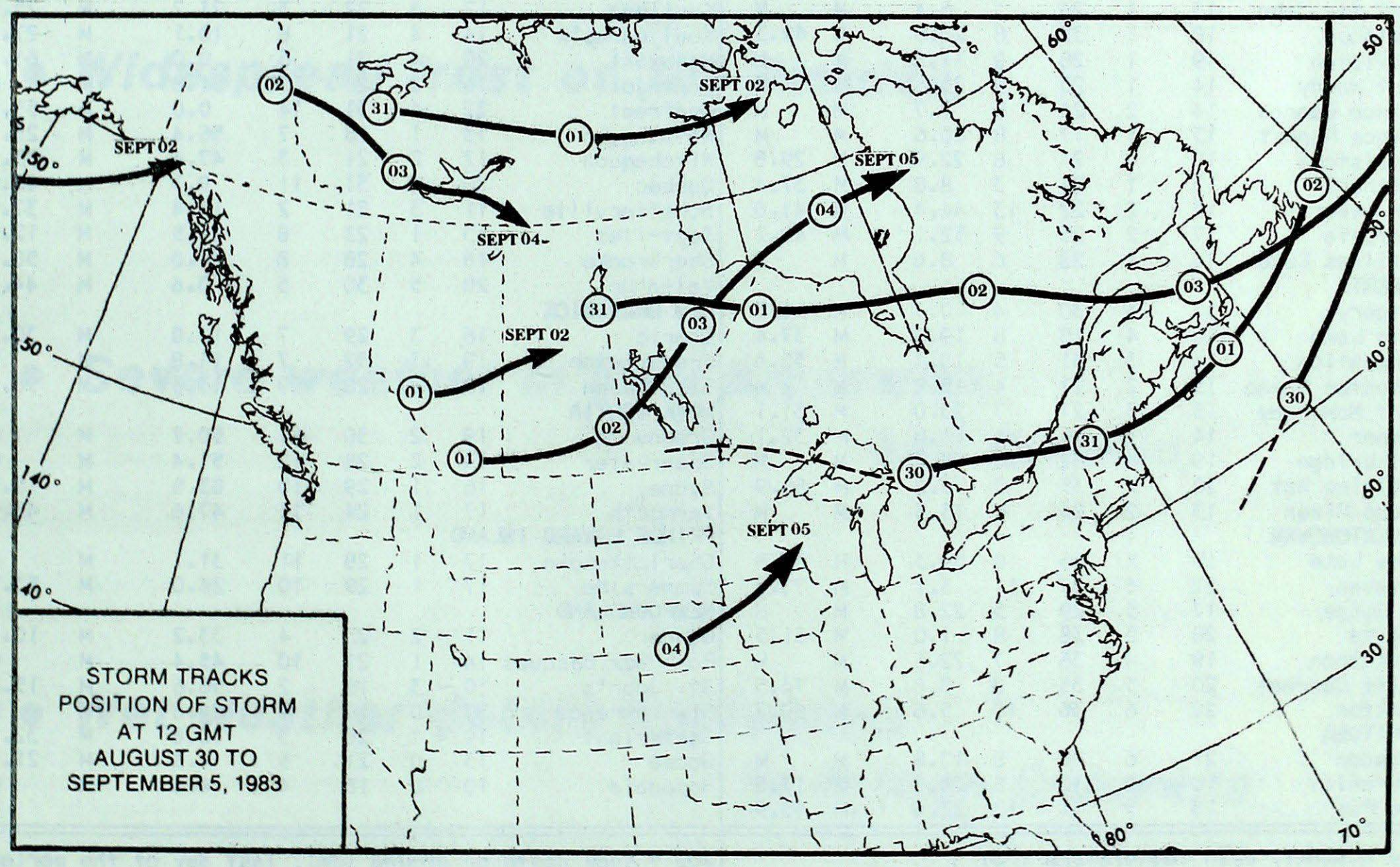
If you wish a copy of the publication covering a specific marine area, write to one of the following addresses:

Atlantic
Environment Canada
Atmospheric Environment Service
1496 Bedford Highway
Bedford, N.S. B4A 1E5

Arctic
Environment Canada
Atmospheric Environment Service
Argyll Centre
6325 - 103 Street
Edmonton, Alberta T6H 5H6

Pacific
Environment Canada
Atmospheric Environment Service
Suite 700
1200 West 73rd Avenue
Vancouver, B.C. V6P 6H9

STORM TRACKS



TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT SEPTEMBER 6, 1983

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	6	- 2	18	- 5	13.8	M	M
Mayo A	9	0	21	- 2	11.2	M	M
Watson Lake	10	0	19	2	23.6	M	24.8
Whitehorse	9	0	19	4	40.8	M	14.9
NORTHWEST TERRITORIES							
Fort Smith	14	3	26	6	9.2	M	38.0
Inuvik	5	0	17	4	7.8	M	M
Norman Wells	10	1	23	0	14.9	M	42.6
Yellowknife	12	2	21	4	4.4	M	26.4
Baker Lake	10	4	14	5	7.0	M	12.5
Cape Dyer	- 1	- 3	5	- 4	2.2	0.0	M
Clyde	1	- 2	5	- 3	2.8	M	54.3
Frobisher Bay	3	- 2	11	- 2	0.0	M	M
Alert	0	4	3	- 5	2.5	2.0	36.1
Eureka	1	2	4	- 3	17.1	0.0	M
Hall Beach	2	- 1	5	0	1.0	M	M
Resolute	2	3	6	- 2	22.7	M	M
Cambridge Bay	8	5	16	2	10.4	M	M
Mould Bay	- 2	0	4	- 6	11.4	4.0	6.4
Sachs Harbour	1	0	8	- 5	17.3	M	15.5
BRITISH COLUMBIA							
Cape St. James	14	1	19	10	M	M	M
Cranbrook	16	1	29	4	6.0	M	43.1
Fort Nelson	14	2	26	5	27.2	M	43.0
Fort St. John	13	1	23	3	5.4	M	M
Kamloops	18	1	32	8	26.6	M	42.3
Penticton	19	1	28	9	11.8	M	M
Port Hardy	14	1	20	9	25.6	M	M
Prince George	14	2	24	3	7.7	M	M
Prince Rupert	13	1	17	8	83.6	M	M
Revelstoke	15	0	24	8	22.9	M	29.8
Smithers	13	1	24	3	8.8	M	37.4
Vancouver	17	2	22	13	44.4	M	41.8
Victoria	17	2	25	9	52.1	M	40.2
Williams Lake	14	1	28	6	8.6	M	M
ALBERTA							
Calgary	17	4	30	4	0.7	M	51.5
Cold Lake	16	4	28	8	19.0	M	37.4
Coronation	16	3	31	5	10.4	M	56.4
Edmonton Namao	15	2	27	4	15.8	M	M
Fort McMurray	15	3	27	7	23.0	M	31.1
Jasper	14	2	26	4	11.0	M	32.1
Lethbridge	19	4	32	6	2.4	M	M
Medicine Hat	20	4	35	7	3.2	M	66.9
Peace River	13	2	24	4	13.5	M	M
SASKATCHEWAN							
Cree Lake	15	X	26	8	59.3	M	35.8
Estevan	22	6	37	11	3.1	M	73.5
La Ronge	17	5	29	5	22.8	M	M
Regina	20	5	38	8	1.0	M	61.5
Saskatoon	19	4	36	7	22.6	M	M
Swift Current	20	5	35	8	0.8	M	74.5
Yorkton	20	6	36	10	5.6	M	60.7
MANITOBA							
Brandon	21	6	35	8	10.8	M	M
Churchill	10	1	18	6	74.7	M	17.5
The Pas	18	5	31	10	22.6	M	40.9
Thompson	16	6	29	5	17.0	M	37.6
Winnipeg	23	6	39	10	1.8	M	63.5
ONTARIO							
Big Trout Lake	18	6	26	11	8.0	M	M
Earlton	21	6	30	7	M	M	M
Kapuskasing	19	5	32	7	46.8	M	M
Kenora	23	7	35	14	12.4	M	M
London	21	2	29	11	14.0	M	M
Moosonee	17	4	31	3	10.2	M	41.4
Muskoka	20	3	32	7	M	M	M
North Bay	21	5	28	11	7.2	M	50.7
Ottawa	22	4	33	13	0.0	M	61.0
Pickle Lake	21	8	32	10	8.8	M	M
Red Lake	20	6	33	8	13.6	M	52.6
Sudbury	21	5	29	10	17.4	M	52.0
Thunder Bay	20	6	31	11	7.4	M	56.3
Timmins	19	5	31	6	36.6	M	M
Toronto	21	2	31	12	19.4	M	M
Trenton	21	2	29	13	51.4	M	M
Wiarton	21	4	32	11	6.6	M	M
Windsor	21	1	31	M	10.9	M	M
QUEBEC							
Bagotville	19	4	31	8	24.8	M	M
Blanc-Sablon	11	0	19	4	23.8	M	M
Inukjuak	10	3	18	6	24.6	M	20.9
Kuujjuaq	12	3	22	3	21.2	M	25.0
Kuujjuarapik	14	4	21	8	10.1	M	27.1
Manawaki	20	4	31	6	0.0	M	61.4
Mont-Joli	16	2	28	7	21.8	M	M
Montréal	22	4	31	14	0.0	M	55.9
Natashquan	13	1	18	7	56.4	M	25.1
Nitchequon	12	2	21	3	47.4	M	33.0
Québec	20	4	31	11	9.3	M	46.0
Schefferville	11	3	21	2	12.4	M	37.9
Sept-Iles	13	1	23	8	25.5	M	12.8
Sherbrooke	18	4	28	8	31.0	M	50.7
Val-d'Or	20	5	30	5	3.6	M	44.0
NEW BRUNSWICK							
Charlo	16	3	29	7	10.0	M	30.9
Fredericton	19	3	32	7	11.8	M	M
Saint John	17	2	28	9	17.6	M	56.5
NOVA SCOTIA							
Greenwood	19	2	30	11	50.7	M	M
Shearwater	19	2	28	12	51.4	M	M
Sydney	16	1	29	10	83.8	M	19.6
Yarmouth	17	1	24	11	47.6	M	43.8
PRINCE EDWARD ISLAND							
Charlottetown	17	1	28	11	31.1	M	M
Summerside	17	1	29	10	26.0	M	53.6
NEWFOUNDLAND							
Gander	11	- 2	23	4	33.2	M	10.2
Port aux Basques	14	1	21	10	45.4	M	M
St. John's	10	- 3	19	2	58.6	M	15.0
St. Lawrence	13	0	19	7	124.6	M	M
Cartwright	10	- 1	20	3	10.8	M	32.9
Goose	13	0	21	5	4.3	M	21.5
Hopedale	10	0	18	4	4.4	M	M

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

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