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Climatic Perspectives

MONTHLY SUPPLEMENT INCLUDED

A WEEKLY REVIEW OF CANADIAN CLIMATE

MAY 18,1984 (Aussi disponible en français) VOL.6 NO.19

FOR THE PERIOD MAY 8 TO 14, 1984

- ***Mild temperatures hasten break up of ice on rivers and lakes in the Yukon***

- ***Cool and wet weather hampers field work from Ontario to the Maritimes***

- ***Severe summer weather on the Prairies and in Quebec***

- ***Unusual snowfall in Southwestern Ontario on Mothers Day***

INSIDE THE APRIL MONTHLY SUPPLEMENT.....

- **GLOBAL CLIMATE CHANGES..... ....CAUSES AND CONSEQUENCES**
- **ICE COVER OFF THE EAST COAST DURING THE WINTER OF 1983-84**
- **1983-84 WINTER RECREATION- A SUMMARY**

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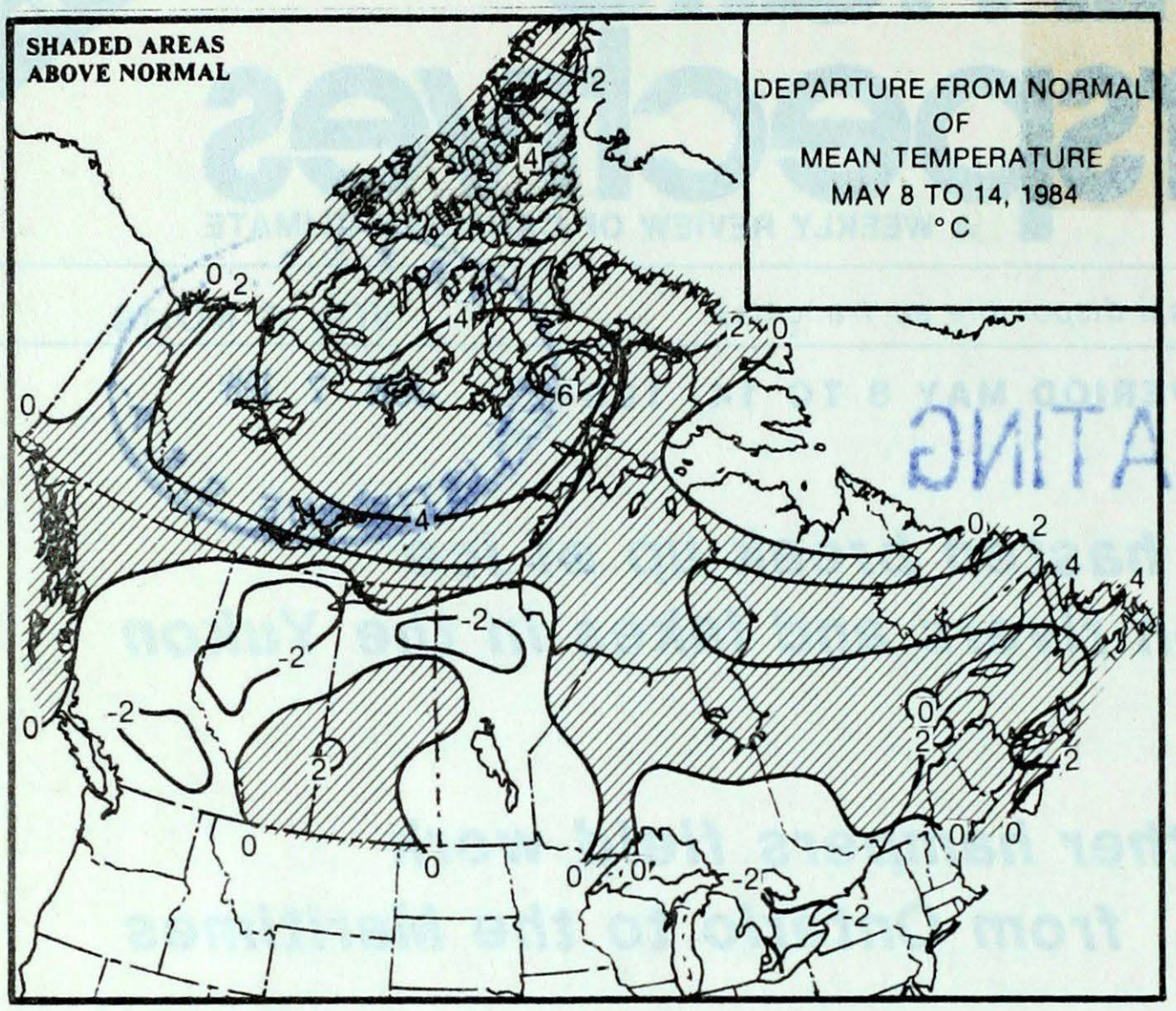
NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic stations.

Canada



WEEKLY TEMPERATURES EXTREMES (°C)

	MAXIMUM		MINIMUM	
YUKON TERRITORY	17.1	Whitehorse	-20.0	Shingle Point
NORTHWEST TERRITORIES	20.1	Fort Simpson	-20.0	Alert
BRITISH COLUMBIA	20.4	Cranbrook	-6.7	Puntzi Mountain
ALBERTA	29.3	Medicine Hat	-5.3	Red Deer
SASKATCHEWAN	26.4	Kindersley	-7.8	Collins Bay
MANITOBA	21.0	Brandon	-9.1	Gillam
ONTARIO	20.7	Windsor	-5.6	Big Trout Lake
QUEBEC	20.4	Québec	-8.3	Kuujjuaq
NEW BRUNSWICK	21.7	Fredericton	-2.5	St. Stephen
NOVA SCOTIA	20.3	Greenwood	-2.9	Truro
PRINCE EDWARD ISLAND	18.6	Charlottetown	0.9	Charlottetown Summerside
NEWFOUNDLAND	22.3	Deer Lake	-5.7	Cartwright

ACROSS THE NATION

Warmest mean temperature	12.1	Lytton, BC
Coolest mean temperature	-12.4	Alert, NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

An influx of mild Pacific air continued to produce spring-like weather north of the 60th parallel. The temperatures were especially mild in the Mackenzie District as the mercury climbed to near 20° on several occasions. The unusual warmth covered almost all of the Arctic, even the High Arctic experienced temperatures that were 4 to 8 degrees above normal. Although precipitation was light across the Territories, nearly 19 mm fell in the mountainous regions as weather systems moved through the Yukon. In the Yukon, the mild weather has hastened the break up of ice in larger lakes and rivers. Ice cleared about two weeks ahead of normal in the Yukon River near Dawson and ice bridge closed on the Mackenzie River on May 6.

British Columbia

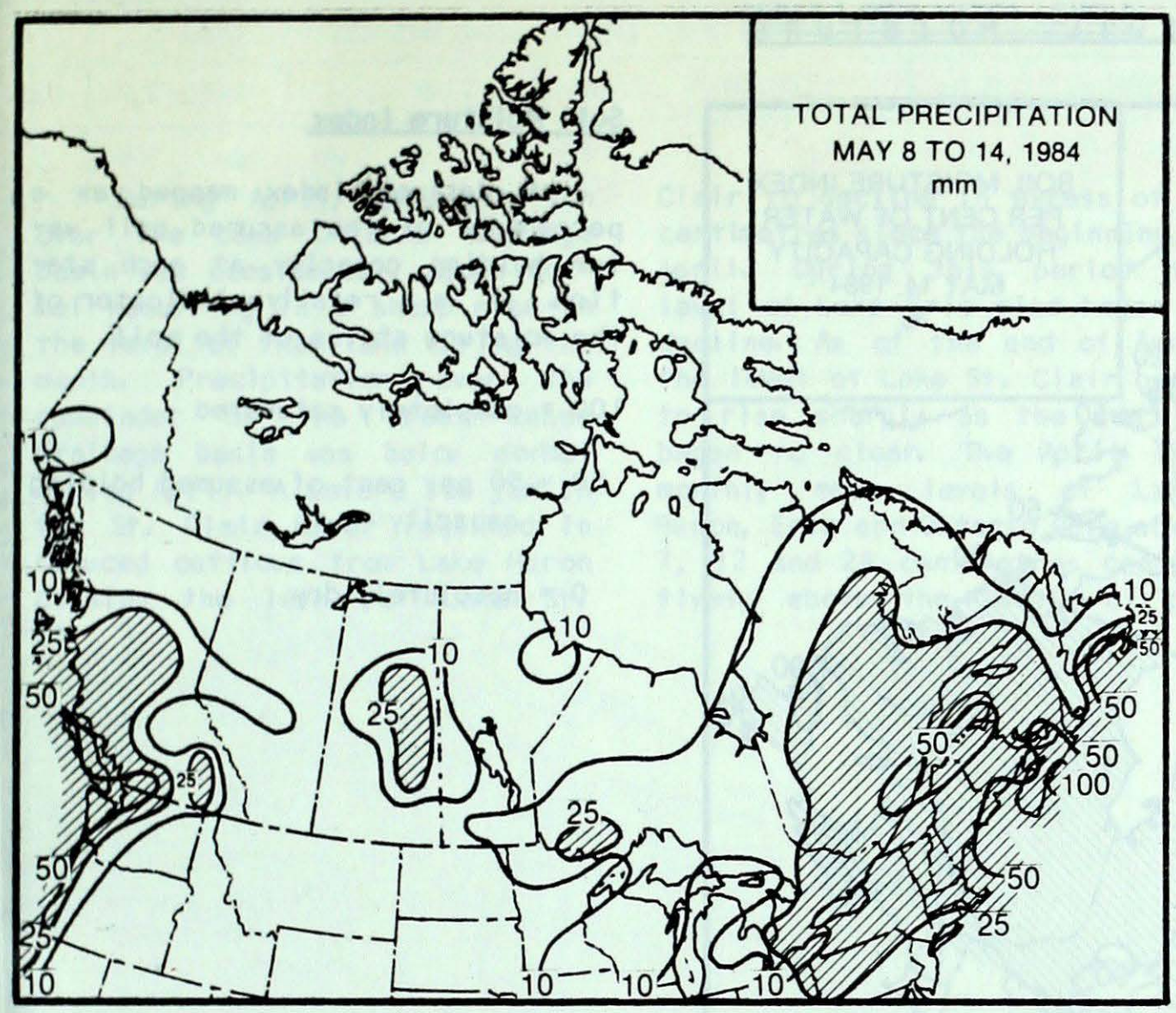
With the exception of the north, cool and showery weather plagued the Province. Conditions were too cold and wet for agriculture; in addition, light frost was reported in some low lying areas of the south.

Prairies

Unsettled and cool weather conditions early in the week gradually changed to a milder and relatively more pleasant weather regime. Several slow moving disturbances deposited 15 to 30 millimetres of rain in central districts, but only a few millimetres fell in the south, increasing the agricultural need for a substantial rainfall. On the afternoon of May 12, two tornadoes and a number of funnel clouds were sighted near Broadview. Near the community of Whitewood, Saskatchewan, there were reports of extensive damage to farm machineries and several buildings. On average, the tornado season begins in this part of the country on May 22, and one tornado can be expected for about every 14,300 square kilometres.

Ontario

Heavy rain in the 20 to 45 mm



HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	18.9	Burwash
NORTHWEST TERRITORIES	6.1	Mould Bay
BRITISH COLUMBIA	73.8	Hope
ALBERTA	20.8	Whitecourt
SASKATCHEWAN	32.8	Wynyard
MANITOBA	18.8	Dauphin
ONTARIO	44.1	Ottawa
QUEBEC	64.2	Québec
NEW BRUNSWICK	59.1	Saint John
NOVA SCOTIA	119.5	Shearwater
PRINCE EDWARD ISLAND	55.4	Charlottetown
NEWFOUNDLAND	51.6	Burgeo

Wind Damage to Ontario Agriculture

On April 30, strong winds gusting near 125 km/h caused considerable damage to Ontario's farmland. In southwestern regions, many seedbeds were blown out and a major reseeding of onions and other vegetables was necessary. Holland Marsh, just north of Toronto, was particularly hard hit as hurricane-force winds caused a lot of damage to seeded and transplanted crops. Onions and early carrots had to be reseeded. Soil erosion was common and some areas lost soil that ended up in canals and ditches.

range and cool temperatures controlled the weather. The temperatures were nearly 2° below the seasonable norm in the South, and on May 13, many record-low values were set as the daytime readings failed to rise above 10°. Snow also fell in some southern location on that day, most notably near London - about 2 cm. On the morning of May 14, widespread frost covered almost all of the Province. The temperatures dropped to below freezing, but it was too early for the frost to do any crop damage. The cool and wet weather has considerably slowed agricultural activities across Ontario.

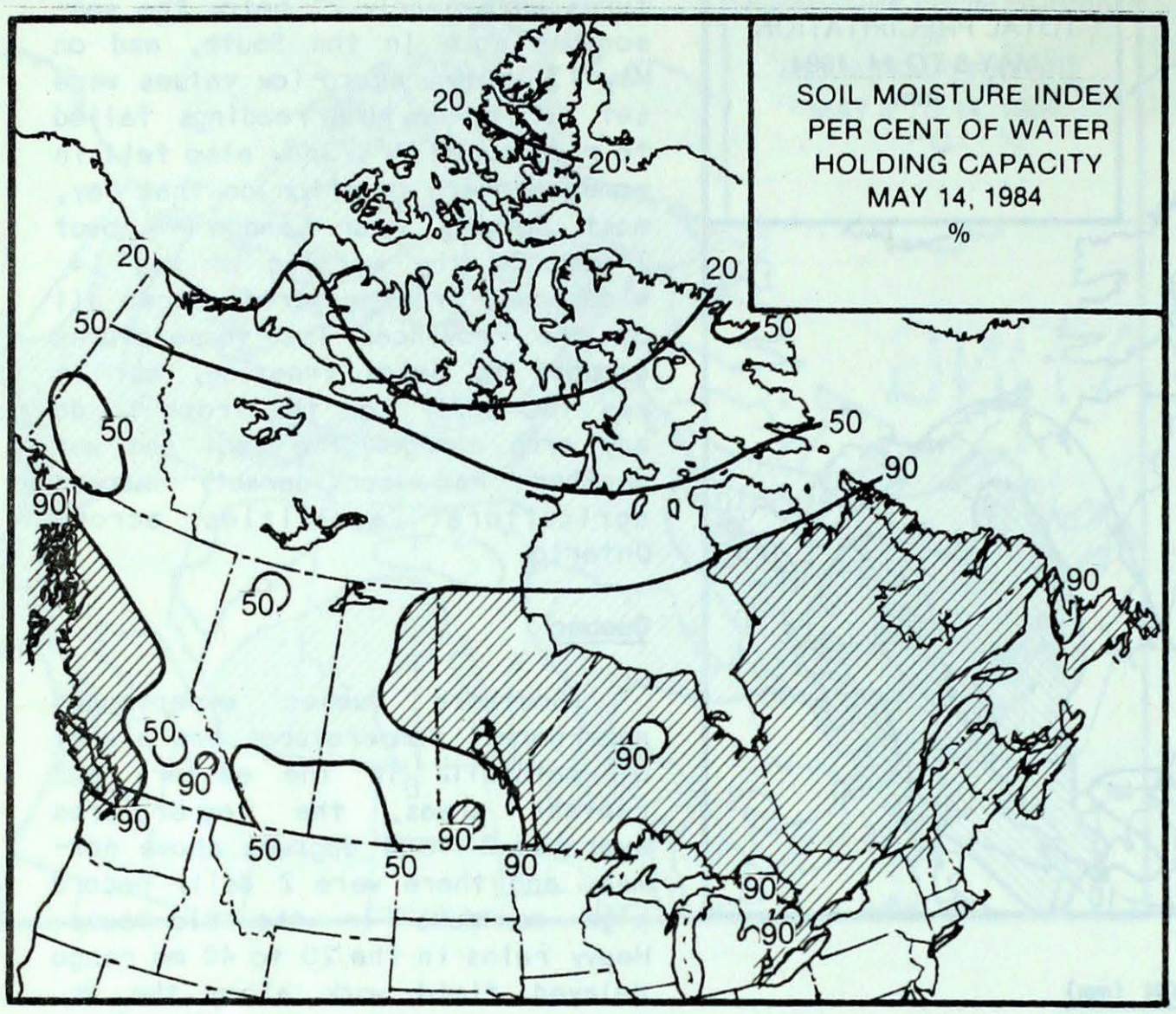
Quebec

Southern Québec experienced near-normal temperatures and plenty of rainfall. In the eastern and central areas, the temperatures averaged 2 to 4 degrees above normal, and there were 2 daily record high maximums in the mid-teens. Heavy rains in the 20 to 40 mm range delayed field work along the St. Lawrence Valley, but elsewhere ploughing and seeding were progressing rapidly. On May 2, an intense squall line crossing southwestern Québec spawned a few funnel clouds near Mattawa, golf ball size hail was observed at Lac Des Chênes and winds were clocked at 82 km/h at Dorval. Near the end of the week, 3 forest fires were burning in extreme southwestern Québec - none major.

Atlantic Provinces

Weather systems crossing the East Coast produced dull and damp weather in Atlantic Canada. Heavy rains in the 40 to 75 mm range inundated the Maritimes and parts of Newfoundland. The rains have saturated fields and have hampered seeding in Nova Scotia and New Brunswick. Owing to the wet weather, potato planting was delayed in Prince Edward Island; however, forage crop was progressing well throughout the Maritimes. After several weeks of cool weather, warm air moved into the Provinces. Mean temperatures were 3 to 6 degrees above normal and several locations established record-high values.

SOIL MOISTURE



Soil Moisture Index

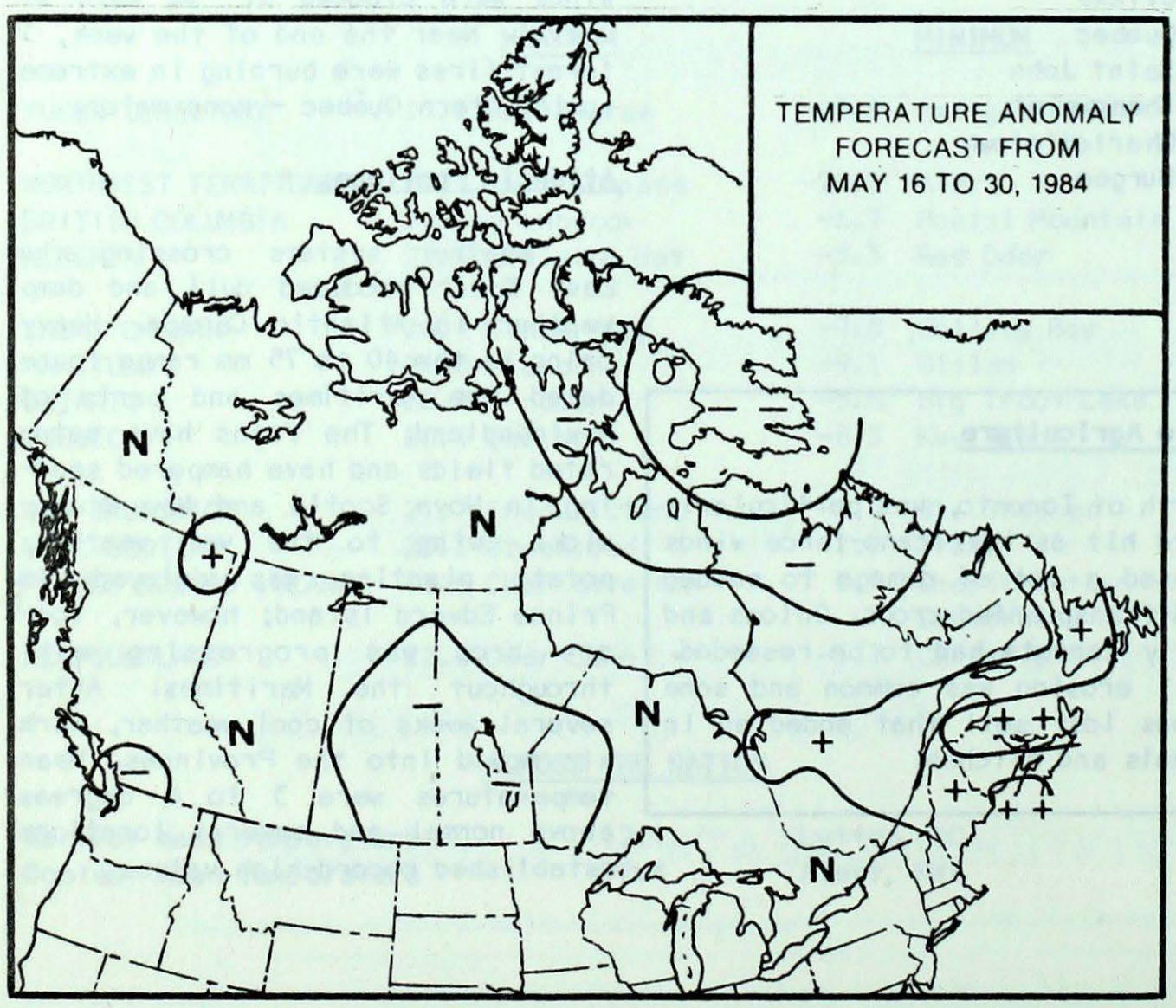
A derived index mapped as a percentage of the assumed soil water holding capacity at each station. It is a relative indicator of the moisture status of the soil.

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

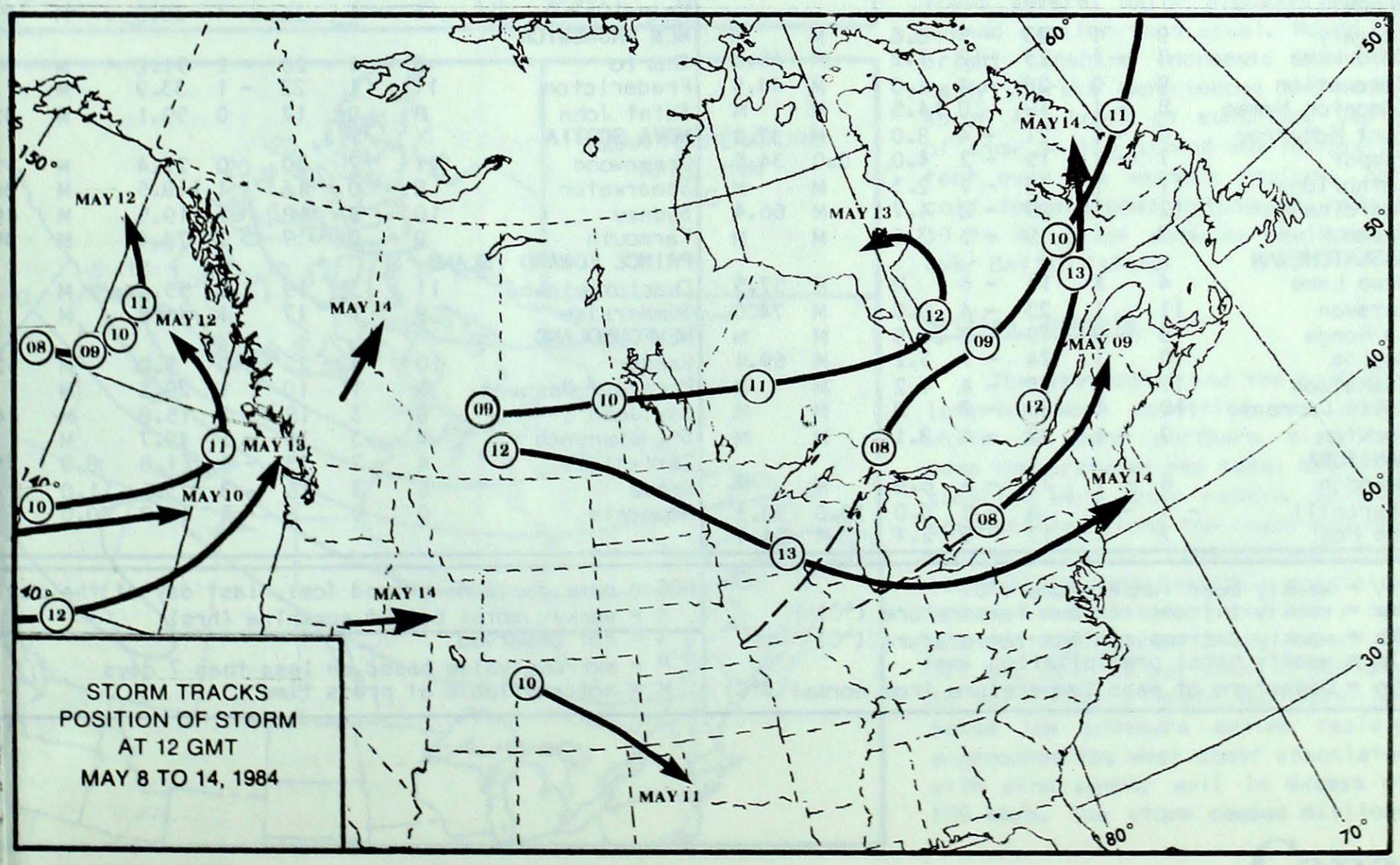
— much below normal

GREAT LAKES WATER LEVELS

During April, precipitation over the Lake Ontario drainage basin was considerably above normal resulting in a sharp rise in the level of that lake during the month. Precipitation over the remainder of the Great Lakes drainage basin was below normal during April. A severe ice jam in the St. Clair River resulted in reduced outflows from Lake Huron causing the level of Lake St. Clair to decline in excess of 61 centimetres since the beginning of April. During this period the level of Lake Erie also began to decline. As of the end of April the level of Lake St. Clair began to rise sharply as the ice jam began to clear. The April 1984 monthly mean levels of Lakes Huron, Erie and Ontario were about 7, 12 and 24 centimetres respectively above the levels of one year ago while the mean levels of Lakes Superior and St. Clair were about 7 and 40 centimetres below the levels of April 1983.

Assuming the most probable water supplies over the next six months, the level of Lake Ontario is expected to remain above normal and also above the levels of last year until October 1984 when the lake level should approximate that recorded in October 1983.

STORM TRACKS



TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT MAY 15, 1984

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	6	0	17	- 6	1.3	M	M
Mayo A	7	1	16	- 5	2.8	M	M
Watson Lake	8	2	16	- 2	7.4	M	65.8
Whitehorse	7	1	17	- 3	2.8	M	M
NORTHWEST TERRITORIES							
Fort Smith	5	- 1	19	- 3	3.9	M	M
Inuvik	- 2	2	10	-14	1.4	42.0	M
Norman Wells	7	4	17	- 3	3.3	M	85.4
Yellowknife	5	3	19	- 4	3.4	M	73.4
Baker Lake	- 5	4	1	-11	0.0	42.0	48.3
Cape Dyer	- 7	0	3	-18	0.0	52.0	M
Clyde	- 6	3	1	-13	0.4	95.0	85.3
Frobisher Bay	- 9	- 4	1	-19	0.0	23.0	93.0
Alert	-12	1	- 2	-20	M	18.0	77.9
Eureka	- 8	4	- 2	-15	M	13.0	18.9
Hall Beach	- 7	4	1	-14	0.0	33.0	M
Resolute	- 9	3	- 4	-18	1.2	18.0	59.3
Cambridge Bay	- 6	5	0	-14	0.0	45.0	90.2
Mould Bay	- 9	3	- 1	-19	6.1	37.0	M
Sachs Harbour	- 7	3	0	-17	0.5	6.0	29.3
BRITISH COLUMBIA							
Cape St. James	9	1	13	5	15.4	M	44.5
Cranbrook	8	- 3	20	- 2	6.8	M	38.7
Fort Nelson	7	- 1	20	- 5	2.7	M	61.7
Fort St. John	7	- 2	17	- 3	0.0	M	M
Kamloops	11	- 2	20	1	2.8	M	M
Pentlcton	11	- 2	19	1	12.6	M	26.4
Port Hardy	9	0	15	4	41.8	M	M
Prince George	7	- 2	13	- 2	38.1	M	34.7
Prince Rupert	8	1	14	1	19.1	M	48.3
Revelstoke	9	- 2	16	4	27.8	M	15.7
Smithers	7	- 2	15	- 2	26.0	M	39.5
Vancouver	11	- 1	17	6	26.4	M	30.6
Victoria	11	- 1	17	5	25.6	M	41.5
Williams Lake	7	- 1	14	- 2	16.4	M	M
ALBERTA							
Calgary	9	1	23	- 5	0.6	M	M
Cold Lake	8	- 1	23	- 2	1.2	M	48.8
Coronation	9	0	26	- 4	1.6	M	44.5
Edmonton Namao	8	- 1	19	0	14.5	M	M
Fort McMurray	6	- 1	21	- 4	8.0	M	37.2
Jasper	7	- 1	15	- 2	4.0	0.0	34.5
Lethbridge	11	1	25	- 1	2.3	M	M
Medicine Hat	12	1	29	- 2	4.7	M	66.4
Peace River	7	- 1	19	- 3	3.6	M	M
SASKATCHEWAN							
Cree Lake	4	X	15	- 6	M	M	57.5
Estevan	11	1	23	- 4	0.0	M	74.0
La Ronge	6	- 2	19	- 2	26.9	M	M
Regina	10	1	24	- 7	3.2	M	69.4
Saskatoon	11	2	25	- 4	1.2	M	M
Swift Current	10	1	26	- 7	M	M	M
Yorkton	7	- 1	22	- 4	8.1	M	M
MANITOBA							
Brandon	8	- 1	21	- 6	6.9	M	M
Churchill	- 5	- 1	0	- 8	0.0	10.0	28.3
The Pas	7	1	17	- 6	2.4	M	54.7
Thompson	4	- 2	15	- 5	0.0	M	70.3
Winnipeg	8	- 1	20	- 4	9.8	M	70.0
ONTARIO							
Big Trout Lake	3	1	13	- 6	0.0	M	M
Earlton	7	- 1	16	- 2	M	M	M
Kapuskasing	6	0	19	- 2	15.5	0.0	M
Kenora	8	0	17	0	7.6	M	M
London	8	- 2	19	0	32.4	M	35.4
Moosonee	4	0	13	- 2	11.8	0.0	29.4
Muskoka	7	- 2	14	- 3	M	M	M
North Bay	7	- 2	16	- 1	21.8	M	28.2
Ottawa	10	- 1	20	3	44.1	M	44.1
Pickle Lake	5	1	16	- 4	14.4	M	M
Red Lake	5	- 1	16	- 2	12.1	M	43.0
Sudbury	7	- 2	16	- 1	13.7	M	31.7
Thunder Bay	8	1	20	- 1	2.7	M	M
Timmins	6	- 1	17	- 2	30.9	M	M
Toronto	9	- 2	18	0	27.4	M	M
Trenton	9	- 2	18	1	33.3	M	M
Wiarton	7	- 2	17	- 1	7.3	M	34.9
Windsor	11	- 1	21	3	8.0	M	M
QUEBEC							
Bagotville	8	1	20	- 3	31.2	M	M
Blanc-Sablon	5	3	17	- 2	7.6	0.0	40.6
Inukjuak	0	4	8	- 5	1.4	0.0	74.3
Kuujjuaq	- 2	- 1	4	- 8	16.2	15.0	M
Kuujjuarapik	1	2	11	- 5	11.5	0.0	36.3
Maniwaki	8	- 2	17	- 2	32.6	M	33.2
Mont-Joli	9	2	18	1	19.2	M	39.0
Montréal	11	0	20	3	46.4	M	39.2
Natashquan	5	1	11	- 1	38.2	M	M
Nitchequon	2	2	16	- 3	47.2	2.0	15.2
Québec	10	1	20	3	64.2	0.0	28.5
Schefferville	1	2	9	- 7	28.9	15.0	20.9
Sept-Iles	5	0	10	- 1	39.6	M	35.4
Sherbrooke	8	0	19	- 1	35.6	M	M
Val-d'Or	6	- 1	16	- 4	30.8	M	29.0
NEW BRUNSWICK							
Charlo	8	1	20	- 2	51.2	M	M
Fredericton	11	1	22	- 1	33.9	M	M
Saint John	8	0	17	0	59.1	M	32.4
NOVA SCOTIA							
Greenwood	11	2	20	0	27.4	M	M
Shearwater	8	0	16	1	119.5	M	38.1
Sydney	10	3	18	1	19.5	M	49.5
Yarmouth	9	0	17	1	74.4	M	39.9
PRINCE EDWARD ISLAND							
Charlottetown	11	3	19	1	55.4	M	M
Summerside	9	1	17	1	41.6	M	M
NEWFOUNDLAND							
Gander	10	4	20	0	9.0	M	52.6
Port aux Basques	5	1	10	1	20.2	M	M
St. John's	8	3	18	- 1	15.8	M	44.5
St. Lawrence	7	3	15	- 1	49.7	M	M
Cartwright	4	2	15	- 6	1.8	8.0	55.0
Goose	6	3	16	- 3	3.5	11.0	27.2
Hopedale	0	0	8	- 5	10.9	30.0	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