

Climatic Perspectives

A WEEKLY REVIEW OF CANADIAN CLIMATE

Indian Climate Centre

MAY 25, 1984

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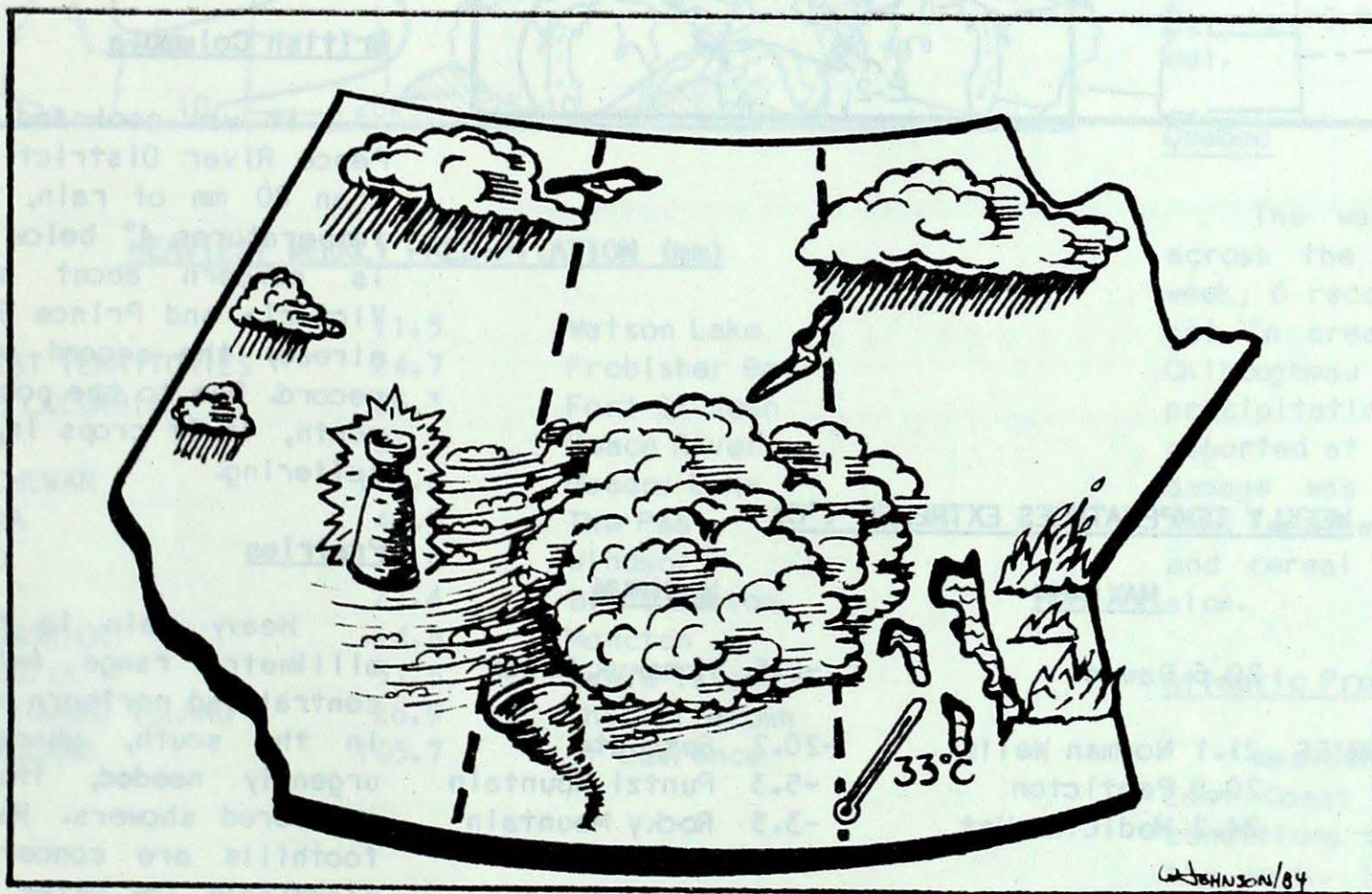
FOR THE PERIOD MAY 15 TO 21, 1984



NON-CIRCULATING

● Extreme weather on the Prairies:

Dust storm in the south;
sweltering heat and forest fires in southern Manitoba;
deluges of rain in the Peace River District;
tornado in Saskatchewan.

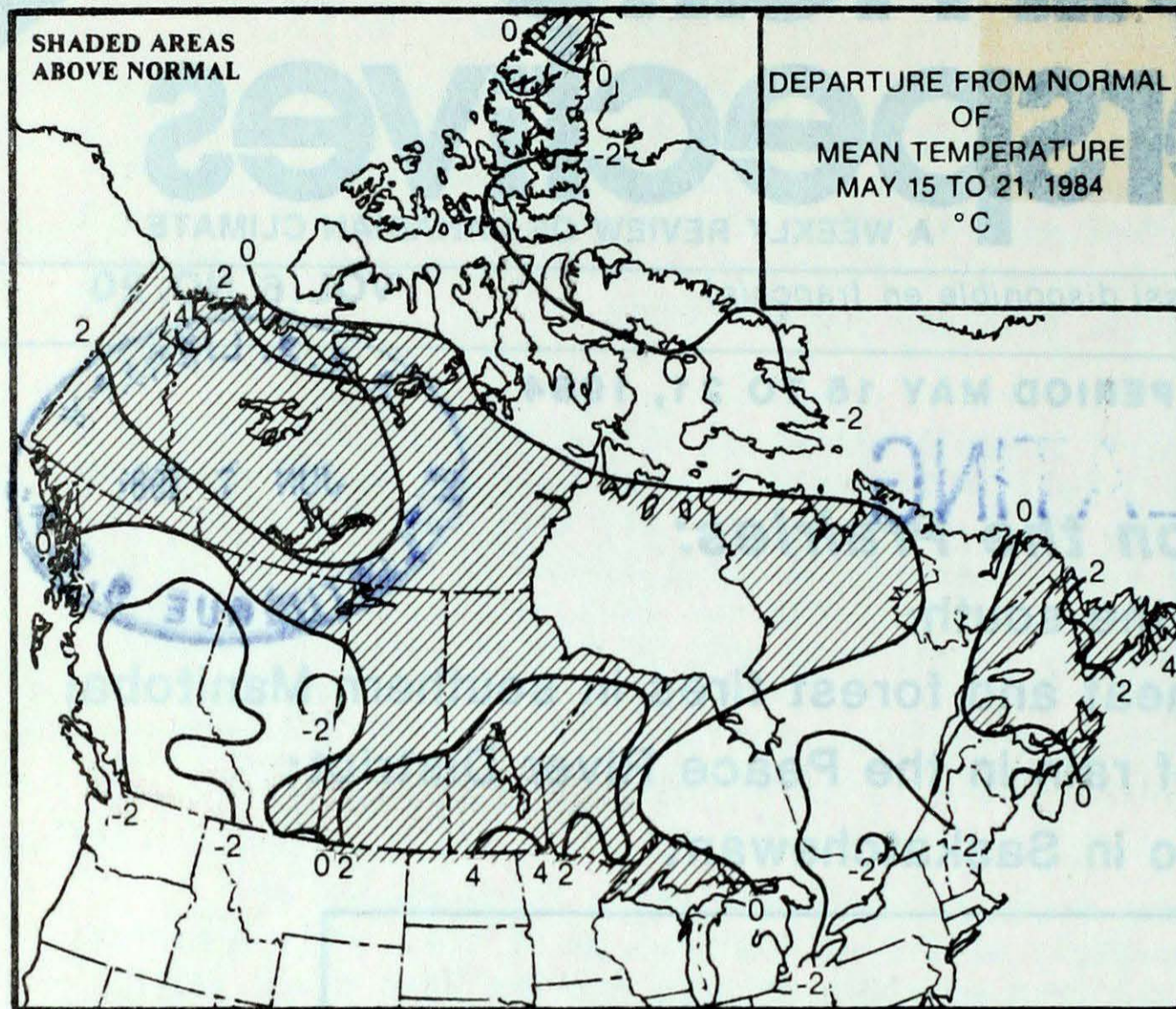


● Farm land saturated in southern British Columbia

● Sunny and warm Victoria Day Weekend from the Great Lakes to the Maritimes - booming business for gardening centres

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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**

Above-normal temperature occurred throughout the western half of the Arctic. The Franklin District experienced unseasonable cold as the weekly temperatures registered nearly 4° below normal. Clouds and showers dominated southern Yukon's weather. The wet weather has considerably reduced the threat of forest fires near Whitehorse. However, warm temperatures near 20° contributed to high fire hazard in the northern Yukon. Except for Frobisher Bay, less than 10 mm of precipitation fell in the North. Owing to rapid ice deterioration, ice bridges were closed both on the Mackenzie and Peel Rivers, and the Dempster Highway to Inuvik was closed at Eagle Plains.

British Columbia

It was cool and very wet. The Peace River District received more than 80 mm of rain, and with mean temperatures 4° below normal, there is concern about seed rot. In Victoria and Prince George this is already the second wettest May on record. Due to the poor weather this month, fruit crops in the south are suffering.

Prairies

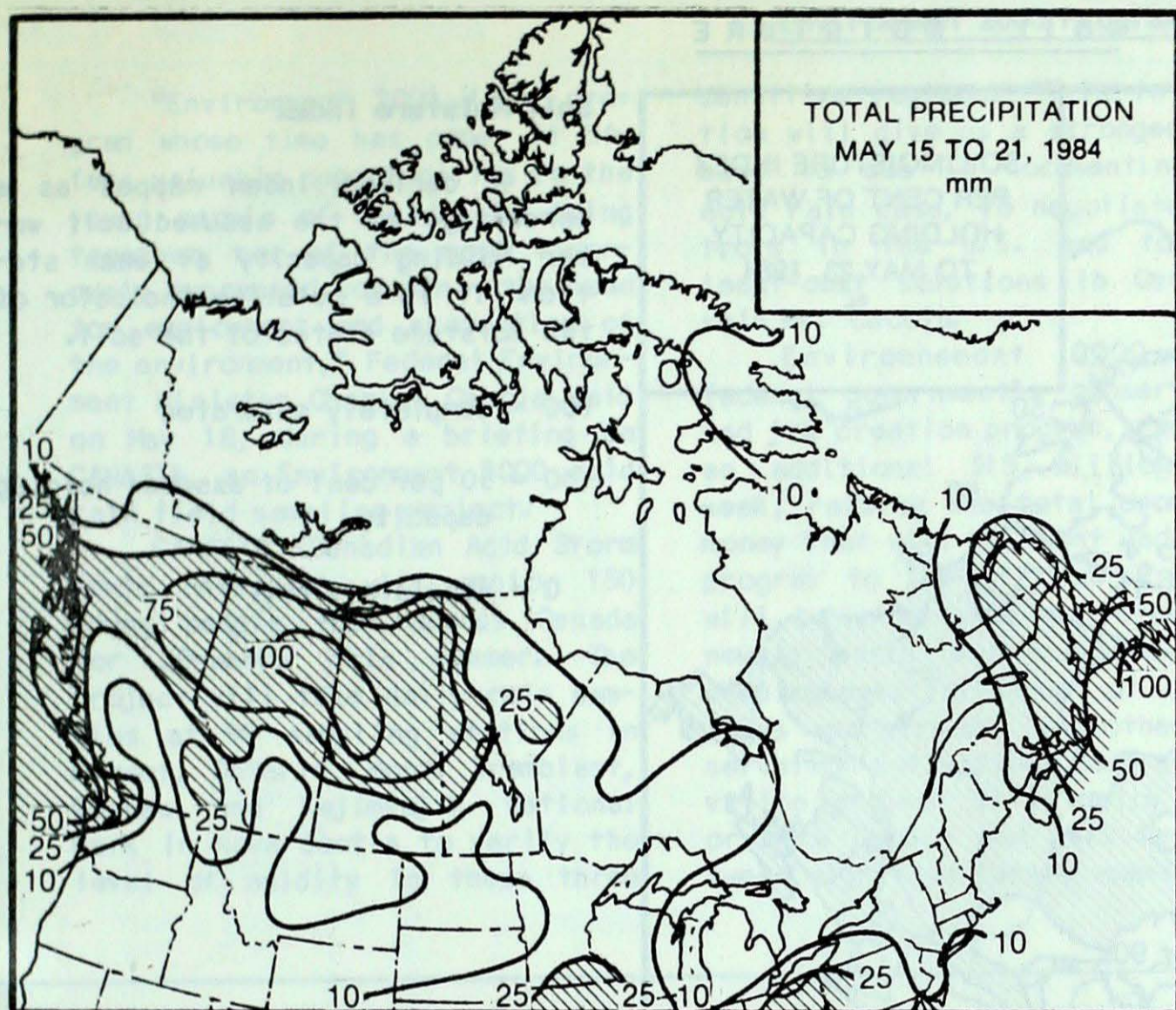
Heavy rain in the 50 to 100 millimetre range fell across the central and northern portions, while in the south, where moisture is urgently needed, there were only scattered showers. Ranchers in the foothills are concerned about the alarmingly low water levels in livestock watering holes and ponds and the slow growth of forage crops. Strong winds in southern Saskatchewan caused significant soil erosion and many fields have to be reseeded. On May 16, a tornado touched down near the farming community of Outram, west of Estevan; several farms sustained extensive damage. In southern Manitoba, near the Ontario border, forest fires fanned by strong winds, spread rapidly during the middle of the week. A portion of the Trans-Canada Highway and Whiteshell Provincial Park had to be closed. Heavy rains of

WEEKLY TEMPERATURES EXTREMES (°C)

	MAXIMUM	MINIMUM
YUKON TERRITORY	20.6 Dawson	-8.5 Komakuk Beach
NORTHWEST TERRITORIES	21.1 Norman Wells	-20.2 Resolute
BRITISH COLUMBIA	20.8 Pentlcton	-5.3 Puntzi Mountain
ALBERTA	24.2 Medicine Hat	-3.5 Rocky Mountain House
SASKATCHEWAN	32.3 Estevan	-1.7 Uranium City
MANITOBA	33.0 Dauphin	-8.4 Churchill
ONTARIO	30.5 Thunder Bay	-8.0 Moosonee
QUEBEC	20.0 Chibougamau Roberval	-7.9 Kuujuaupik
NEW BRUNSWICK	24.8 Charlo	-1.2 Charlo
NOVA SCOTIA	20.3 Shearwater	-.7 Truro
PRINCE EDWARD ISLAND	21.3 Summerside	1.4 East Point
NEWFOUNDLAND	20.4 St. John's	-4.0 Churchill Falls Wabush Lake

ACROSS THE NATION

Warmest mean temperature	15.3	Estevan, Sask
Coollest mean temperature	-12.6	Resolute, NWT



HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	11.5	Watson Lake
NORTHWEST TERRITORIES	24.7	Frobisher Bay
BRITISH COLUMBIA	86.3	Fort St John
ALBERTA	81.3	Peace River
SASKATCHEWAN	109.0	Meadow Lake
MANITOBA	47.9	The Pas
ONTARIO	22.0	Windsor
QUEBEC	27.4	Blanc Sablon
NEW BRUNSWICK	14.8	Moncton
NOVA SCOTIA	57.5	Sable Island
PRINCE EDWARD ISLAND	26.9	Charlottetown
NEWFOUNDLAND	105.7	St Lawrence

Historically This Week...

A look into the past reveals some extreme meteorological events, two milestones are: May 18, 1950, The highest Red River flood in modern times crested at 10.1 metres above normal near Winnipeg, Man. where more than 100,000 people were evacuated. Damage to 5000 homes and build-

ings was estimated at \$1,000,000,000.

May 21, 1953, Tornadoes moved eastward across Lambton and Middlesex Counties, in southwestern Ontario, resulting in five deaths and property damage amounting to \$8,000,000 in Sarnia and the rural areas.

the weekend allowed fire fighting crews to bring the situation under control.

Ontario

Sunny and warm Victoria Day weekend ended a week of unseasonably cool weather across most of Ontario. Earlier in the week, nighttime minimums fell below freezing; at Moosonee, the temperature dropped to -8° on the morning of May 21 - erasing the old record dating back to 1936. The dry weather provided farmers an excellent opportunity to complete their field work near schedule. Only southwestern Ontario experienced moderate rainfall in the 15 to 20 mm range this week. To date, monthly mean temperatures for May remain well below normal through out the Province. Toronto's mean for the first three weeks of May is 10.8° - almost 3° below normal.

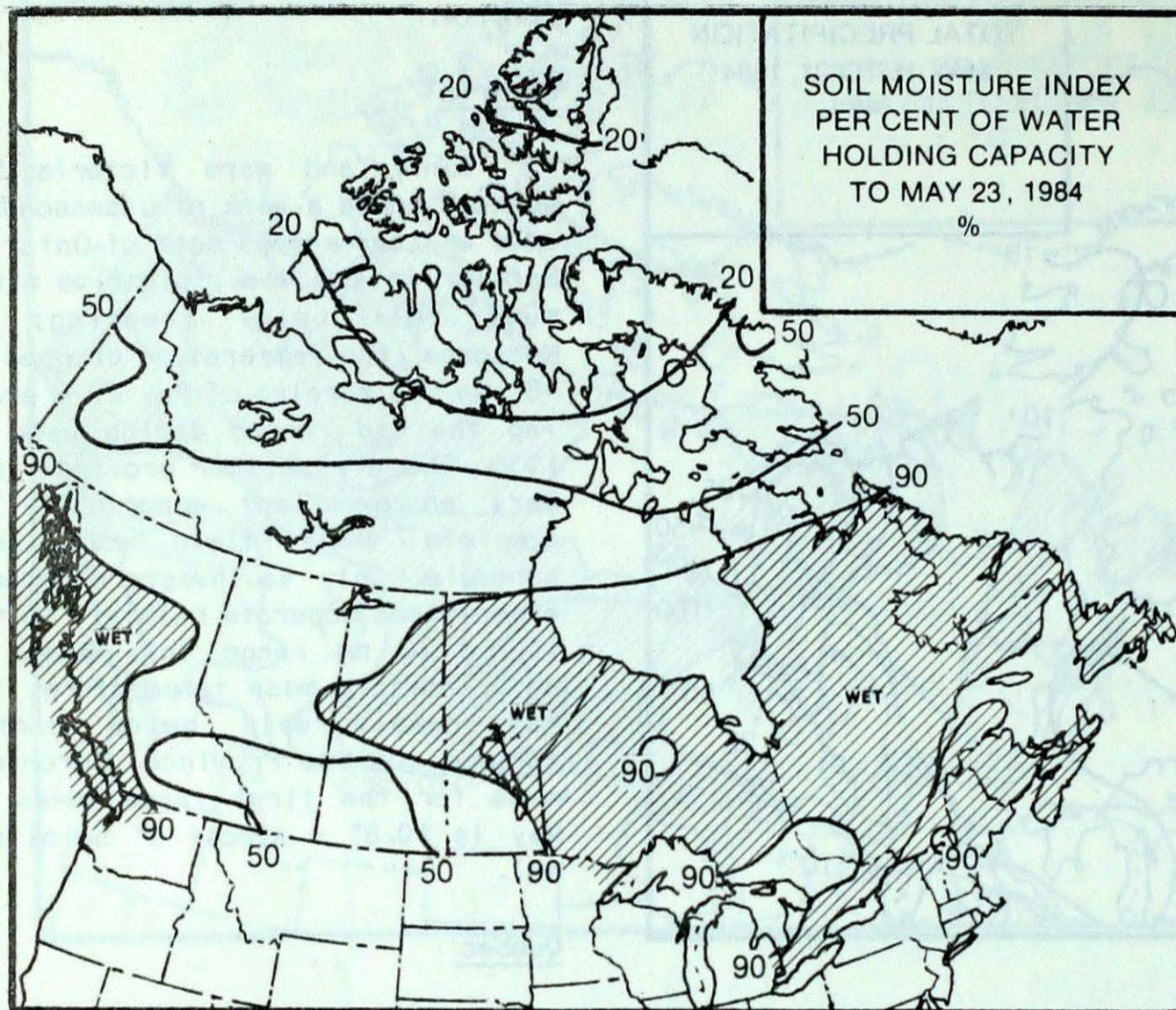
Quebec

The weather was dry but cool across the Province. Early in the week, 6 record-low temperatures were set in areas south of a line from Chibougamau to Sept-Îles. Although precipitation was light, hail was reported at Ascot Canton on May 15 - damage was minimal. Owing to the cool weather, growth of vegetable and cereal crops was described as slow.

Atlantic Provinces

Weather systems crossing the East Coast produced dull and damp conditions during the first half of the week. However, sunny and warm weather covered the Maritimes over the weekend. The wet weather delayed planting; in Prince Edward Island field work was delayed several weeks. Warm air moved into Newfoundland on May 15, several record-high temperatures were established including 20° at St. John's. In contrast, Labrador felt wintry weather. Over 21 cm of snow fell at Goose Bay during the week surpassing the normal amount for May, 18 cm. Melt and decay of pack ice were progressing rapidly off the East Coast. At the end of the week, there was no ice south of Cape Freels.

SOIL MOISTURE

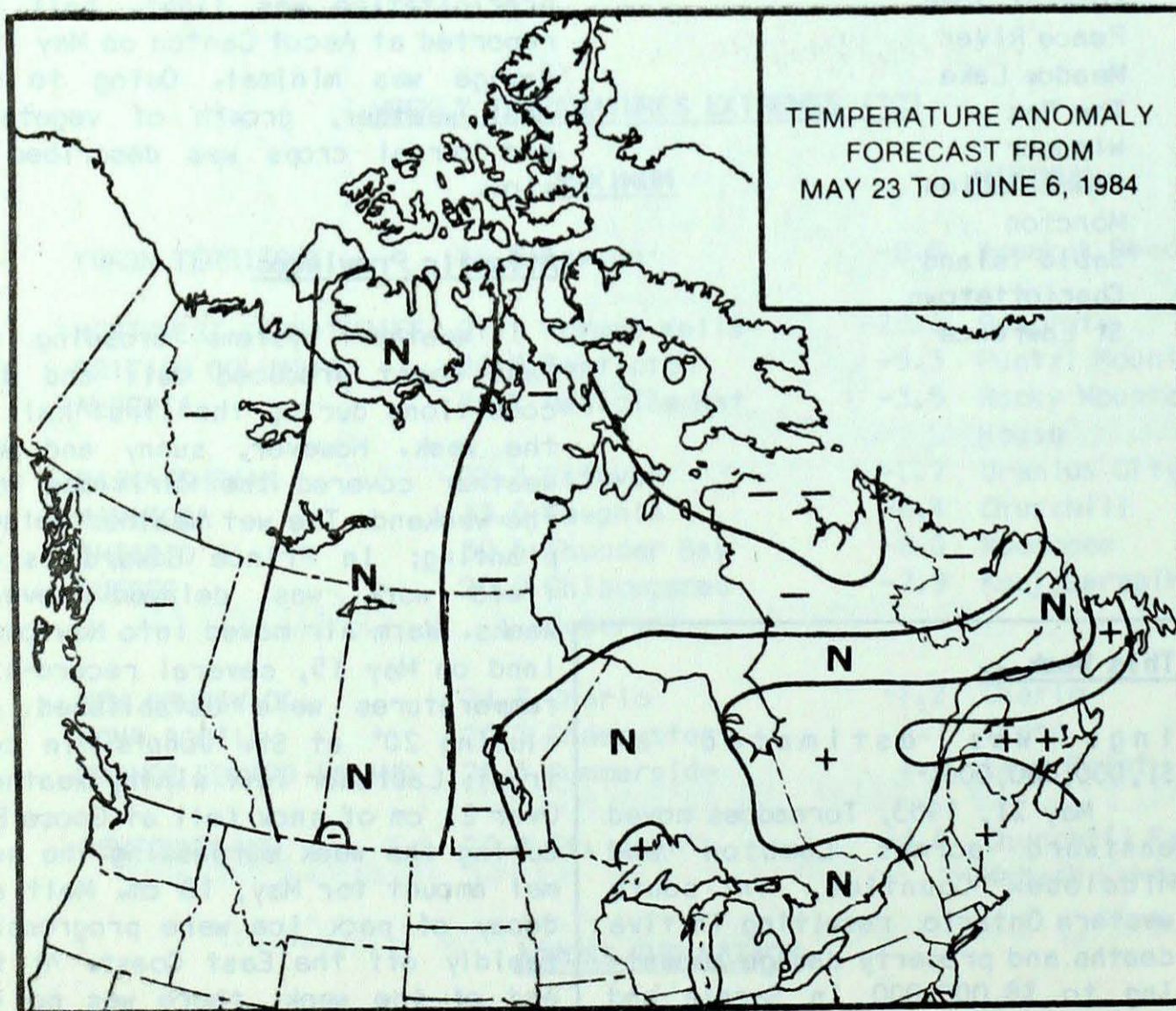


Soil Moisture Index

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

Environment 2000 Program

"Environment 2000 is a program whose time has come: It offers valuable opportunities to the young people of Canada, by tying together two of the most vigorously expressed concern - the need for employment and protection of the environment," Federal Environment Minister Charles Caccia said on May 18, during a briefing on CANASTA, an Environment 2000 acid rain field sampling project.

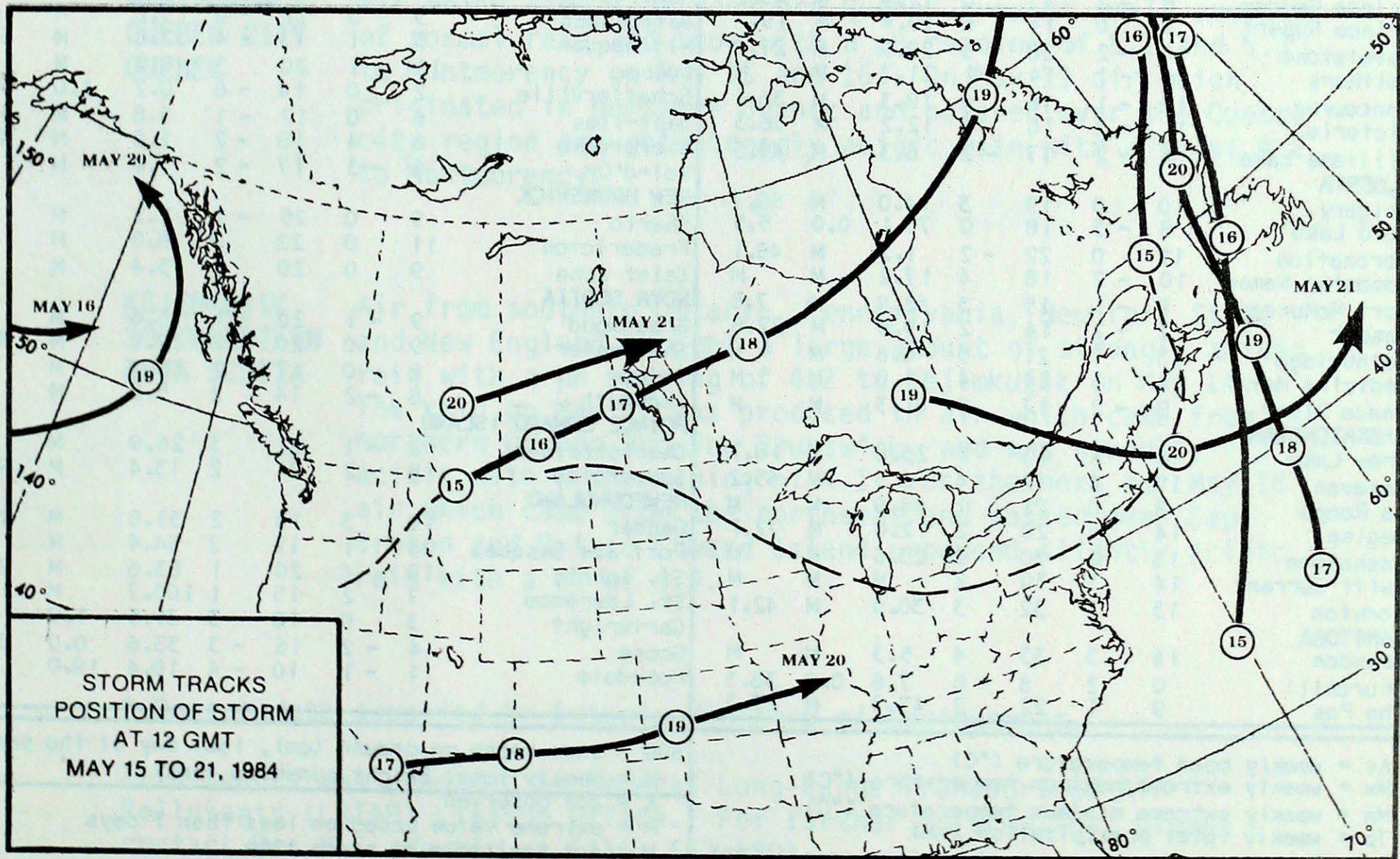
CANASTA (Canadian Acid Storm Toxic Analysis) will employ 150 young people from across Canada for 20-weeks this summer. The project will take daily rain samples at 99 sampling stations in Dorset, Ontario, Mont. Tremblant, Quebec and Kejimikujik National Park in Nova Scotia to verify the level of acidity in these three

sensitive regions. "This information will give us a stronger data base to use in documenting the acid rain case, to negotiate controls in the U.S. and to find least-cost solutions in Canada," said Mr. Caccia.

Environnement 2000, the federal government's conservation and job creation program, received an additional \$15 million last week, raising the total amount of money that will be spent under the program to \$50 million. Projects will be undertaken on forest renewal; parks and historic sites development; clean-up of rivers lakes and streams; and other conservation activities. Each conservation project will employ three or more people and will last between eight and twenty weeks.



STORM TRACKS



TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT MAY 22, 1984

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	7	2	19	-2	15.3	M	39.5
Dawson	11	2	21	-3	0.6	M	M	Winnipeg	15	4	30	6	12.4	M	43.3
Mayo A	12	3	19	4	0.3	M	M	ONTARIO							
Watson Lake	9	1	15	3	11.5	M	32.5	Big Trout Lake	8	3	20	-3	16.3	M	M
Whitehorse	9	1	18	-1	6.6	M	M	Earlton	9	-1	20	-3	M	M	M
NORTHWEST TERRITORIES								Kapusking	8	-1	27	-4	3.0	M	M
Fort Smith	10	2	17	0	1.2	M	M	Kenora	13	3	24	5	11.2	M	M
Inuvik	5	4	17	-4	0.0	10.0	M	London	11	-2	23	-1	8.1	M	M
Norman Wells	10	3	21	1	0.4	M	95.1	Moosonee	5	-1	27	-8	14.6	M	42.0
Yellowknife	8	3	16	-3	0.0	M	98.8	Muskoka	10	-1	22	0	M	M	M
Baker Lake	-5	1	3	-13	2.8	26.0	78.6	North Bay	8	-3	20	-1	3.6	M	M
Cape Dyer	-8	-2	2	-18	16.4	63.0	M	Ottawa	11	-2	20	4	9.5	M	43.7
Clyde	-8	-2	3	-16	M	93.0	81.2	Pickle Lake	11	3	25	-2	9.4	M	M
Frobisher Bay	-5	-2	6	-12	24.7	19.0	57.3	Red Lake	11	2	23	-1	14.1	M	37.8
Alert	-10	1	-3	-15	1.6	18.0	68.0	Sudbury	9	-2	20	-2	2.0	M	48.6
Eureka	-9	0	-1	-14	0.0	12.0	102.2	Thunder Bay	11	2	31	-2	18.6	M	57.2
Hall Beach	-10	-1	0	-20	0.4	33.0	M	Timmins	7	-2	26	-4	8.4	M	M
Resolute	-13	-3	-5	-20	M	19.0	90.2	Toronto	11	-2	25	0	0.6	M	M
Cambridge Bay	-8	1	2	-17	0.0	42.0	92.8	Trenton	10	-3	26	0	0.6	M	M
Mould Bay	-12	-1	-6	-16	M	38.0	M	Warton	9	-2	21	-2	0.4	M	53.0
Sachs Harbour	-9	-1	0	-18	0.2	7.0	112.1	Windsor	14	-1	29	3	22.0	M	M
BRITISH COLUMBIA								QUEBEC							
Cape St. James	8	0	12	6	34.6	M	18.6	Bagotville	8	-1	17	-2	5.4	M	M
Cranbrook	9	-2	18	-1	10.0	M	M	Blanc-Sablon	5	2	19	-1	27.4	0.0	M
Fort Nelson	10	-1	18	4	51.4	M	18.8	Inukjuak	0	2	6	-5	8.2	0.0	43.3
Fort St. John	7	-4	15	2	86.3	M	M	Kuujuuaq	2	1	14	-5	4.0	4.0	38.1
Kamloops	12	-3	19	1	M	M	M	Kuujuuarapik	2	1	18	-8	7.6	M	27.6
Penticton	11	-3	21	1	6.2	M	33.7	Maniwaki	8	-3	19	-3	0.4	M	36.3
Port Hardy	9	-1	13	5	26.0	M	M	Mont-Joli	6	-2	17	-2	5.7	M	55.3
Prince George	8	-2	17	0	17.9	M	43.2	Montréal	12	-2	20	3	3.2	M	46.9
Prince Rupert	9	0	14	6	59.4	M	19.7	Natashquan	5	0	11	0	15.8	M	M
Revelstoke	10	-2	20	5	29.9	M	27.8	Nitchequon	3	1	13	-4	2.0	M	63.0
Smithers	8	-1	14	-1	21.7	M	M	Québec	10	-1	20	3	6.2	M	53.4
Vancouver	12	-1	16	6	18.3	M	36.1	Schefferville	2	0	14	-6	0.2	1.0	56.7
Victoria	11	-2	16	4	12.2	M	36.3	Sept-Îles	6	0	17	-1	5.8	M	40.8
Williams Lake	8	-2	17	-2	6.3	M	45.5	Sherbrooke	8	-4	18	-2	1.0	M	47.5
ALBERTA								Val-d'Or	6	-3	17	-2	7.0	M	M
Calgary	10	0	19	3	14.0	M	50.7	NEW BRUNSWICK							
Cold Lake	8	-3	18	0	75.1	0.0	5.5	Charlo	9	0	25	-1	7.2	M	M
Coronation	11	0	22	-2	1.2	M	48.1	Fredericton	11	0	22	0	8.0	M	M
Edmonton Namao	10	-2	18	4	17.2	M	M	Saint John	9	0	20	1	5.4	M	M
Fort McMurray	9	-1	15	3	52.8	M	7.5	NOVA SCOTIA							
Jasper	7	-2	14	2	15.4	M	22.6	Greenwood	9	-1	20	-1	8.6	M	M
Lethbridge	13	1	21	5	6.6	M	M	Shearwater	9	0	20	2	17.8	M	47.4
Medicine Hat	14	1	24	4	11.8	M	M	Sydney	8	0	17	2	55.7	M	M
Peace River	9	-2	17	2	81.3	M	M	Yarmouth	8	-2	14	2	5.8	M	M
SASKATCHEWAN								PRINCE EDWARD ISLAND							
Cree Lake	6	X	13	1	25.8	M	18.7	Charlottetown	8	-1	21	3	26.9	M	M
Estevan	15	4	32	4	0.5	M	65.2	Summerside	8	-2	21	2	13.4	M	43.8
La Ronge	8	0	21	1	64.9	M	M	NEWFOUNDLAND							
Regina	14	3	28	2	12.0	M	72.1	Gander	10	3	18	2	51.8	M	13.9
Saskatoon	13	2	30	3	23.6	M	M	Port aux Basques	6	1	12	2	54.4	M	M
Swift Current	14	3	30	2	M	M	M	St. John's	10	4	20	1	83.6	M	27.2
Yorkton	13	2	32	3	30.0	M	42.1	St. Lawrence	7	2	15	1	105.7	M	M
MANITOBA								Cartwright	3	0	18	-3	31.5	1.0	M
Brandon	14	3	33	4	5.3	M	M	Goose	4	-2	16	-3	33.6	0.0	31.0
Churchill	0	2	8	-8	7.6	0.0	36.3	Hopedale	1	-1	10	-4	10.4	19.0	M
The Pas	9	1	22	2	47.9	M	27.3								

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

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ACID RAIN REPORT ISSUED BY ENVIRONMENT CANADA FOR MAY 13 - MAY 19 1984

**LONGWOODS
NEAR LONDON
ONTARIO**

Air which came from northern Ontario and passed through northern Michigan and southern Ontario brought normal rain with a pH reading of 5.0 to Longwoods on May 14. Air from the U.S. Midwest brought strongly acidic rain with a pH of 4.2 on May 18 and moderately acidic rain with a pH reading of 4.3 to the region on May 19.

**DORSET*
MUSKOKA
ONTARIO**

No rain last week.

**CHALK RIVER
OTTAWA
ONTARIO**

Chalk River received a small amount of strongly acidic rain on May 17 with a pH reading of 3.8. This event was associated with air which came from Hudson Bay and passed through the Sudbury Basin and southern Ontario.

**MONTMORENCY
QUEBEC CITY
QUEBEC**

Air which came from northern Quebec brought small amounts of normal rain and snow with a pH reading of 5.1 and 5.3 to Montmorency on May 15 and 16. On May 19 air which originated in northern Quebec and hovered over the Quebec city region brought strongly acidic rain with a pH of 4.2 to Montmorency.

**KEJIMKUJIK
SOUTHWESTERN
NOVA SCOTIA**

Air from southern Ontario, Pennsylvania, New York State and New England brought a large amount of strongly acidic rain with a pH reading of 4.2 to Kejimkujik on May 14. The rain on May 17 was produced in air which came from northern Quebec and New Brunswick, and was strongly acidic with a pH reading of 4.1. On the next day May 18 air which came from the northwest and passed over Cape Breton and Prince Edward Island produced slightly acidic rain with a pH of 4.9.

* Dorset data supplied by Ontario Ministry of Environment.

This report was prepared by Federal Long-Range Transport of Air Pollutants (LRTAP) Liaison Office. For further information, please contact Dr. H.C. Martin at (416) 667-4803.