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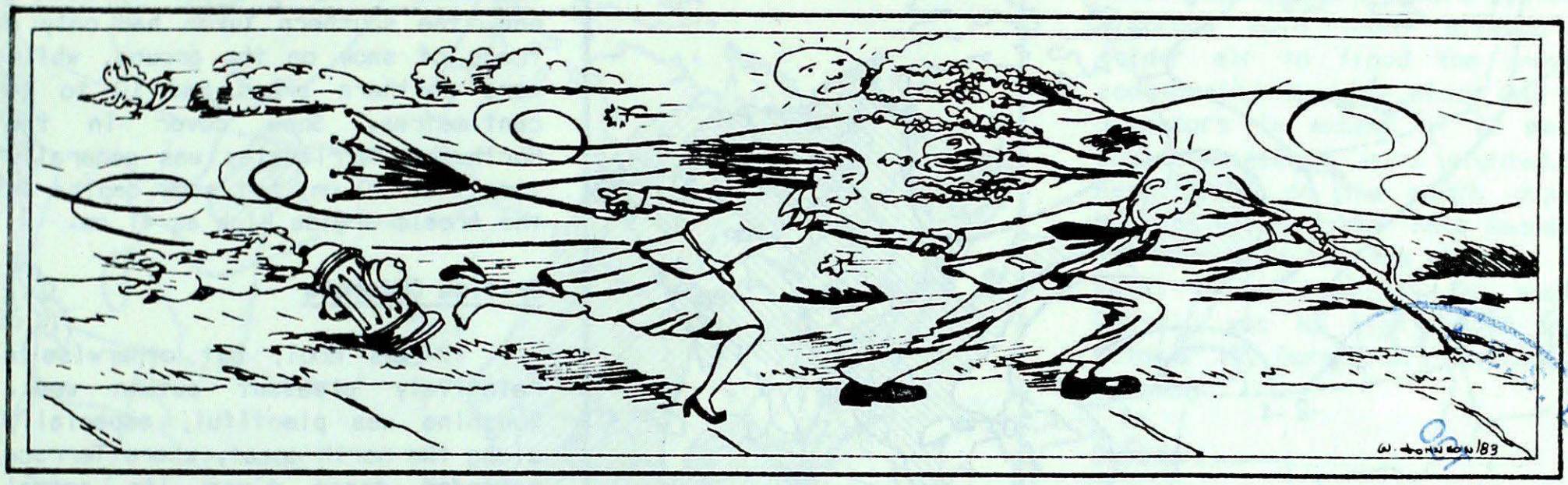
Climatic Perspectives

MONTHLY SUPPLEMENT INCLUDED

A WEEKLY REVIEW OF CANADIAN CLIMATE

OCTOBER 21,1983 (Aussi disponible en français) VOL.5 NO.42

FOR THE PERIOD OF OCTOBER 11-17, 1983



Strong winds over Southern Ontario and Quebec

On October 13-14, a sharp cold front swept through southern Ontario and Québec causing substantial damage. In southern Ontario, late season heavy thunderstorms accompanied the front and two small tornadoes did some minor damage near Delhi and Beamsville. This occurrence was well after August 31, the average end of tornado season. The strong winds that followed the frontal passage reached gale force over Lake Ontario and Toronto Island Airport reported a wind gust to 92 km/h. In Toronto, a man was injured when a wall under construction fell on him; in addition, there were the usual reports of broken trees and power outages across the area. In southern Québec, there was significant damage at Nicolet; wind gusts to 140 km/h were reported. In this same area, 4 house roofs were seriously damaged and broken trees blocked roads and caused power outages. Near Québec City, several cars were damaged by a metal structure that fell from a roof. In the Montréal area one small plane was overturned.

Inside the September Monthly Supplement .....

- ***Acid rain***
- ***Impacts of the mild winter and hot summer of 1983 on the Great Lakes Basin***
- ***Summer recreation and tourism - 1983***
- ***50kPa Atmospheric Circulation***

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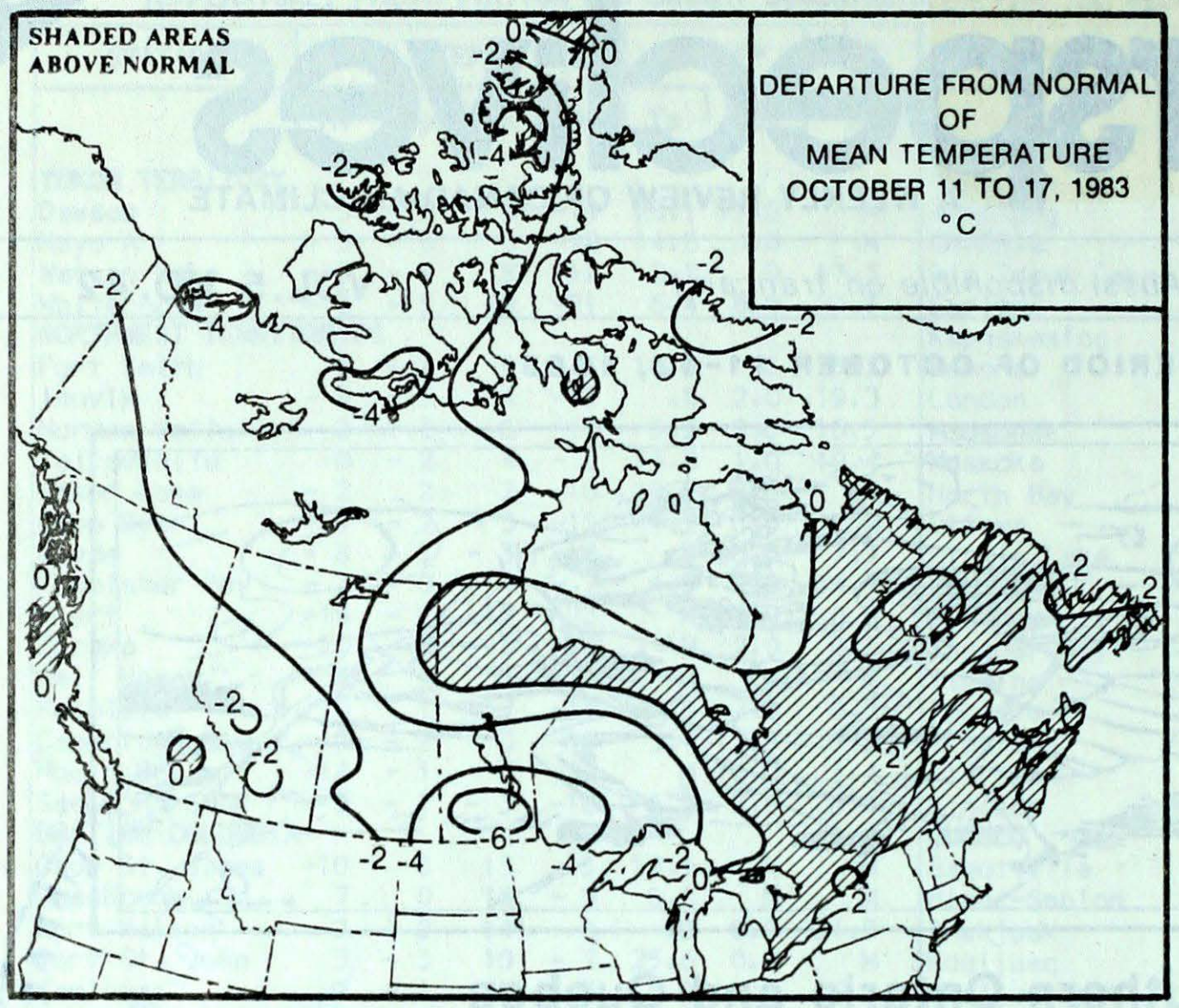
NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic stations.

Canada



WEEKLY TEMPERATURES EXTREMES (°C)

	MAXIMUM		MINIMUM	
YUKON TERRITORY	12.8	Burwash	-24.2	Shingle Point
NORTHWEST TERRITORIES	19.7	Jenny Lind Island	-34.7	Eureka
BRITISH COLUMBIA	19.9	Puntzi Mountain	-8.4	Fort Nelson
ALBERTA	21.2	Lethbridge	-16.0	High Level
SASKATCHEWAN	18.1	Swift Current	-13.8	Collins Bay
MANITOBA	13.6	Dauphin	-8.7	Brandon
ONTARIO	25.0	Trenton	-7.2	Upsala
QUEBEC	25.5	Sherbrooke	-7.0	Border
NEW BRUNSWICK	23.0	Moncton	-4.1	St. Stephen
NOVA SCOTIA	23.9	Greenwood	-3.8	Greenwood
PRINCE EDWARD ISLAND	22.2	Charlottetown	2.6	Summerside
NEWFOUNDLAND	20.5	Badger	-5.1	Wabush Lake

ACROSS THE NATION

Warmest mean temperature	13.3	Sable Island, N.S.
Coolest mean temperature	-27.0	Eureka, NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

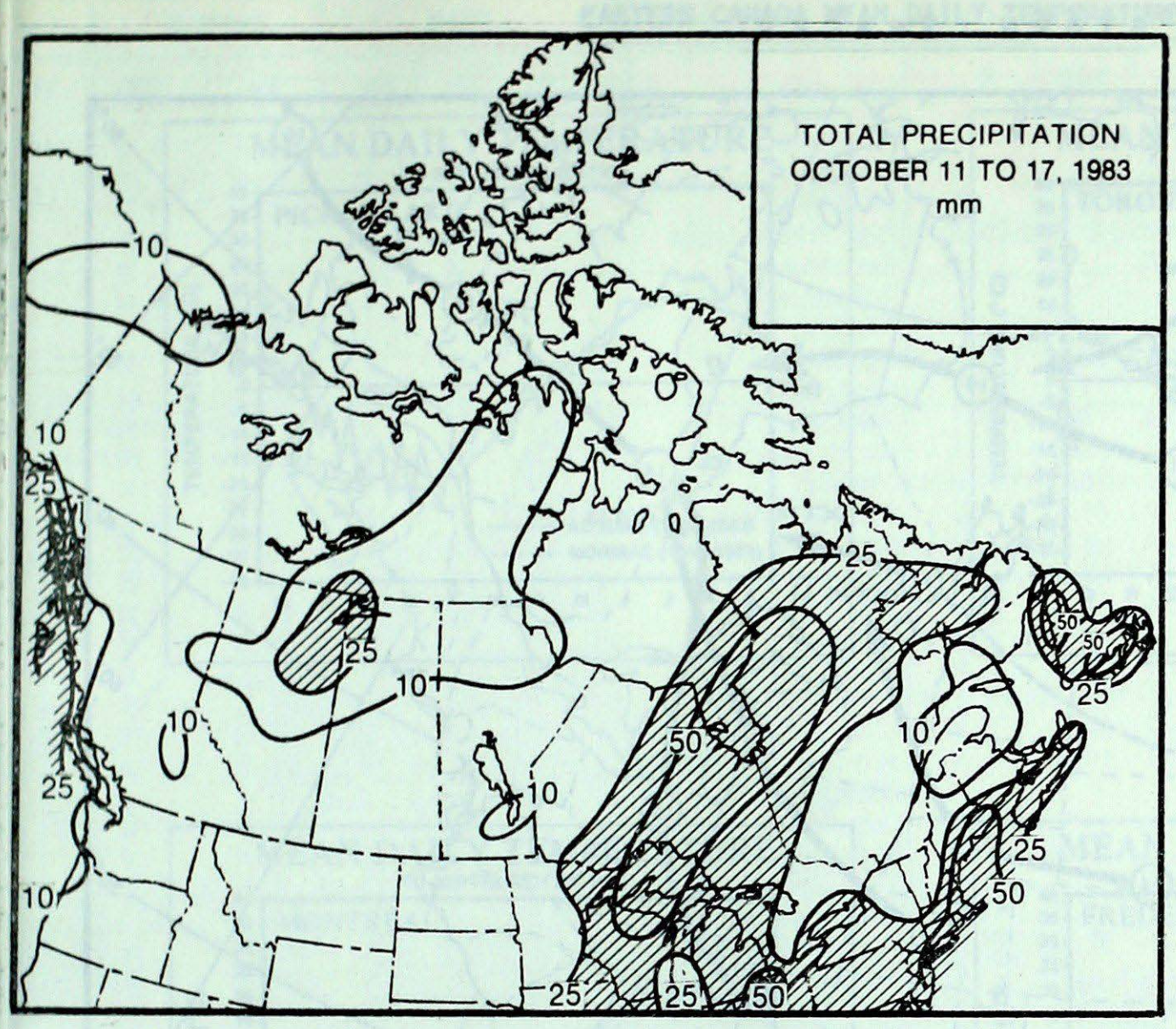
Mean temperatures across northern Canada were below normal, even though temperatures in the Yukon had moderated somewhat from the last week. Daytime readings in the Yukon fluctuated from day-to-day as several disturbances gave frequent snow and some freezing rain. By week's end, the southern Yukon had only a trace of snow on the ground, while more northern areas had 10 to 14 centimetres. Snow cover in the Northwest Territories was generally less than 10 cm, but snow depths in the Arctic are as high as 41 cm.

British Columbia

It was cool, but otherwise a relatively pleasant autumn week. Sunshine was plentiful, especially along the north coast, where Terrace recorded three times its normal sunshine of fourteen hours. Precipitation was light; however, the Peace River district received almost 13 cm of snow, causing delays once more to the already late harvest. The southern Interior continued to be dry. Penticton has had no measurable precipitation in four weeks. The apple and grape harvests in the Okanagan Valley are almost complete.

Prairies

Changable mid-autumn weather conditions prevailed. Mean temperatures were as much as 7° below normal in southern Manitoba and 1 to 2 degrees below normal in the west. The Peace River district broke several maximum temperature records early in the week, but by the weekend a fresh Arctic outbreak dropped temperatures to near record levels. Precipitation amounts in southern and central regions varied, but were generally less than 10 mm; however, heavier amounts fell in the north, frequently as snow. The Peace River district received 3 to 5 centimetres of snow, once more delaying the harvest. On the morning of October 11, several centimetres of snow covered parts of eastern Saskatchewan and southern Manitoba.



HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	17.8	Shingle Point
NORTHWEST TERRITORIES	29.2	Fort Smith
BRITISH COLUMBIA	45.8	McInnes Island
ALBERTA	30.5	Fort McMurray
SASKATCHEWAN	16.6	Collins Bay
MANITOBA	12.2	Churchill
ONTARIO	95.3	Moosonee
QUEBEC	104.9	La Grande Rivière
NEW BRUNSWICK	43.5	Saint John
NOVA SCOTIA	32.0	Shearwater
PRINCE EDWARD ISLAND	18.4	Charlottetown
NEWFOUNDLAND	52.0	Daniels Harbour

ICE

Steady ice growth continues in the Beaufort Sea. New ice is now approximately 15 cm thick. Supply tugs are actively resupplying the permament drill sites. The John A Macdonald has left the Arctic; two commercial ships accompanied the icebreaker to the open waters of Baffin Bay. The icebreaker Franklin is in Hudson Strait awaiting the departure of three ships from Churchill before retrieving navigational aids to conclude the 1983 shipping season. The icebreaker Louis St. Laurent and the ice-strengthened ore carrier M.V. Arctic are expected to rendezvous in Baffin Bay on October 24 before preceeding into the high Arctic.

Ontario

Daytime temperatures were near or above normal across southern and central Ontario through the first half of the week. Trenton reached 25° on October 13, tying a previous record. In contrast, mean temperatures in northwestern Ontario were as much as 5° below normal under generally cloudy skies. By mid-week a developing low pressure system and vigorous cold front allowed much colder air to flood the province, accompanied by high winds and heavy downpours in excess of 20 mm. Two small tornadoes were sighted, one near Delhi on the north shore of Lake Erie, the other near Beamsville in the heart of the Niagara Fruit Belt. Precipitation in northern Ontario was as high as 95 mm. On October 15, Geraldton received 21 cm of snow.

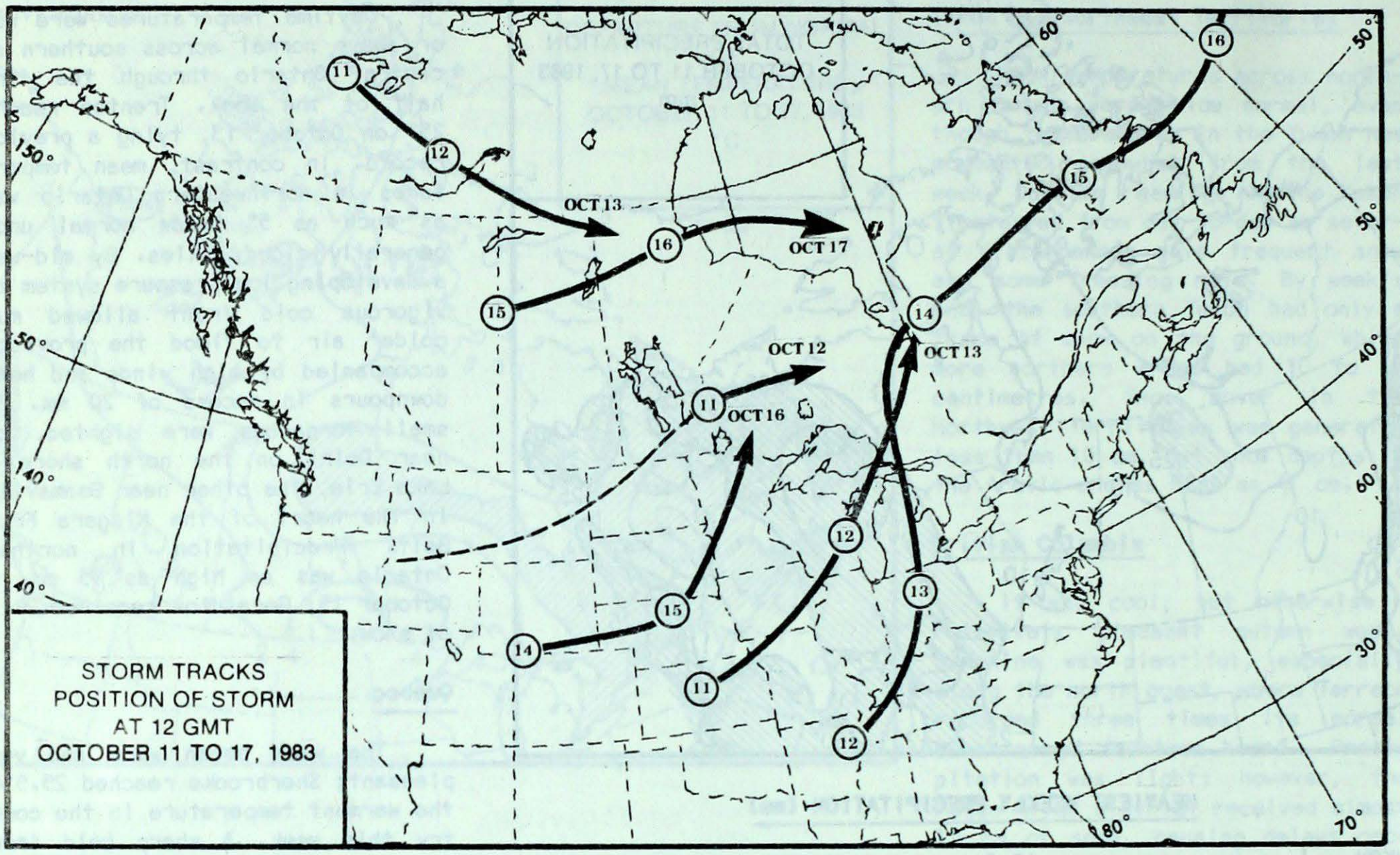
Québec

The week began warm and very pleasant; Sherbrooke reached 25.5°C, the warmest temperature in the country this week. A sharp cold front crossed the province on October 14, giving nearly 20 mm of rain to most areas. Strong winds that accompanied the front produced substantial damage in southern Québec. Wind gusts of 140 km/h were reported at Nicolet and many houses were damaged, trees and hydro poles were broken, and there were the usual power outages. There was also some damage in the Québec City and Montréal areas. The period ended on a better note, with a return to fair weather.

Atlantic Provinces

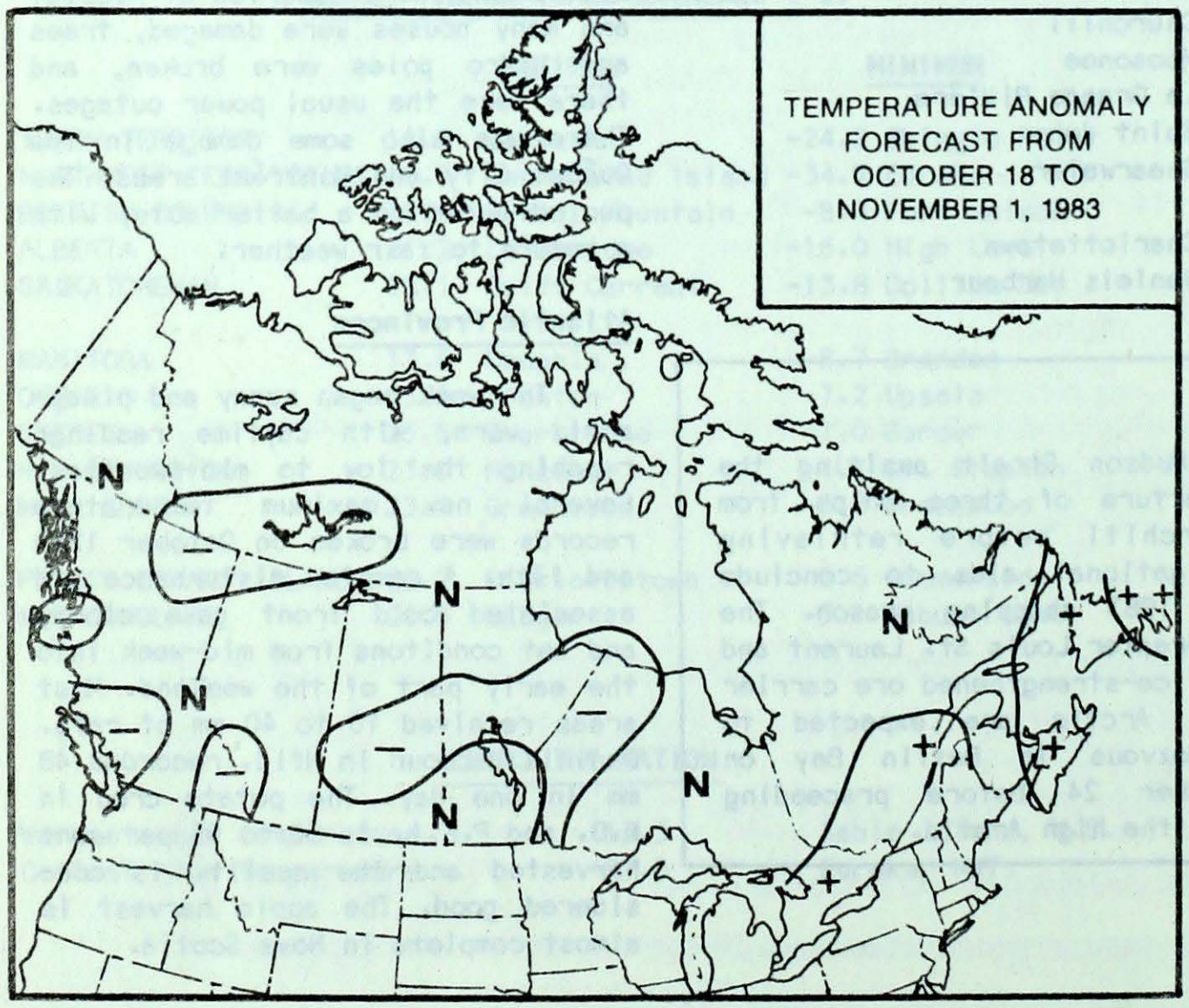
The week began sunny and pleasantly warm, with daytime readings reaching the low to mid-twenties. Several new maximum temperature records were broken on October 12th and 13th. A complex disturbance and associated cold front gave cloudy and wet conditons from mid-week into the early part of the weekend. Most areas received 10 to 40 mm of rain. Daniels Harbour in Nfld. recorded 48 mm in one day. The potato crop in N.B. and P.E.I. is 80 to 95 per cent harvested and the quality is considered good. The apple harvest is almost complete in Nova Scotia.

STORM TRACKS



STORM TRACKS
POSITION OF STORM
AT 12 GMT
OCTOBER 11 TO 17, 1983

TEMPERATURE ANOMALY FORECAST



TEMPERATURE ANOMALY
FORECAST FROM
OCTOBER 18 TO
NOVEMBER 1, 1983

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

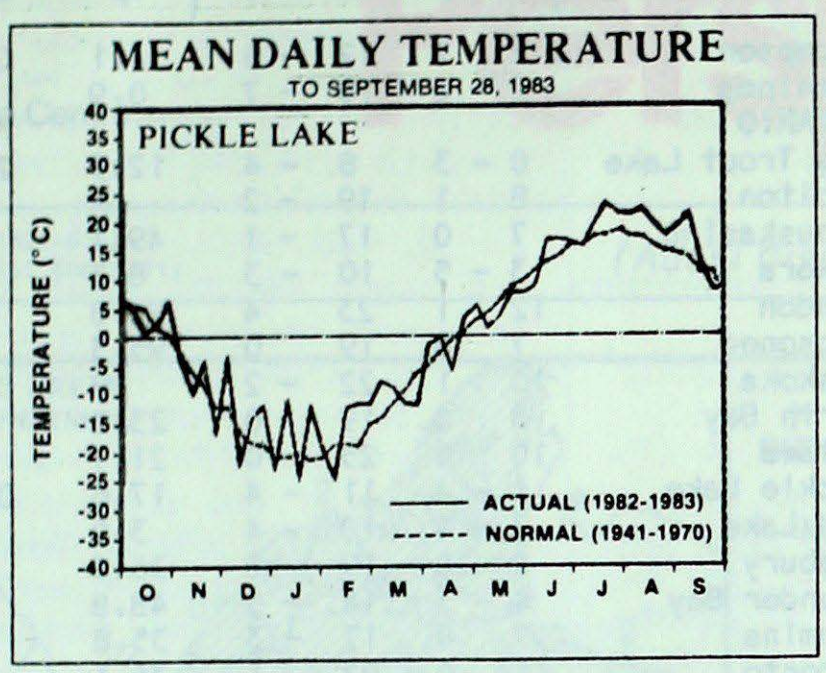
+ above normal

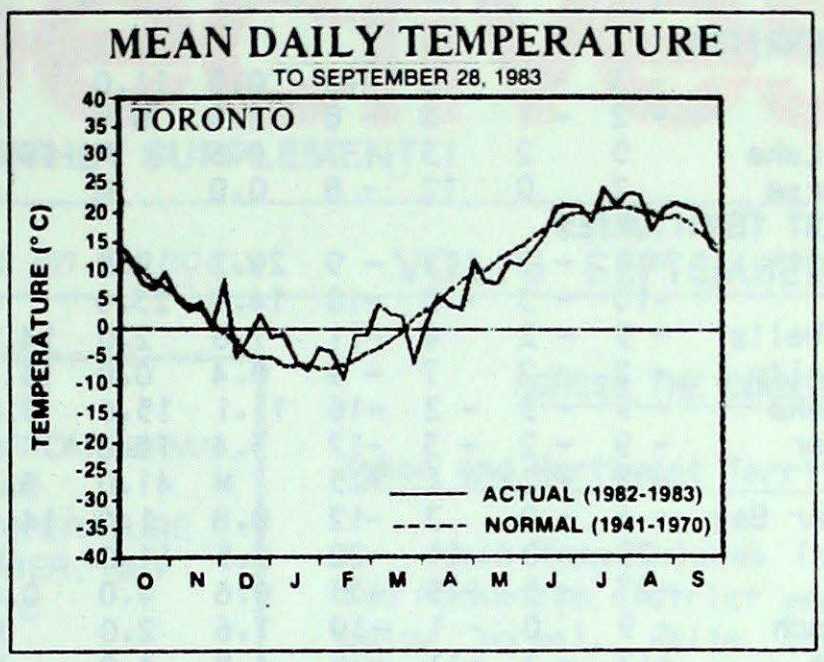
N normal

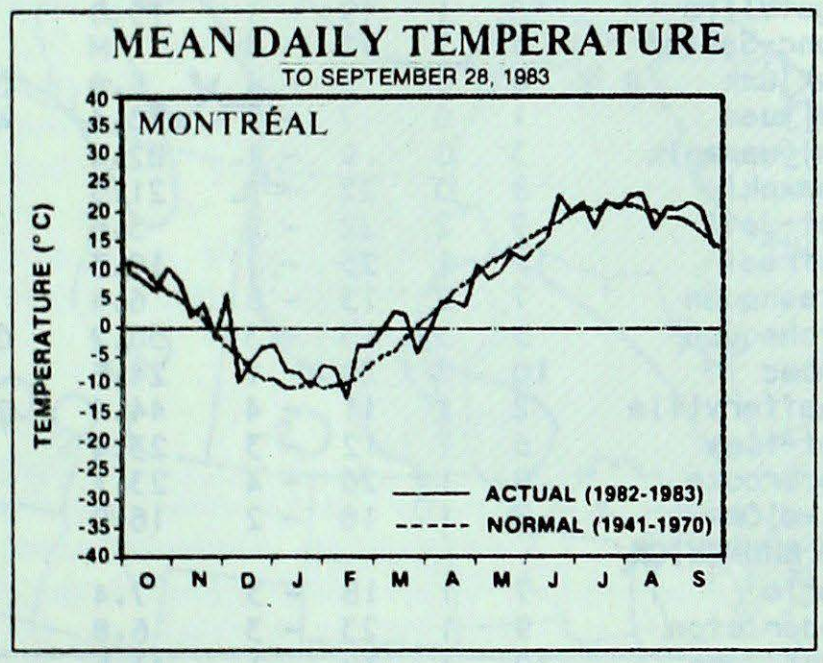
- below normal

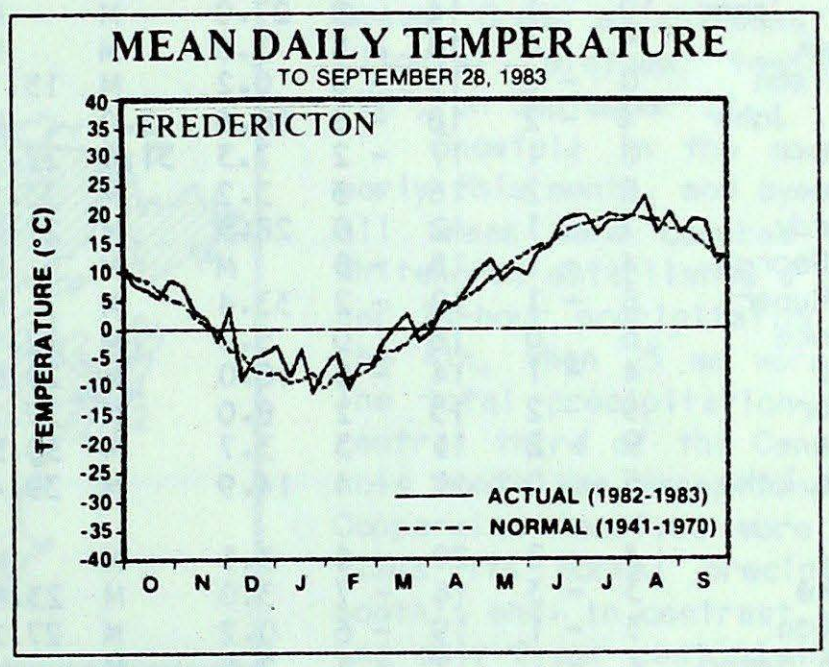
-- much below normal

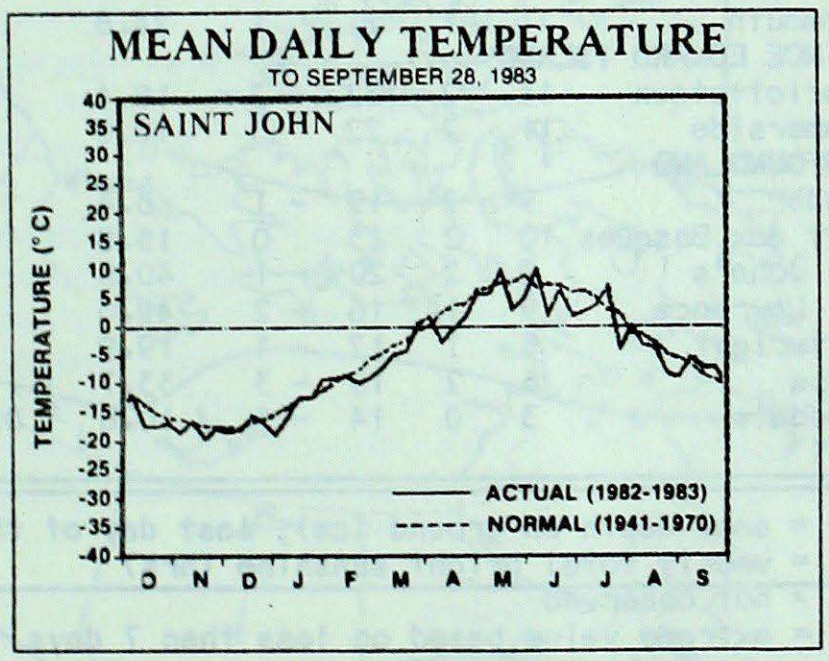
EASTERN CANADA MEAN DAILY TEMPERATURES

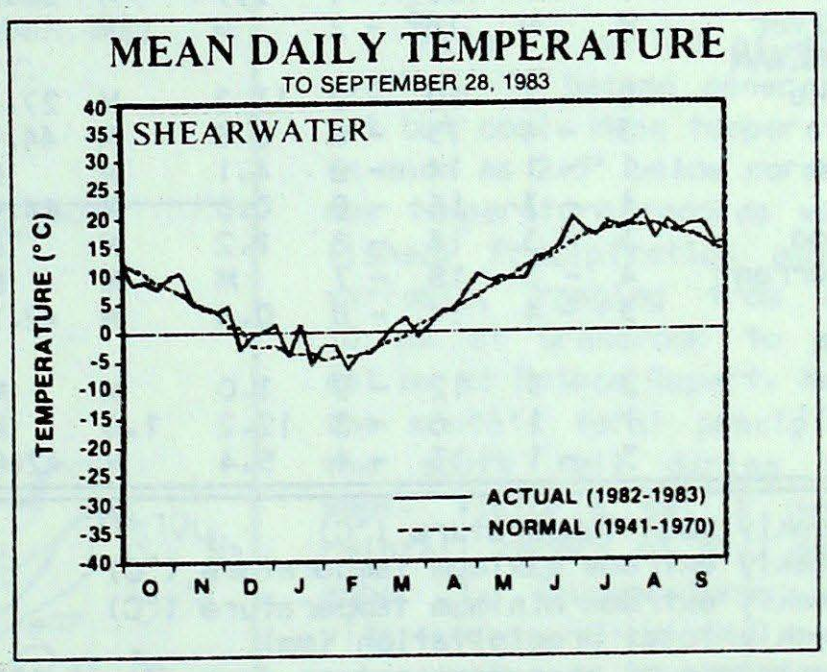












TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT OCTOBER 18, 1983

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	- 3	- 1	6	-16	0.0	11.0	M
Mayo A	- 2	- 1	8	- 8	2.9	8.0	M
Watson Lake	0	2	13	- 7	0.8	M	19.2
Whitehorse	2	0	12	- 8	0.0	M	M
NORTHWEST TERRITORIES							
Fort Smith	- 1	- 2	13	- 9	29.2	9.0	M
Inuvik	-10	- 3	- 3	-18	14.8	23.0	M
Norman Wells	- 5	- 2	4	-11	7.8	2.0	14.5
Yellowknife	- 2	- 2	7	- 9	0.4	0.0	15.1
Baker Lake	- 9	- 3	- 2	-16	11.1	15.0	7.8
Cape Dyer	- 9	- 2	- 3	-17	3.4	10.0	M
Clyde	- 8	- 2	- 1	-15	M	41.0	3.3
Frobisher Bay	- 6	- 2	3	-12	0.8	1.0	14.2
Alert	-20	0	-14	-28	3.5	11.0	M
Eureka	-27	- 5	-15	-35	0.6	4.0	0.0
Hall Beach	- 9	0	- 1	-19	1.6	2.0	M
Resolute	-17	- 3	-11	-25	4.8	4.0	M
Cambridge Bay	-16	- 5	- 9	-21	0.4	13.0	14.2
Mould Bay	-19	- 2	-14	-26	0.9	17.0	M
Sachs Harbour	-13	- 2	- 7	-21	4.9	10.0	M
BRITISH COLUMBIA							
Cape St. James	10	1	14	8	27.0	M	M
Cranbrook	5	0	15	- 5	3.0	M	M
Fort Nelson	0	- 2	19	- 8	0.2	M	15.1
Fort St. John	4	- 2	18	- 6	18.6	3.0	M
Kamloops	8	- 1	17	- 2	7.3	31.0	27.3
Penticton	8	- 2	16	- 3	3.2	M	33.1
Port Hardy	7	- 1	12	0	28.5	M	27.3
Prince George	4	- 1	15	- 5	M	M	M
Prince Rupert	8	- 1	12	- 2	33.4	M	M
Revelstoke	6	0	16	0	5.0	M	22.7
Smithers	4	- 1	14	- 8	10.0	M	20.6
Vancouver	9	- 2	13	2	8.0	M	37.2
Victoria	9	- 2	15	3	3.7	M	30.5
Williams Lake	5	0	17	- 4	14.9	M	39.4
ALBERTA							
Calgary	4	- 2	20	- 6	3.1	M	M
Cold Lake	3	- 3	16	- 7	3.0	M	23.8
Coronation	5	- 1	19	- 6	0.2	M	27.2
Edmonton Namao	4	- 1	17	- 5	2.5	M	M
Fort McMurray	1	- 3	14	- 9	30.5	0.0	24.0
Jasper	4	- 1	17	- 7	5.6	M	29.0
Lethbridge	7	- 2	21	- 7	2.5	M	M
Medicine Hat	7	- 1	20	- 4	2.9	M	26.2
Peace River	M	M	16P	- 2	M	M	M
SASKATCHEWAN							
Cree Lake	0	X	10	- 9	11.2	M	27.7
Estevan	3	- 4	15	- 6	0.8	M	44.0
La Ronge	1	- 1	14	- 8	4.1	M	M
Regina	4	- 3	16	- 8	0.0	M	44.9
Saskatoon	3	- 3	16	- 8	1.2	M	M
Swift Current	4	- 3	18	- 7	M	M	M
Yorkton	3	- 4	14	- 8	0.4	M	42.3
MANITOBA							
Brandon	2	- 5	12	- 9	1.0	M	M
Churchill	1	1	6	- 3	12.2	1.0	M
The Pas	3	- 1	13	- 4	5.4	M	42.9
Thompson	2	2	12	- 8	4.1	0.0	22.1
Winnipeg	2	- 6	10	- 7	0.9	M	34.4
ONTARIO							
Big Trout Lake	0	- 3	8	- 4	12.3	2.0	M
Earlton	8	1	19	- 2	M	M	M
Kapuskasing	7	0	17	- 1	49.1	M	M
Kenora	3	- 5	10	- 3	8.3	M	M
London	12	1	23	4	21.8	M	M
Moosonee	7	0	19	0	95.3	M	12.4
Muskoka	10	1	22	- 2	M	M	M
North Bay	8	0	19	0	23.8	M	11.1
Ottawa	10	0	25	0	21.7	M	22.7
Pickle Lake	1	- 4	11	- 4	17.6	0.0	M
Red Lake	2	- 4	10	- 4	3.0	M	20.3
Sudbury	8	0	19	0	36.6	M	M
Thunder Bay	4	- 3	14	- 5	48.8	M	15.9
Timmins	7	0	17	- 3	35.8	M	M
Toronto	11	0	22	1	36.1	M	M
Trenton	11	0	25	- 2	42.6	M	M
Wiarton	11	0	22	2	27.9	M	22.2
Windsor	12	- 1	21	3	54.6	M	M
QUEBEC							
Bagotville	8	1	19	- 1	15.0	M	M
Blanc-Sablon	6	1	11	- 4	M	M	M
Inukjuak	0	0	5	- 4	5.8	0.0	10.2
Kuujjuaq	1	0	7	- 5	23.4	4.0	1.9
Kuujjuarapik	3	0	9	- 1	82.4	M	2.6
Manawaki	8	0	22	- 3	21.5	M	18.5
Mont-Joli	9	2	22	- 2	3.6	M	33.3
Montréal	11	1	25	- 1	10.3	M	34.4
Natashquan	7	2	13	- 5	6.4	M	33.6
Nitchequon	5	3	13	- 3	30.2	0.0	8.9
Québec	10	2	20	- 1	24.6	M	29.8
Schefferville	2	1	11	- 4	44.4	0.0	M
Sept-Iles	6	1	12	- 3	23.4	M	32.7
Sherbrooke	9	1	26	- 4	23.1	M	30.2
Val-d'Or	8	1	18	- 2	16.0	M	8.2
NEW BRUNSWICK							
Charlo	7	1	18	- 3	7.4	M	28.0
Fredericton	9	1	23	- 3	6.8	M	M
Saint John	10	1	19	1	43.5	M	29.2
NOVA SCOTIA							
Greenwood	11	1	24	- 4	M	M	M
Shearwater	11	1	20	2	32.0	M	M
Sydney	11	2	20	0	20.4	M	M
Yarmouth	11	1	21	1	24.8	M	31.1
PRINCE EDWARD ISLAND							
Charlottetown	11	2	22	3	18.4	M	M
Summerside	11	2	22	3	10.0	M	M
NEWFOUNDLAND							
Gander	9	2	19	- 1	6.4	M	M
Port aux Basques	10	2	15	0	15.8	M	M
St. John's	9	2	20	- 1	40.8	M	35.4
St. Lawrence	9	1	16	- 2	49.0	M	M
Cartwright	5	1	17	- 1	19.9	M	18.7
Goose	6	2	18	- 3	33.7	M	27.4
Hopedale	3	0	14	- 5	10.8	0.0	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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