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CLIMATIC PERSPECTIVES

OTM

Canadian perspectives

MONTHLY
SUPPLEMENT
INCLUDED



A weekly review of Canadian climate

June 18 to 24, 1985

Vol.7 No. 25



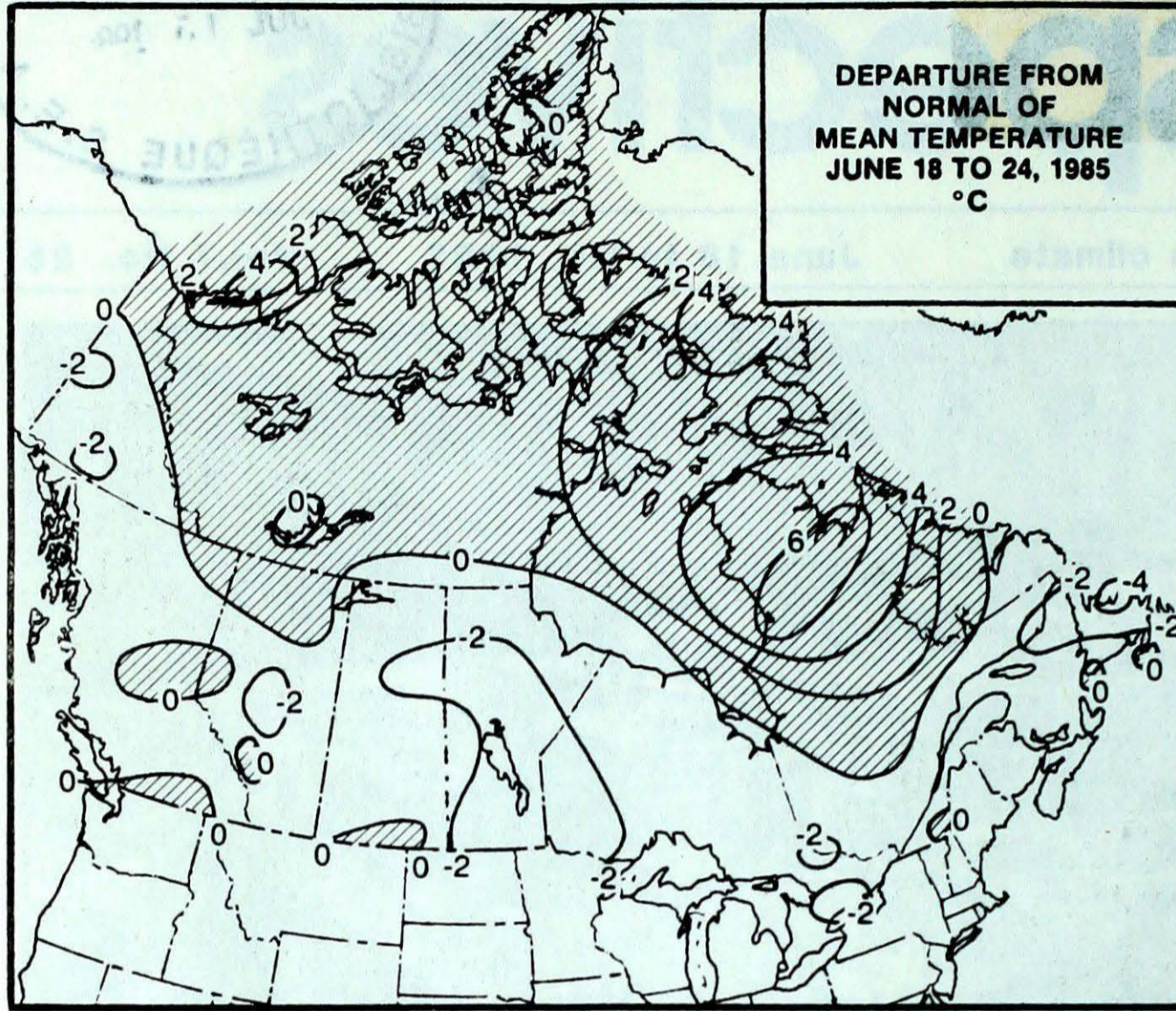
- ***Tornado devastates St-Sylvère, Southern Québec***
- ***Record June snowfall - Caribou Region, B.C.***

Monthly Supplement special feature

Follow-up on the tornado disaster
of May 31, 1985

Canada

TEMPERATURE



ACROSS THE COUNTRY...

Yukon and Northwest Territories

Temperatures in the Yukon recovered to near normal values, while record warm weather continued in the Arctic. Precipitation across the south was mostly in the form of showers and a few thundershowers. Ice in the Beaufort is gradually decaying, but a few leads of open water have appeared. In the eastern Arctic weather conditions have been favourable for an earlier than normal ice breakup.

British Columbia

At interior locations, the week began with record warm daily temperatures on the June 18 and 19 and an extreme forest fire hazard. By the weekend cool weather spread into eastern sections of the province from Alberta, producing snow at higher elevations as well as scattered thunderstorms. Williams Lake received 8 cm of snow, a record for June. At Fort St. John, significant rains made farmers happy. Other areas received only enough moisture for gardens and lawns, while "dry" lightning and gusty thunderstorm winds started and fanned numerous new forest fires. In coastal regions the week was mainly sunny and pleasant.

Prairies

The week began sunny and mild. In Alberta, many new maximum temperature records were established during the early part of the week as readings climbed into the low thirties. After mid-week, in the wake of a cold frontal passage, a much colder airmass flooded southward. Temperatures dropped to record low values everywhere and frost was reported in the Alberta foothills at the end of the week. Most rain fell during the weekend, as much as 70 mm in central Alberta and almost 50 mm in Manitoba. The southwest remained predominantly dry. Preliminary surveys show that the devastating wind storm that occurred two weeks ago on June 8 damaged up to 200 thousand hectares of agricultural land. Crop damage is estimated at \$4 million.

WEEKLY TEMPERATURE EXTREMES (°C)

	MAXIMUM	MINIMUM
YUKON TERRITORY	23.8 Shingle Point	- 3.0 Klondike
NORTHWEST TERRITORIES	28.5 Hay River	- 5.0 Broughton Island
BRITISH COLUMBIA	36.6 Lytton	- 1.5 Dease Lake
ALBERTA	33.4 Lethbridge	- 0.1 Banff
SASKATCHEWAN	31.0 Kindersley	- 0.1 Prince Albert
MANITOBA	28.3 Brandon	- 0.8 Thompson
ONTARIO	29.4 Windsor	0.1 Wawa
QUÉBEC	28.2 Kuujjuak	- 1.3 Quaqtaq
NEW BRUNSWICK	27.5 Chatham	6.5 St. Stephen
NOVA SCOTIA	24.9 Shelburne	5.2 Sydney
PRINCE EDWARD ISLAND	22.5 Summerside	6.3 Summerside
NEWFOUNDLAND	27.6 Goose	- 1.7 St. Anthony

ACROSS THE NATION

Warmest mean temperature	19.6	Windsor, ONT
Coollest mean temperature	2.0	Alert



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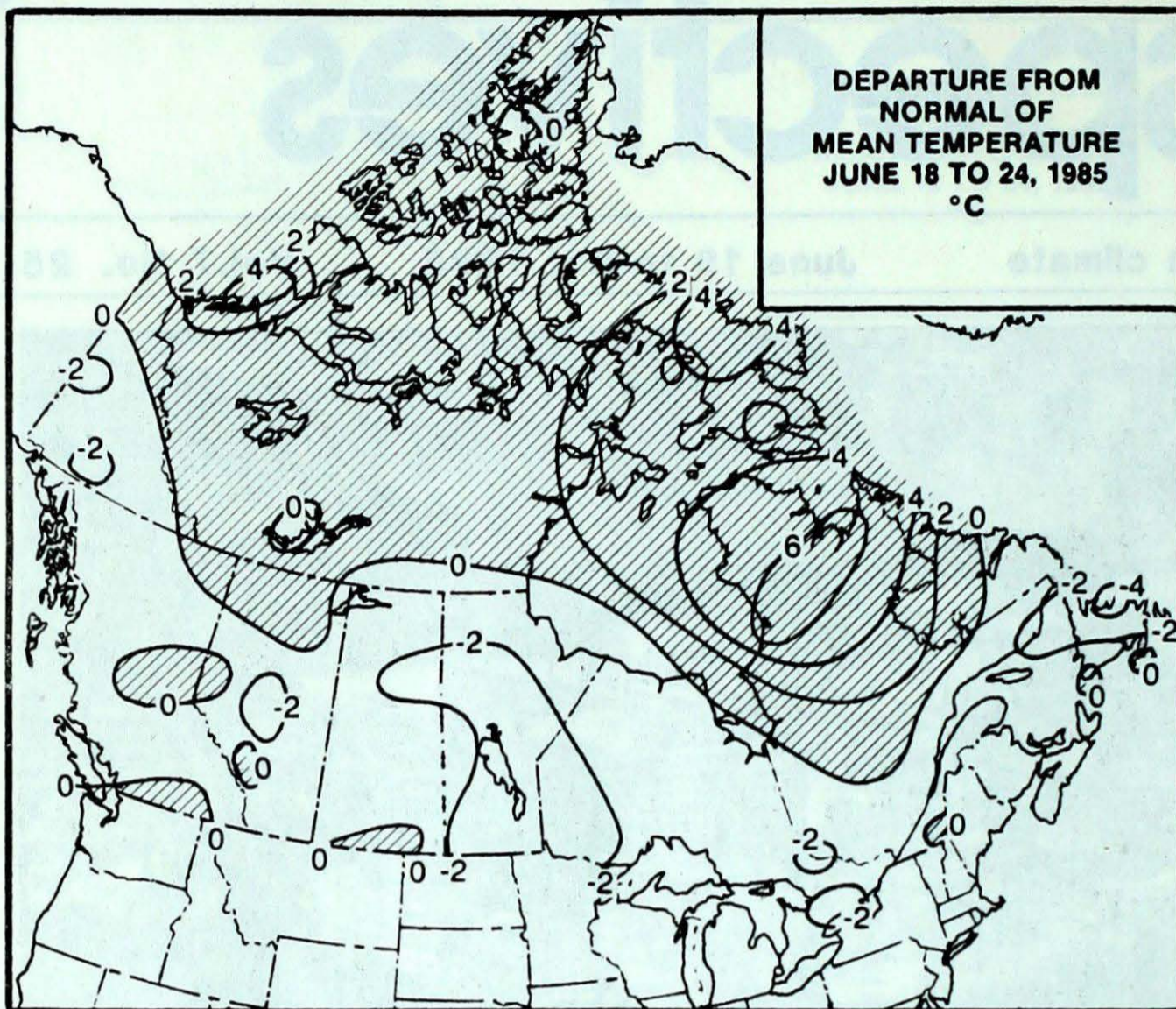


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Ontario

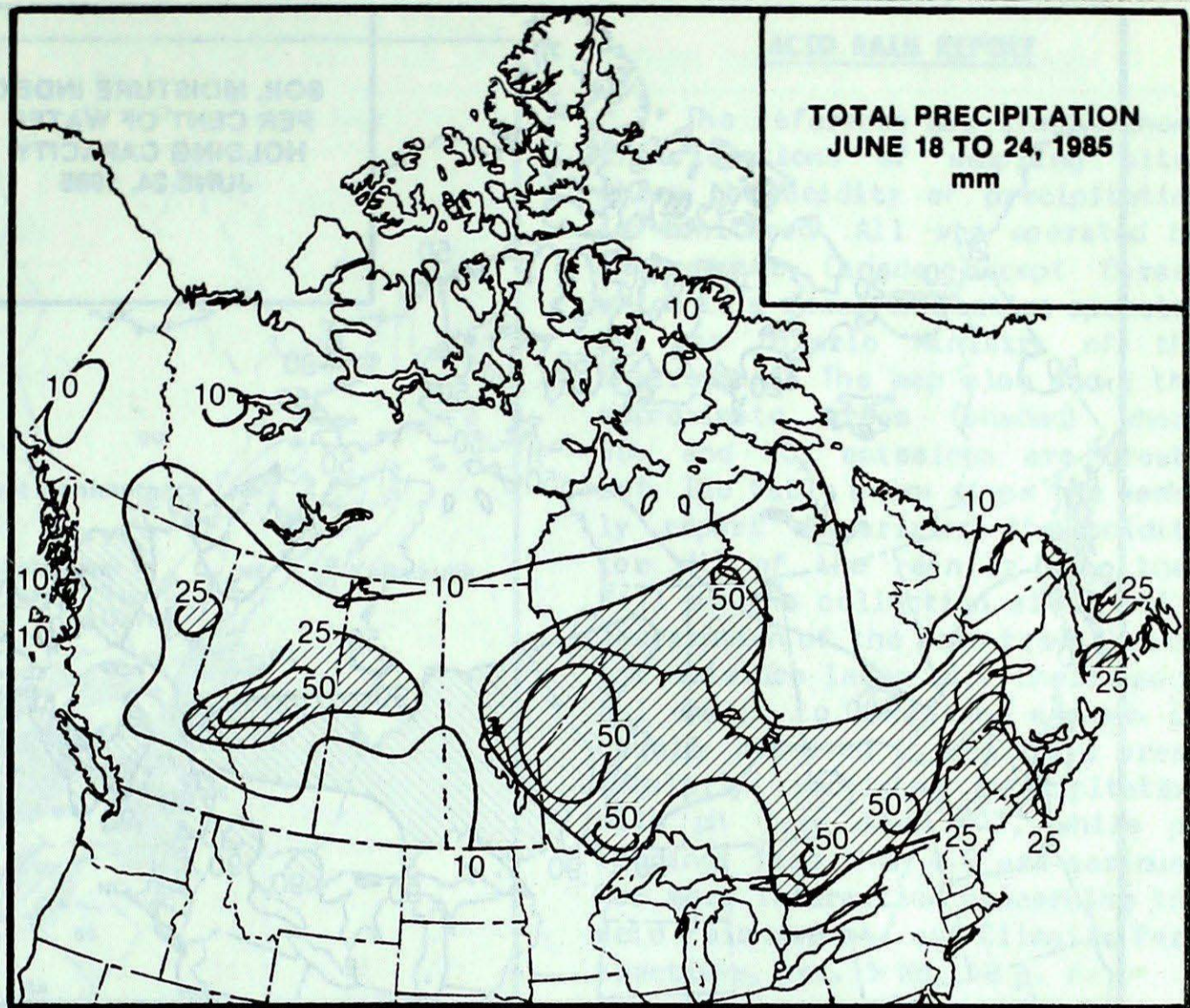
Once again the period was unsettled and cool as several slow moving disturbances plagued the region. Showers and thundershowers occurred frequently in the unstable airmass. Hail was reported near Toronto on June 20. A water spout was sighted near Wiarton on June 18 and a funnel cloud near Orillia late in the day on June 23. Heaviest rains occurred in northwestern Ontario; some communities received more than 70 mm. Several 24-hour precipitation records were broken in central Ontario. Daytime temperatures were unusually cool and several daily low maximum temperature records were broken.

Quebec

It was predominantly unsettled and cool with showers and thunderstorms. Hail fell in Sherbrooke on June 18, at Ste-Agathe on June 23 and throughout the Eastern Townships on June 24. On June 19 a tornado ripped through the town of St-Sylvere, situated along the south shore near Victoriaville. Three people were injured; six houses and many cars were damaged. Property loss is estimated at \$1 million.

Atlantic Provinces

The period began with cloudy, wet and cool conditions but turned sunny and warm toward the weekend. Cartwright recorded a record low maximum temperature of 3.0°C on June 20. However, maximum temperatures were generally in the mid-twenties throughout most of Atlantic Canada for the second week in a row. On June 23, the mercury in Chatham and Goose Bay climbed above 27°C. Rain during the earlier part of the period increased the June precipitation totals to well above normal, with weekly accumulation of up to 60 mm in New Brunswick. The weather continues to delay planting and the cutting of the first hay crop in Nova Scotia. Some cereals are also showing signs of moisture stress, and costs are expected to rise because of increased spraying expenses.

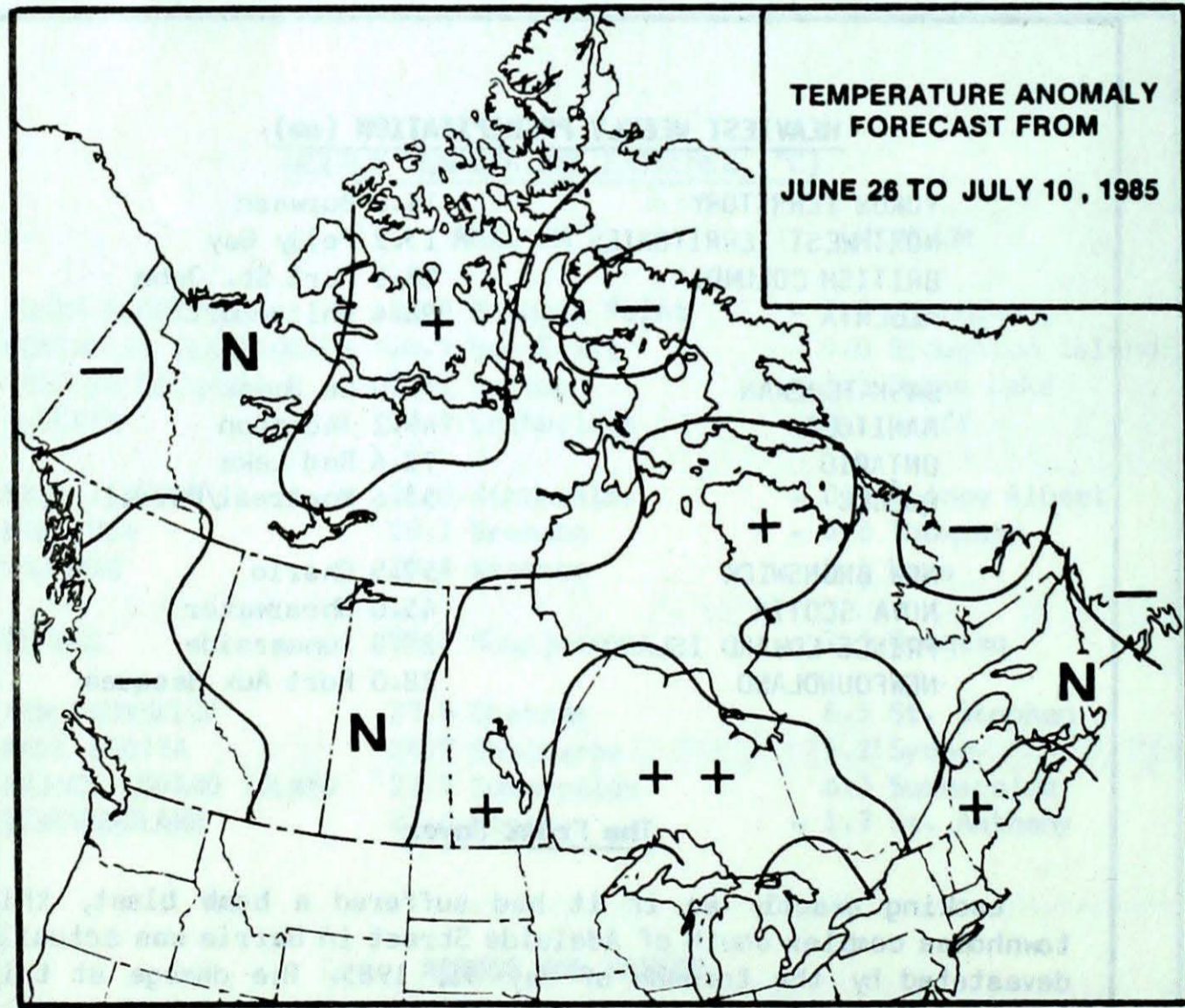
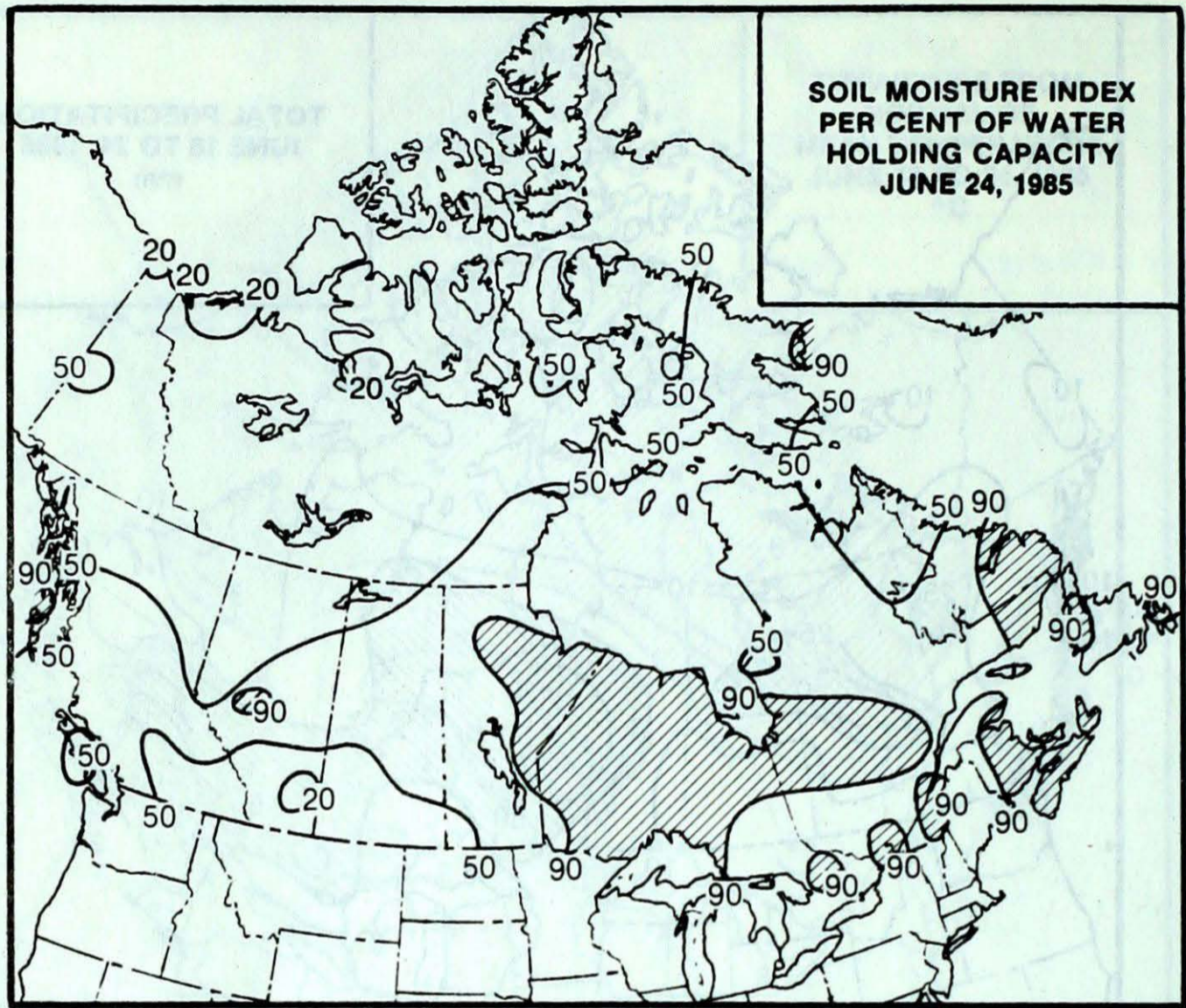
**HEAVIEST WEEKLY PRECIPITATION (mm)**

YUKON TERRITORY	16.0 Burwash
NORTHWEST TERRITORIES	13.2 Pelly Bay
BRITISH COLUMBIA	28.2 Fort St. John
ALBERTA	96.4 Whitecourt
SASKATCHEWAN	39.0 La Ronge
MANITOBA	49.2 Thompson
ONTARIO	72.6 Red Lake
QUÉBEC	53.6 Montreal/Dorval
NEW BRUNSWICK	57.5 Charlo
NOVA SCOTIA	45.0 Shearwater
PRINCE EDWARD ISLAND	20.8 Summerside
NEWFOUNDLAND	28.0 Port Aux Basques

The Front Cover

Looking exactly as if it had suffered a bomb blast, this townhouse complex south of Adelaide Street in Barrie was actually devastated by the tornado of May 31, 1985. The damage at this location is typical of a tornado rated F3 on the Fujita intensity scale (winds of 252 to 330 km/h, upper storeys of brick houses destroyed; extensive structural damage to frame houses; heavy farm machinery and automobiles moved or upset). See page 8B for a feature article about this and other tornadoes of May 31, 1985. Photo courtesy of Scientific Services Division, Atmospheric Environment Service Region.

FORECAST



Temperature Anomaly Forecast
 This forecast is prepared by searching historical weather maps to find cases similar to the present. The historical outcome during the 15 days subsequent to the chosen analogues is assumed to be a forecast for the next 15 days from now.

++ much above normal
 + above normal
 N normal
 - below normal
 -- much below normal

CLIMATIC PERSPECTIVES VOLUME 7

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It began in 1978 and in 1985 was expanded to include a monthly supplement (formerly known as the Canadian Weather Review). The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socioeconomic impact.

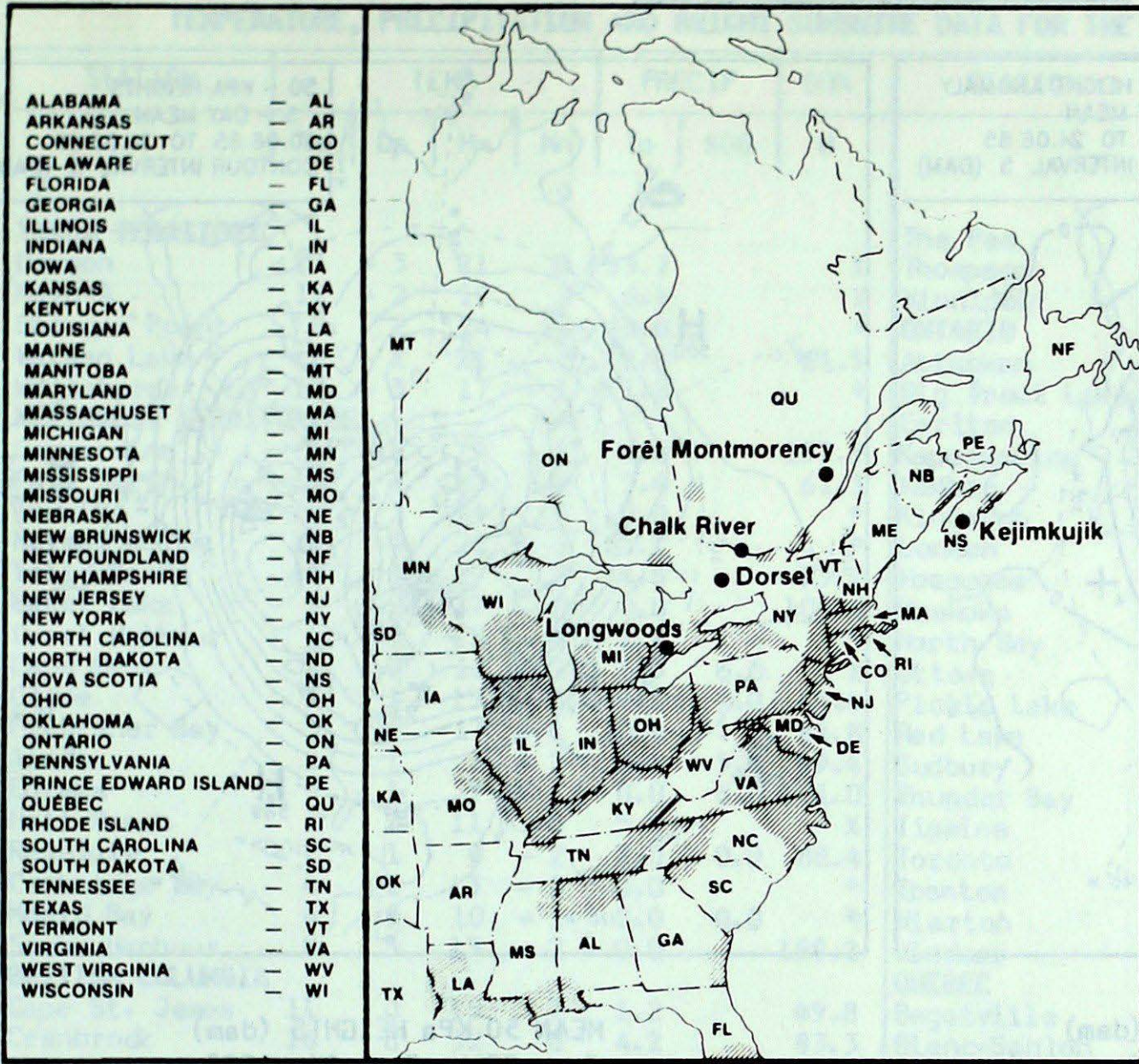
Unsolicited articles are welcome but should be at maximum about 1500 words in length. They will be subject to editorial change without notice due to publishing time constraints. Black and white photographs can be used, but not colour. The contents may be reprinted free with proper credit.

The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the view of the Atmospheric Environment Service.

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ACID RAIN

ACID RAIN REPORT



The reference map (left) shows the locations of sampling sites where the acidity of precipitation is monitored. All are operated by Environment Canada except Dorset which is a research station operated by the Ontario Ministry of the Environment. The map also shows the approximate areas (shaded) where SO₂ and NO_x emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the rain or snow that fell at the collection sites and a description of the path travelled by the moisture laden air. Environmental damage to lakes and streams is usually observed in sensitive areas regularly receiving precipitation with pH less than 4.7, while pH readings less than 4.0 are serious. For more information concerning the acid rain report, see Climatic Perspectives, Vol. 5 No. 50 p. 6.

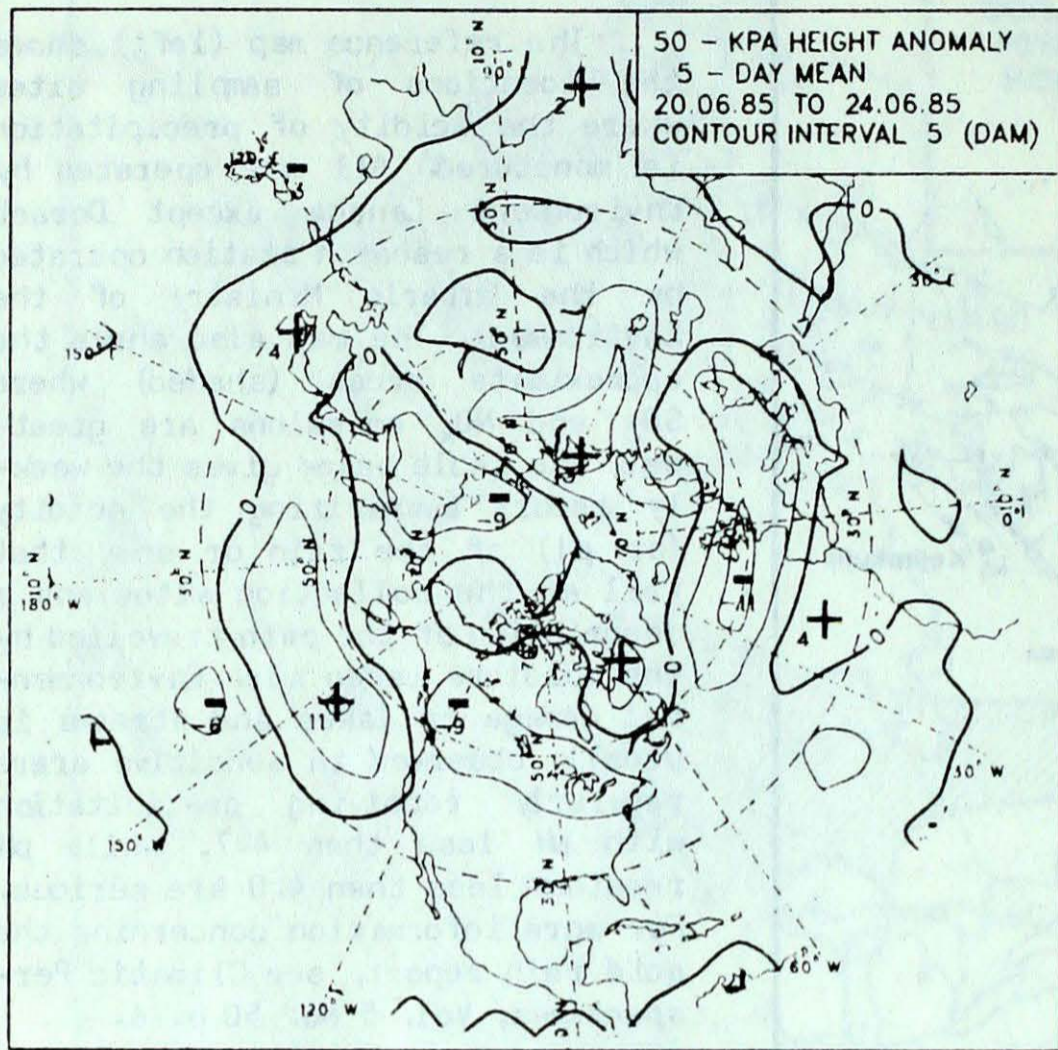
JUNE 16 to JUNE 22, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	17	3.3	17(r)	Illinois, Indiana, Ohio
	22	3.6	6(r)	Kentucky, Indiana, West Virginia, Ohio
Dorset	16	4.2	8(r)	Illinois, Indiana, Ohio, New York, Southern Ontario
	17	4.3	15(r)	Illinois, Indiana, Ohio, Southern Ontario
	18	6.3	2(r)	Wisconsin, Michigan, Lake Huron
	20	4.3	4(r)	Northern Ontario, Central Ontario
	22	4.6	17(r)	Kentucky, Indiana, Ohio, Southern Ontario
Chalk River	17	4.6	15(r)	Michigan, Southern Ontario, Central Ontario
	18	4.4	2(r)	Michigan, Central Ontario
	19	4.5	3(r)	Northern Ontario
	21	3.7	2(r)	Illinois, Indiana, Ohio, Southern Ontario
	22	3.8	7(r)	Kentucky, Ohio, Southern Ontario
Montmorency	16	4.2	3(r)	Southern Ontario, Southern Quebec
	17	5.0	15(r)	Southern Ontario, New York, New England
	18	4.6	14(r)	Pennsylvania, New York, New England, Southern Quebec
	19	5.1	19(r)	Michigan, Southern Ontario, Central Ontario, Central Quebec
	22	4.3	7(r)	Ohio, Southern Ontario, New York, New England, Southern Quebec
Kejimikujik	16	4.6	18(r)	Atlantic Ocean
	17	5.3	17(r)	Atlantic Ocean
	18	4.2	15(r)	Atlantic Ocean, Nova Scotia

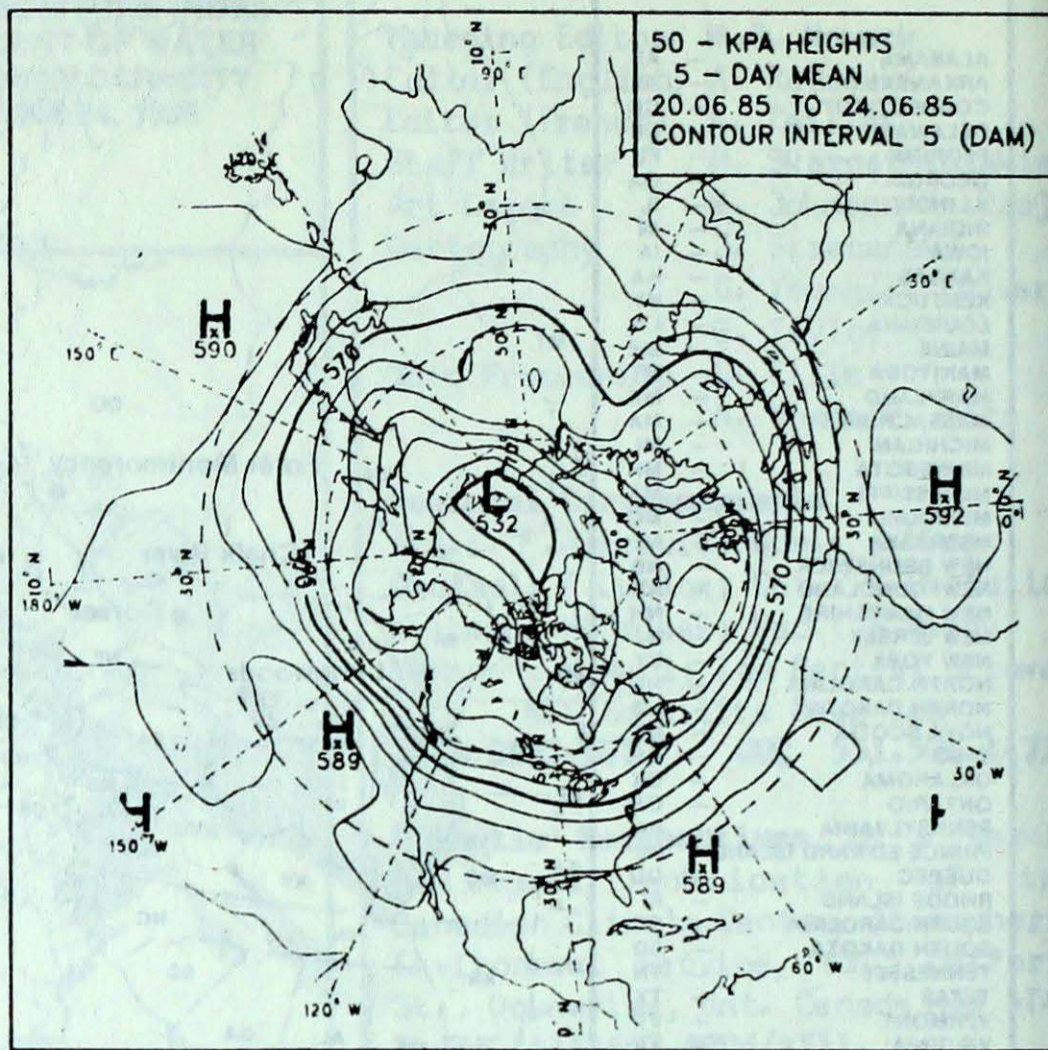
r = rain (mm), s = snow (cm), m = mixed rain and snow (mm).

CIRCULATION

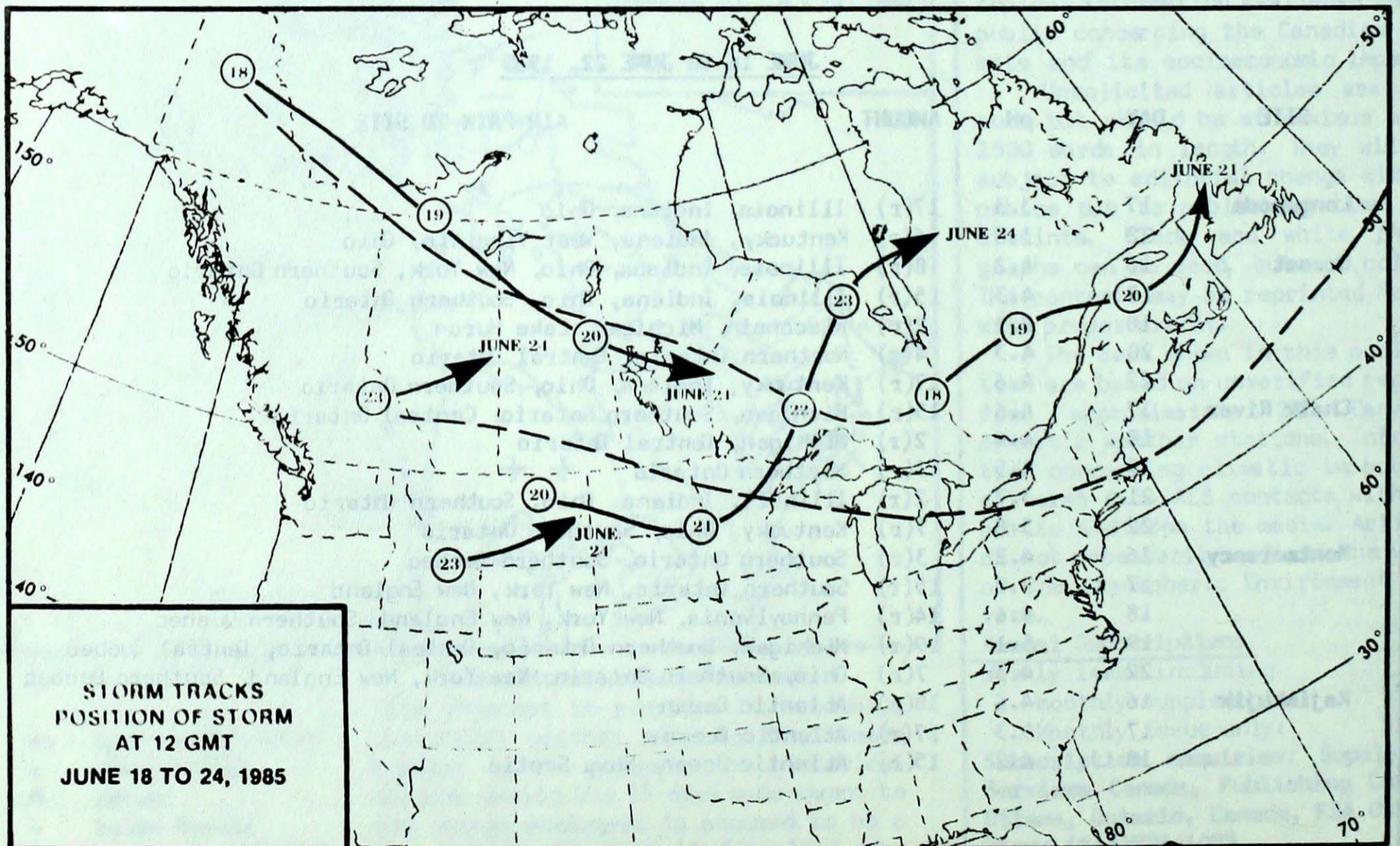
50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)
June 20 to June 24, 1985



MEAN 50 KPa HEIGHTS (dam)
June 20 to June 24, 1985



TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT JUNE 25, 1985

STATION	TEMP				PRECIP		SUN	STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H		Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY								The Pas	13	-2	27	2	4.3		53.3
Dawson	12	-3	21	0	13.7		X	Thompson	10	-3	25	-1	49.0		43.3
Mayo A	12	-2	19	3	6.4		X	Winnipeg	*	*	27P	5P	*		*
Shingle Point	8	2	24	1	0.0		*	ONTARIO							
Watson Lake	12	-2	21	1	11.8		61.5	Atikokan	12	-2	23	0	71.6		*
Whitehorse	10	-3	17	-1	1.8		*	Big Trout Lake	11	-2	23	2	72.1		*
NORTHWEST TERRITORIES								Earlton	15	-1	25	5	*		X
Coppermine	4	0	19	-4	0.0		137.5	Kapusking	13	-1	27	5	15.2		*
Fort Smith	14	1	27	5	9.4		61.3	Kenora	14	-2	23	6	19.0		X
Inuvik	14	3	24	3	0.0		*	Kingston	16	-1	26	10	*		*
Norman Wells	15	0	22	6	11.1		*	London	17	-1	26	9	8.4		78.9
Yellowknife	13	0	19	7	4.8		73.7	Mosonee	13	0	27	4	26.0		33.3
Baker Lake	7	2	17	0	0.0		105.4	Muskoka	15	-2	26	4	*		X
Coral Harbour	6	3	12	-1	1.8		*	North Bay	14	-2	25	7	57.8		40.8
Cape Dyer	4	3	12	-2	1.3	6.0	X	Ottawa	18	-1	28	9	25.6		*
Clyde	3	1	13	-3	9.6	2.0	65.4	Pickle Lake	13	-2	24	3	44.6		X
Frobisher Bay	5	0	13	-1	10.4		84.8	Red Lake	13	-3	23	2	72.6		53.1
Alert	2	1	7	-2	0.0	5.0	99.4	Sudbury	15	-1	24	7	31.8		*
Eureka	3	-1	7	-1	0.0	6.0	101.0	Thunder Bay	13	-1	24	4	61.2		51.7
Hall Beach	3	2	11	0	5.0		X	Timmins	13	-1	26	5	20.2		X
Resolute	2	1	8	-2	2.0	0.0	88.4	Toronto	17	-2	27	6	13.4		X
Cambridge Bay	4	1	13	-2	0.0		*	Trenton	16	-2	27	7	9.6		X
Mould Bay	4	3	10	-1	0.0	0.0	*	Warton	14	-2	26	6	27.5		63.0
Sachs Harbour	8	5	15	-2	0.0		158.2	Windsor	20	-1	29	12	5.4		X
BRITISH COLUMBIA								QUEBEC							
Cape St. James	11	0	15	7	1.2		49.8	Bagotville	16	0	28	8	27.4		X
Cranbrook	16	0	32	0	4.2		83.3	Blanc-Sablon	6	-2	15	2	18.2		*
Fort Nelson	15	0	31	7	15.4		111.2	Inukjuak	11	6	22	6	52.5		28.4
Fort St. John	12	-2	29	2	28.2		X	Kuujuaq	15	7	28	1	4.4		68.8
Kamloops	17	-2	35	6	4.7		*	Kuujuarapik	14	6	28	4	30.0		37.9
Penticton	18	0	35	6	1.4		75.8	Maniwaki	15	-1	26	6	27.2		47.8
Port Hardy	12	0	20	7	9.8		59.9	Mont-Joli	16	0	25	10	31.8		42.0
Prince George	14	1	29	2	3.7		76.1	Montréal	18	-1	27	11	53.6		65.5
Prince Rupert	10	-1	16	4	11.5		27.6	Natashquan	9	-2	16	4	28.4		*
Revelstoke	17	0	31	6	2.4		61.8	Nitchequon	14	3	23	9	7.8		*
Smithers	13	0	26	5	9.4		47.3	Québec	16	-1	28	8	49.0		38.4
Vancouver	16	0	25	8	0.0		85.1	Schefferville	14	5	25	4	4.4		76.1
Victoria	15	0	28	6	1.2		94.9	Sept-Iles	11	-2	19	6	25.6		47.2
Williams Lake	13	-2	30	0	20.4		66.6	Sherbrooke	17	1	27	8	48.3		48.9
ALBERTA								Val-d'Or	14	-1	26	4	*		*
Calgary	14	0	31	4	26.7		80.0	NEW BRUNSWICK							
Cold Lake	14	-1	27	4	*		*	Charlo	15	-1	23	9	57.5		36.7
Coronation	13	-2	30	1	14.8		73.8	Chatham	16	0	28	8	28.0		46.3
Edmonton Namao	13	-2	26	3	59.7		*	Fredericton	17	-1	25	9	25.4		*
Fort McMurray	14	0	29	4	27.6		*	Moncton	15	-1	25	8	13.6		*
High Level	14	1	29	3	11.2		66.1	Saint John	15	1	22	7	42.4		44.6
Jasper	12	-1	29	0	27.8	0.0	53.7	NOVA SCOTIA							
Lethbridge	15	-1	33	4	1.2		*	Greenwood	16	0	25	8	22.8		X
Medicine Hat	16	0	33	4	4.2		85.7	Shearwater	14	0	24	9	45.0		*
Peace River	14	0	28	5	21.3		X	Sydney	13	-2	24	5	11.2		41.7
SASKATCHEWAN								Yarmouth	14	1	22	10	22.4		57.3
Cree Lake	12	X	27	3	17.4		*	PRINCE EDWARD ISLAND							
Estevan	16	0	28	5	0.6		75.7	Charlottetown	15	-1	22	8	13.2		*
La Ronge	12	-2	29	2	39.0		*	Summerside	15	-1	23	6	20.8		*
Regina	15	0	28	4	2.6		67.6	NEWFOUNDLAND							
Saskatoon	15	-1	29	4	1.0		*	Gander	10	-3	21	1	24.6		34.1
Swift Current	15	0	29	4	*		*	Port aux Basques	10	1	19	6	28.0		*
Yorkton	13	-2	25	3	4.7		65.1	St. John's	9	-3	22	2	20.8		*
MANITOBA								St. Lawrence	9	1	19	3	23.9		X
Brandon	13	-3	28	1	8.4		*	Cartwright	8	-2	27	0	*		*
Churchill	6	-1	18	1	14.0		78.8	Churchill Falls	14	1	27	3	5.4		73.5
Lynn Lake	12	-2	24	4	21.2		50.7	Goose	12	-1	28	1	13.2		62.3

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
* = missing