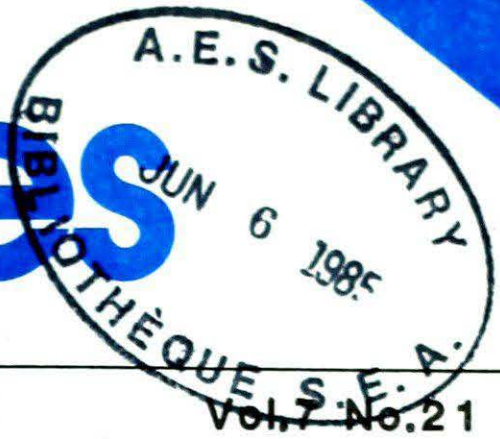


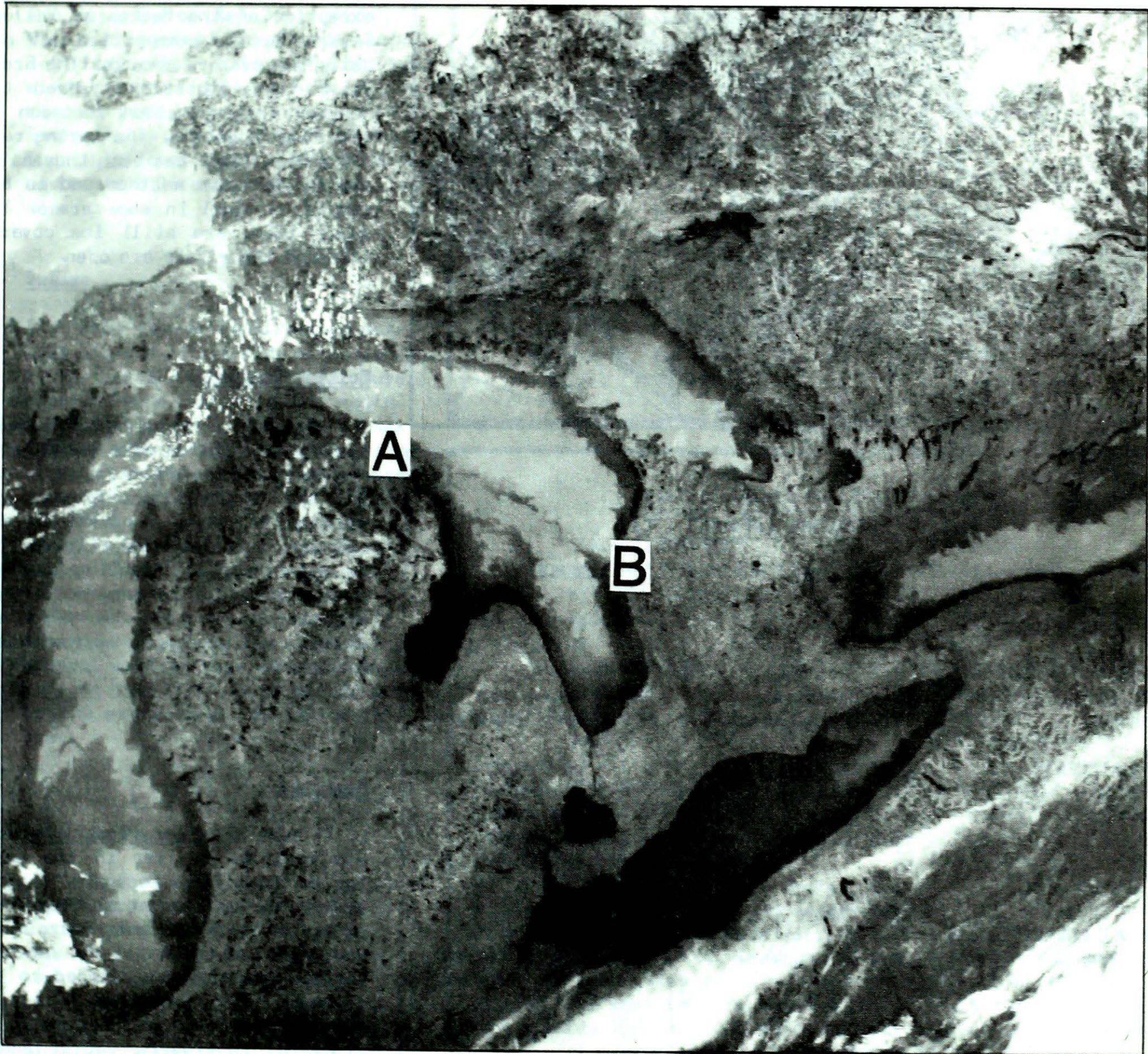
# Climatic Perspectives



A weekly review of Canadian climate

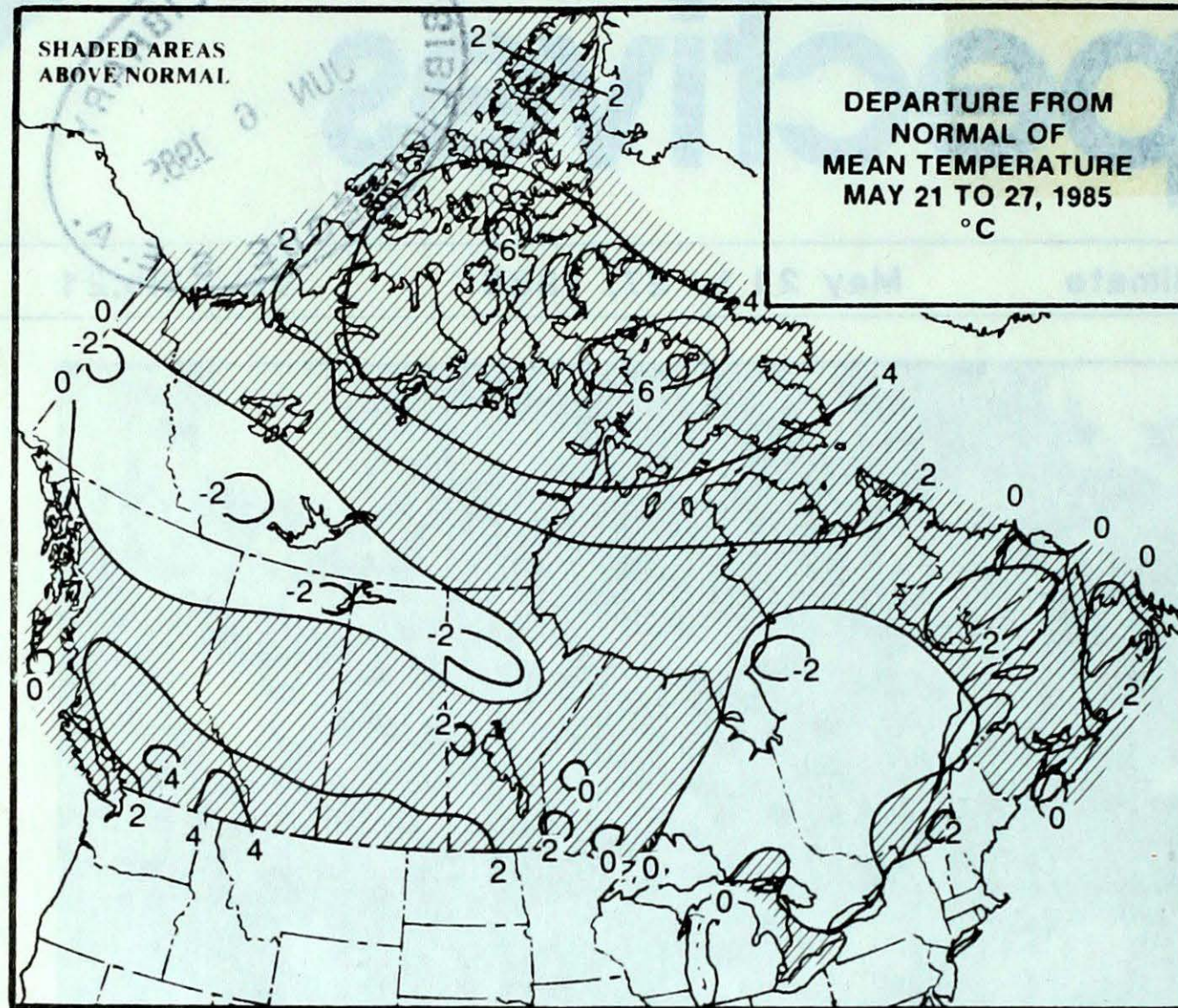
May 21 to 27, 1985

Vol. 7 No. 21



This NOAA 9 infrared satellite image of 0837 GMT, May 24, 1985 reveals the temperature structure of the Great Lakes. See page 3 for more detail.

- ***Tornado touches down East of Quebec City***
- ***Prospects for agriculture good in most areas***

**ACROSS THE COUNTRY...****Yukon and Northwest Territories**

In the Yukon skies were mainly sunny. Temperature were above normal through out the north, with the exception of the Mackenzie Valley. Several Arctic communities set new daily temperature records. The Great Slave Lake district received the heaviest precipitation, between 10 and 25 millimetres. The spring run-off in the Yukon has been increasing due to the warm weather and is becoming critical in some areas. The major lakes are still ice covered although the rivers are open.

**British Columbia**

It was a relatively pleasant spring week. Skies were mainly sunny. Some scattered showers developed in the afternoons. Temperatures climbed as high as 30°C in the southern interior. The mild weather caused some minor flooding near the north coast due to snow melt. Cool weather of the past few weeks has slowed crop growth by approximately two weeks.

**Prairies**

There was some frost in southern Manitoba earlier in the week, but no damage was reported. Minimum temperatures in the north dropped to as low as -5°C at night. Overall, it was sunny and hot until the weekend. Maximum temperatures climbed to the record high twenties and low thirties. A rash of forest fires broke out in Alberta. Cooler unsettled weather arrived for the weekend. Precipitation amounts varied, but some agricultural districts received 10 to 20 millimetres of rain. In the southern regions, 35 per cent of the early seeded crops have already emerged.

**WEEKLY TEMPERATURE EXTREMES (°C)**

	MAXIMUM	MINIMUM
YUKON TERRITORY	22.0 Beaver Creek	- 5.5 Komakuk Beach Shingle Point
NORTHWEST TERRITORIES	19.5 Fort Smith	-15.0 Alert
BRITISH COLUMBIA	30.4 Kamloops	- 5.0 Dease Lake
ALBERTA	29.7 Medicine Hat	- 5.0 Fort Chipewyan
SASKATCHEWAN	30.1 Estevan	- 2.5 La Ronge
MANITOBA	29.6 Portage la Prairie	- 3.0 Thompson
ONTARIO	29.0 Windsor	- 4.4 Moosonee
QUÉBEC	25.2 Maniwaki	- 3.6 La Grande Rivière
NEW BRUNSWICK	26.9 Chatham	2.7 Charlo
NOVA SCOTIA	27.8 Sydney	- 0.4 Sydney
PRINCE EDWARD ISLAND	23.9 Charlottetown	2.8 East Point
NEWFOUNDLAND	25.2 Deer Lake	- 3.6 Battle Harbour

**ACROSS THE NATION**

Warmest mean temperature	18.3	Lytton, BC
Coollest mean temperature	- 8.0	Alert, NWT

### Ontario

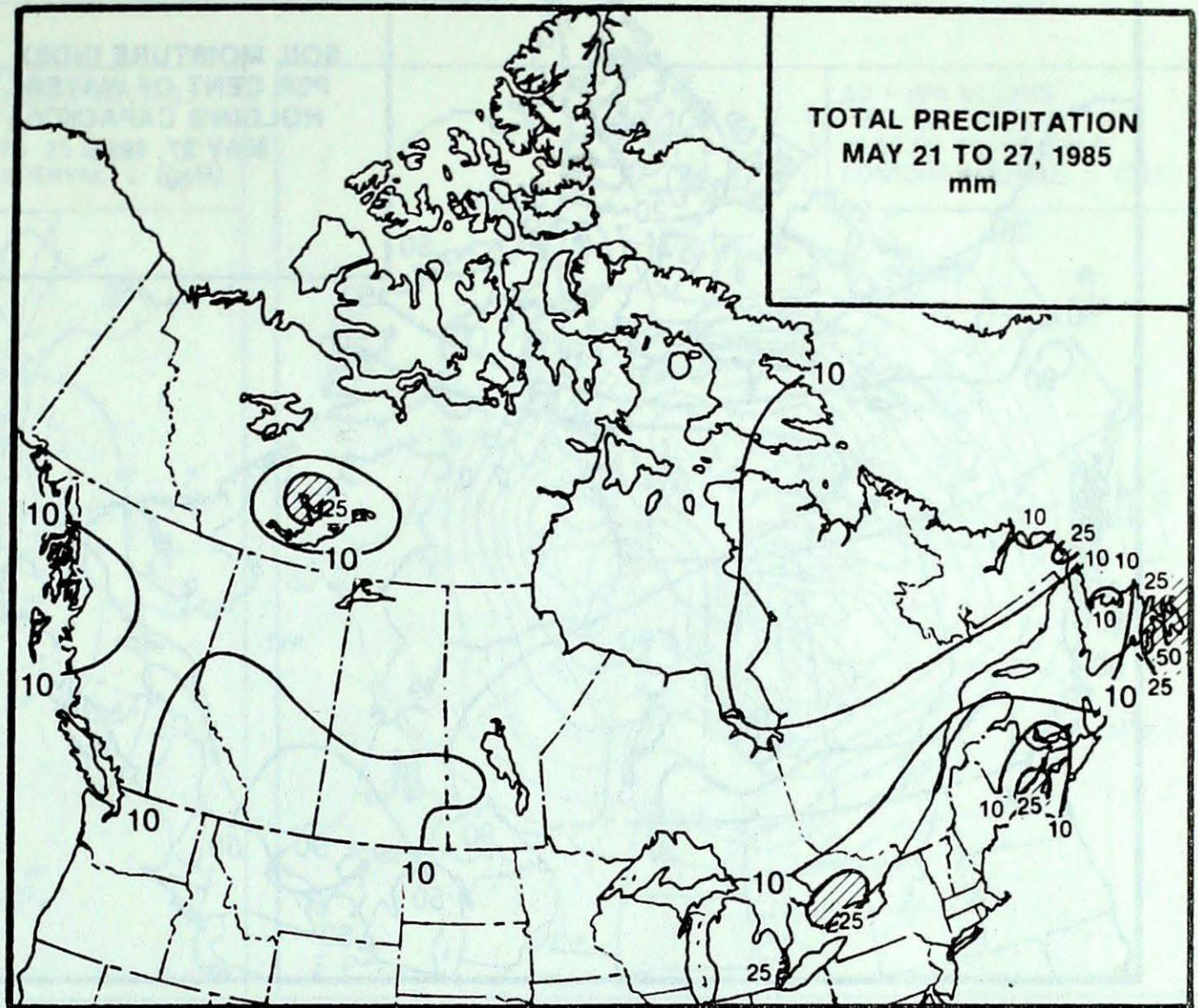
More rain fell in southern and central Ontario during the weekend, as a series of weak weather disturbances crossed the districts. Rainfalls were significant, ending farmers concerns about the unusually dry spring season. In southwestern Ontario, on May 26, a frontal trough triggered heavy thunderstorm activity, with hail and strong winds. Several daily precipitation records were broken in the south. Temperatures averaged near normal. Frost was reported in some northern and eastern Ontario communities.

### Québec

Mean temperatures varied several degrees either side of normal. A few daily minimum temperature records were broken in the north. Precipitation in the south was light, with only scattered rain showers. In the north, amounts were more general, between 10 and 15 millimetres. On May 20 a line of heavy thunderstorms crossed the Eastern Townships. A tornado touched down near the farming community of St. Raphaël east of Quebec City. A barn was completely destroyed and several mobile homes were damaged. Fifteen forest fires were burning in the province at the end of the week.

### Atlantic Provinces

After several days of unsettled showery weather in the Maritimes, the weather became sunny and warm. Heavy rains and above normal temperatures were beneficial to crops and welcomed by farmers. Daytime readings climbed to the mid to high twenties. Fruit trees went into bloom just in time for the annual Annapolis Valley Apple Blossom Festival held on May 25. In Newfoundland it was frequently cloudy and wet, particularly on the Avalon Peninsula. Freezing nighttime temperatures were experienced in Labrador and in northern Newfoundland.

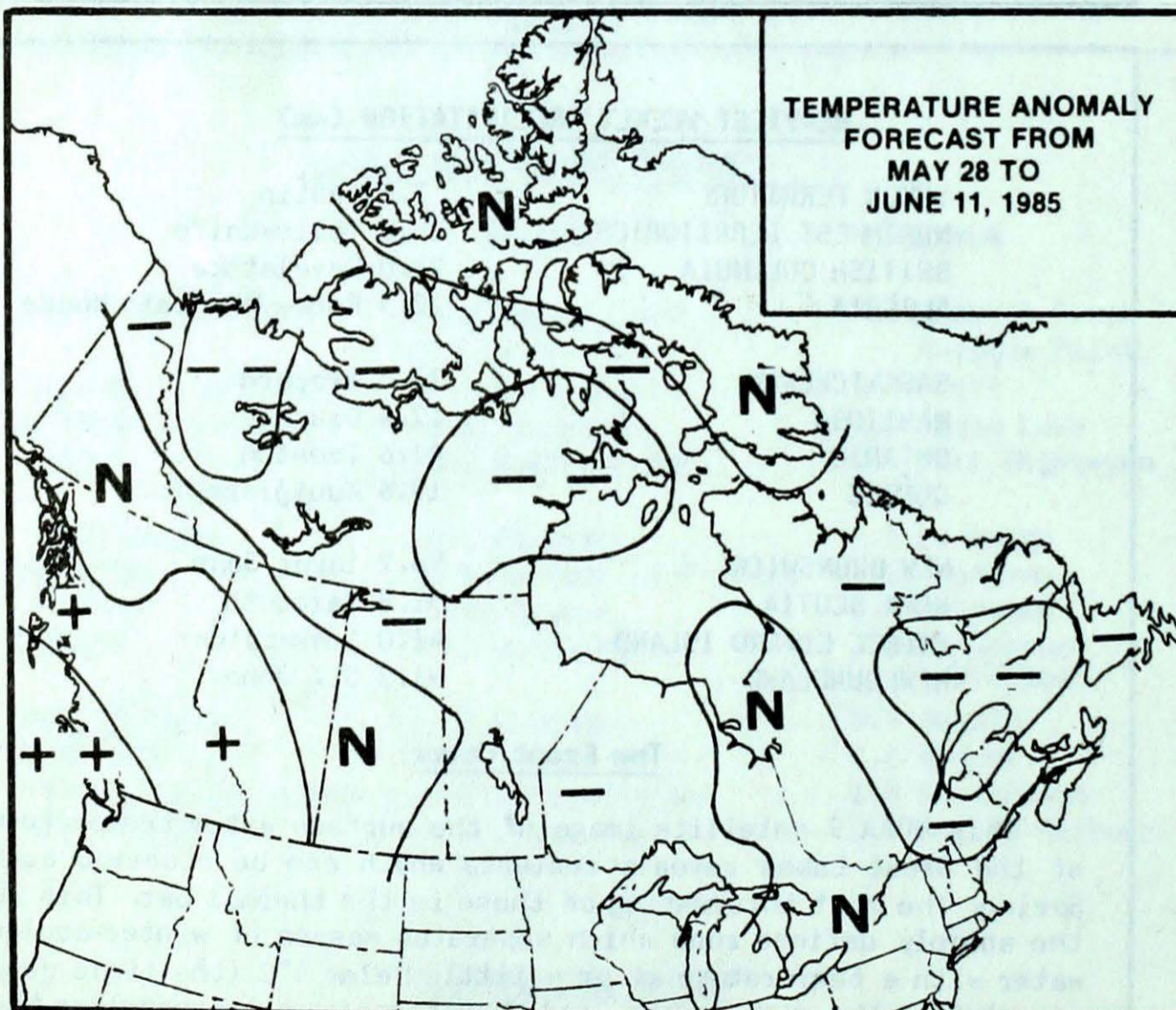
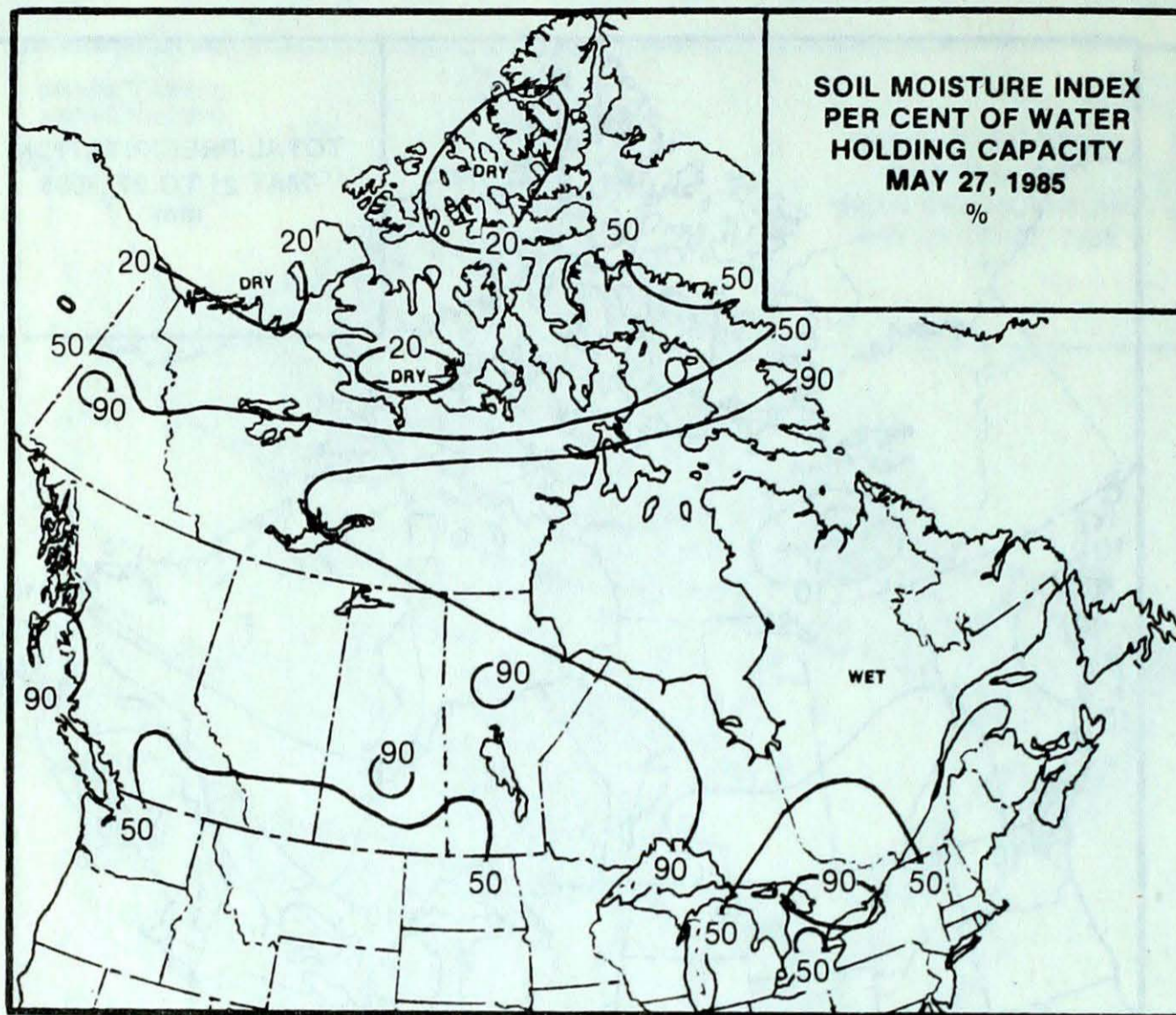


### HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON TERRITORY	7.2 Teslin
NORTHWEST TERRITORIES	26.8 Yellowknife
BRITISH COLUMBIA	24.0 Revelstoke
ALBERTA	22.3 Rocky Mountain House
SASKATCHEWAN	23.8 Wynyard
MANITOBA	12.4 Dauphin
ONTARIO	41.6 Trenton
QUÉBEC	19.6 Kuujuarapik
NEW BRUNSWICK	58.2 Saint John
NOVA SCOTIA	31.8 Yarmouth
PRINCE EDWARD ISLAND	41.0 Summerside
NEWFOUNDLAND	91.2 St. John

### The Front Cover

This NOAA 9 satellite image of the surface water temperature of the Great Lakes reveals features which can be observed each Spring. The most interesting of these is the thermal bar. This is the sharply defined zone which separates masses of winter-cooled water with a temperature at or a little below 4°C (the light gray areas) from the much darker (and therefore warmer) areas near the lake shores. In Lake Erie, the shallowest and therefore the warmest of the Great Lakes, only a small area of 4°C water remains at the east end. At its extreme western end, temperatures are as high as 16°C. In Lake Huron, a line of warmer waters (between A and B) indicates the presence of the underwater ridge, which divides the basin into two distinct geological zones.



#### Temperature Anomaly Forecast

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

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.

#### CLIMATIC PERSPECTIVES VOLUME 7

Managing Editor M.J. Newark  
 Editor (English) A. Radomski  
 Editor (French) A. Caillet  
 Staff Writer M. Skarpathiotakis  
 Art Layout and Graphics W. Johnson  
 K. Czaja  
 J. Rautenberg  
 Word Processing U. Ellis, N. Khaja  
 P. Hare

#### Regional Correspondents

Atl.: F. Amirault; Que.: J. Miron  
 Central: F. Luciw; Ont.: W. Christian  
 Western: W. Prusak; Pac.: N. Penny  
 Yukon : H. Wahl; Ice Central Ottawa  
 AES Satellite Data Lab  
 ISSN 0225-5707 UDC 551.506.1(71)

**Climatic Perspectives** is a weekly bilingual publication of the Canadian Climate Centre, Atmospheric Environment Service, 4905 Dufferin St., Downsview, Ont. Canada M3H 5T4. Phone (416)667-4906/4711.

It began in 1978 and in 1983 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 freely with proper credit.

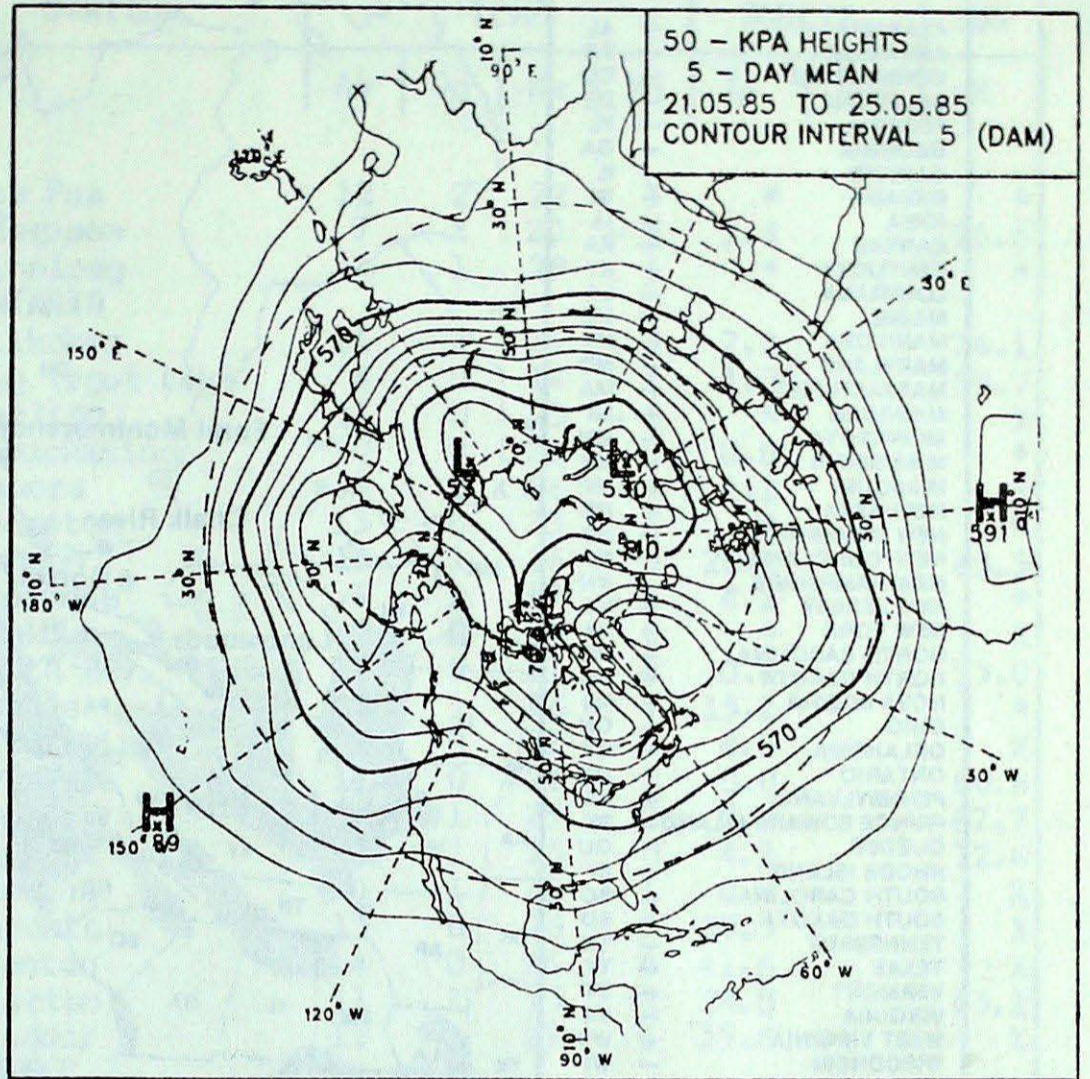
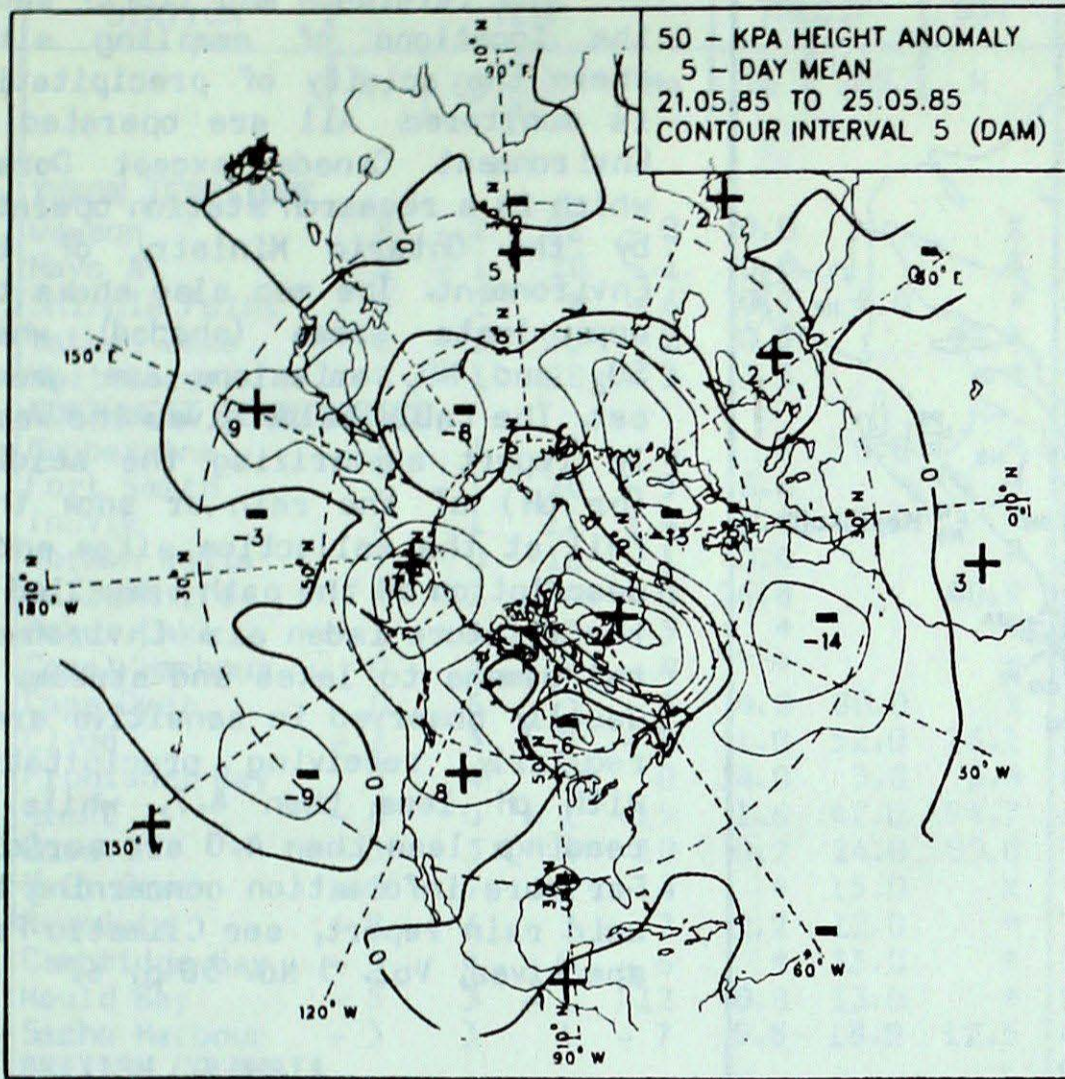
The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment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

#### Annual Subscriptions

Weekly issue including  
 monthly supplement: \$35.00  
 Monthly issue only: \$10.00

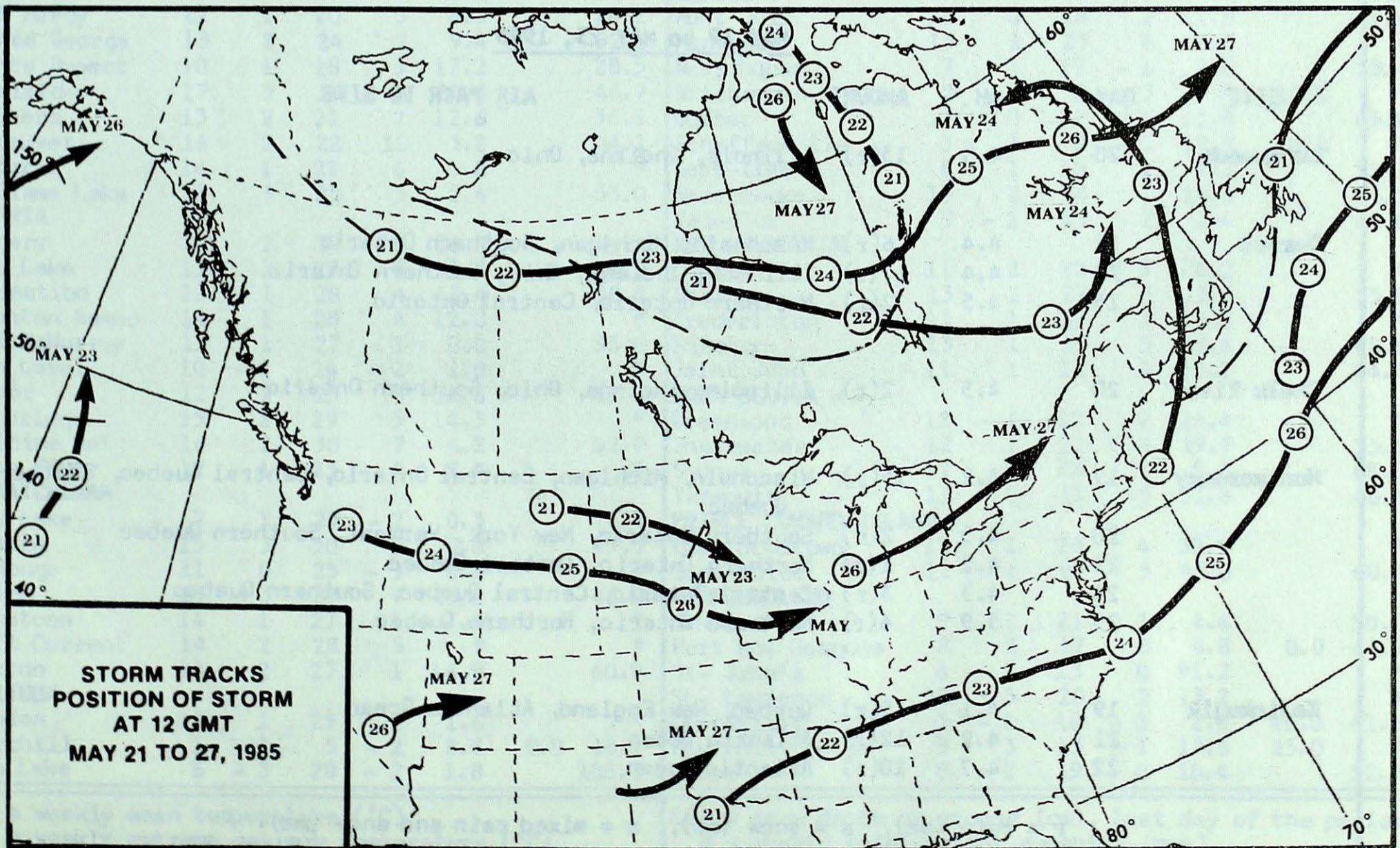
Subscription enquiries: Supply and Services Canada, Publishing Centre, Ottawa, Ontario, Canada, K1A 0S9. Phone (613)994-1495

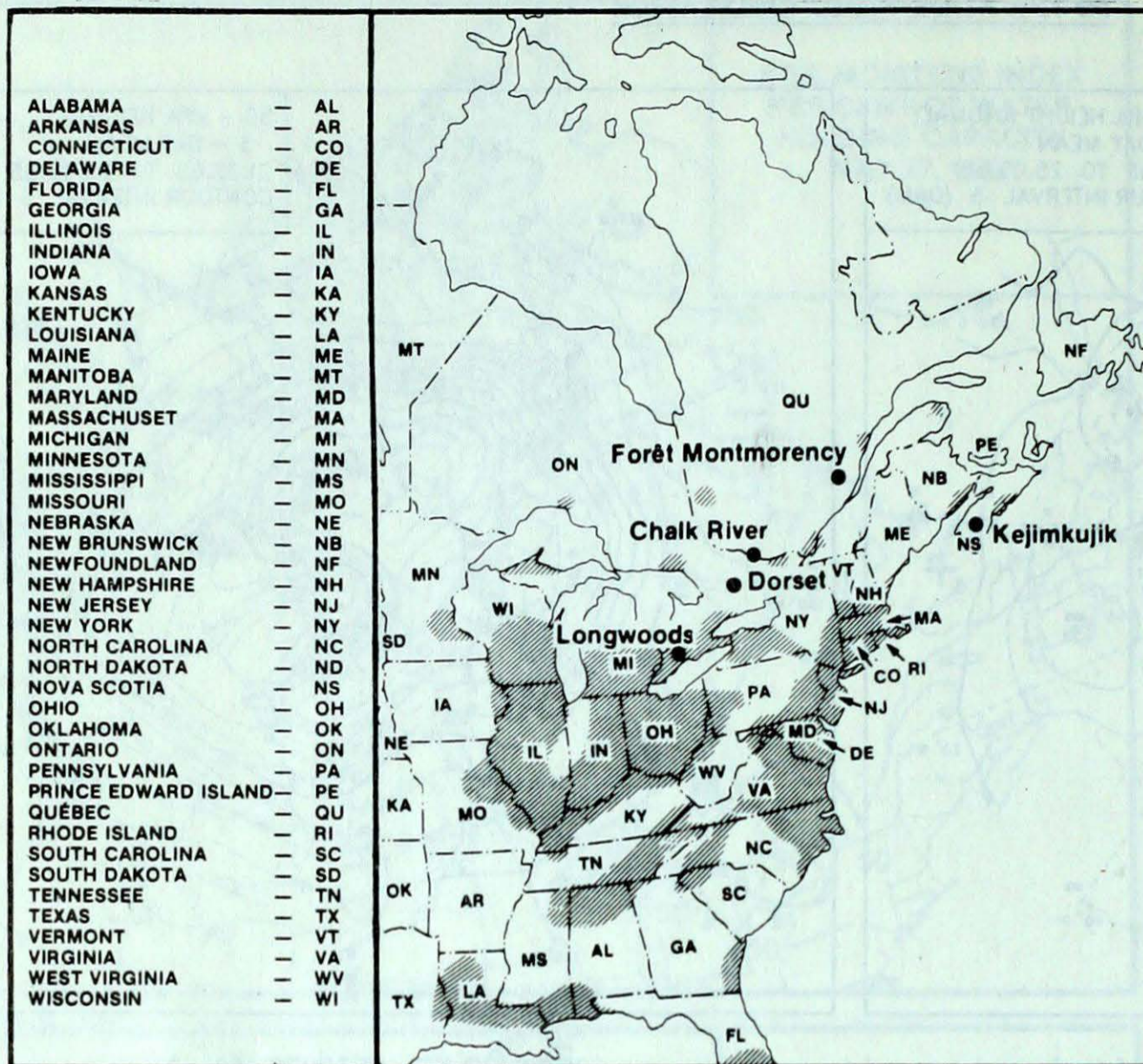
**50 KPa ATMOSPHERIC CIRCULATION**



MEAN 50 KPa HEIGHT ANOMALY (dam)  
May 21 to May 25, 1985

MEAN 50 KPa HEIGHTS (dam)  
May 21 to May 25, 1985



**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  $\text{SO}_2$  and  $\text{NO}_x$  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.

**MAY 19 to MAY 25, 1985**

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	20	4.3	13(r)	Illinois, Indiana, Ohio
Dorset	19	4.4	6(r)	Wisconsin, Michigan, Southern Ontario
	20	4.4	17(r)	Illinois, Indiana, Ohio, Southern Ontario
	25	4.5	2(r)	Northern Ontario, Central Ontario
Chalk River	20	4.5	2(r)	Illinois, Indiana, Ohio, Southern Ontario
Montmorency	19	4.2	15(r)	Wisconsin, Michigan, Central Ontario, Central Quebec, Southern Quebec
	20	4.5	2(r)	Southern Ontario, New York, Vermont, Southern Quebec
	23	4.2	1(r)	Northern Ontario, Central Quebec
	24	4.3	3(r)	Central Ontario, Central Quebec, Southern Quebec
	25	5.9	6(r)	Northern Ontario, Northern Quebec
Kejimikujik	19	4.1	5(r)	Quebec, New England, Atlantic Ocean
	21	4.2	12(r)	Atlantic Ocean
	22	4.7	10(r)	Atlantic Ocean

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

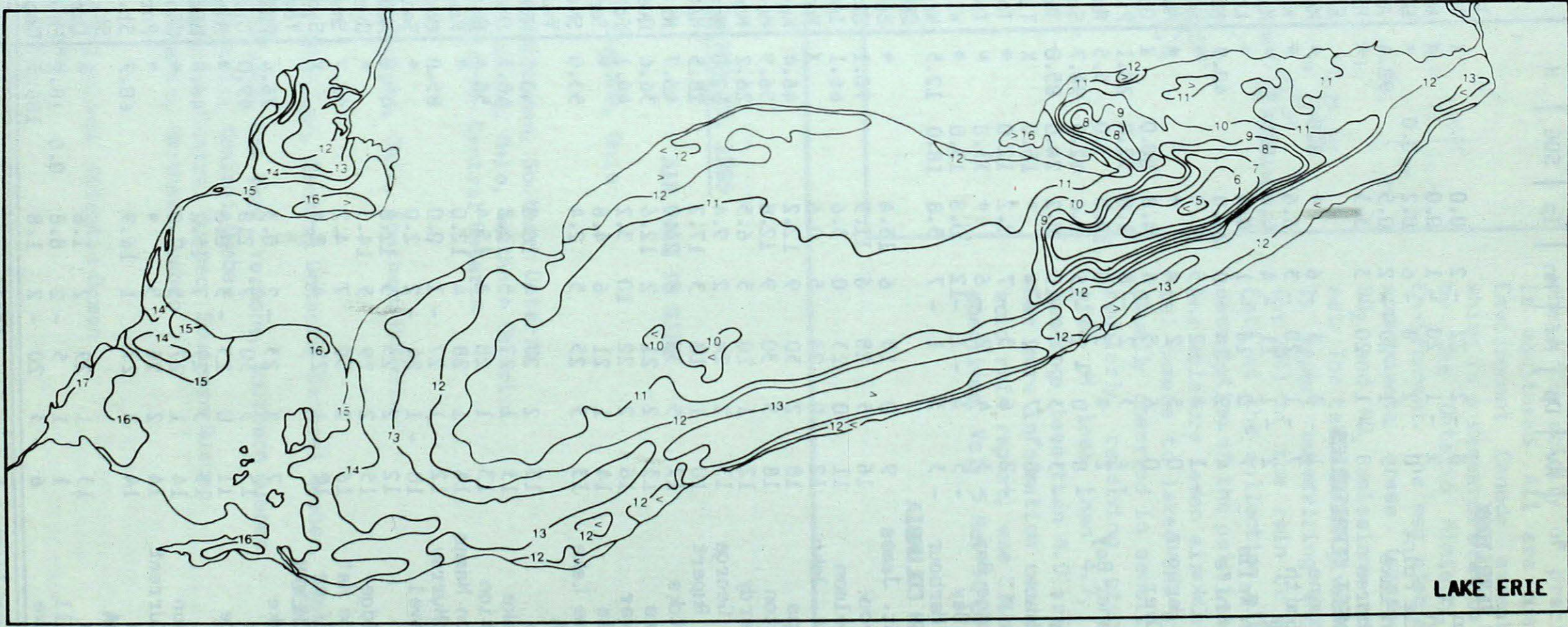
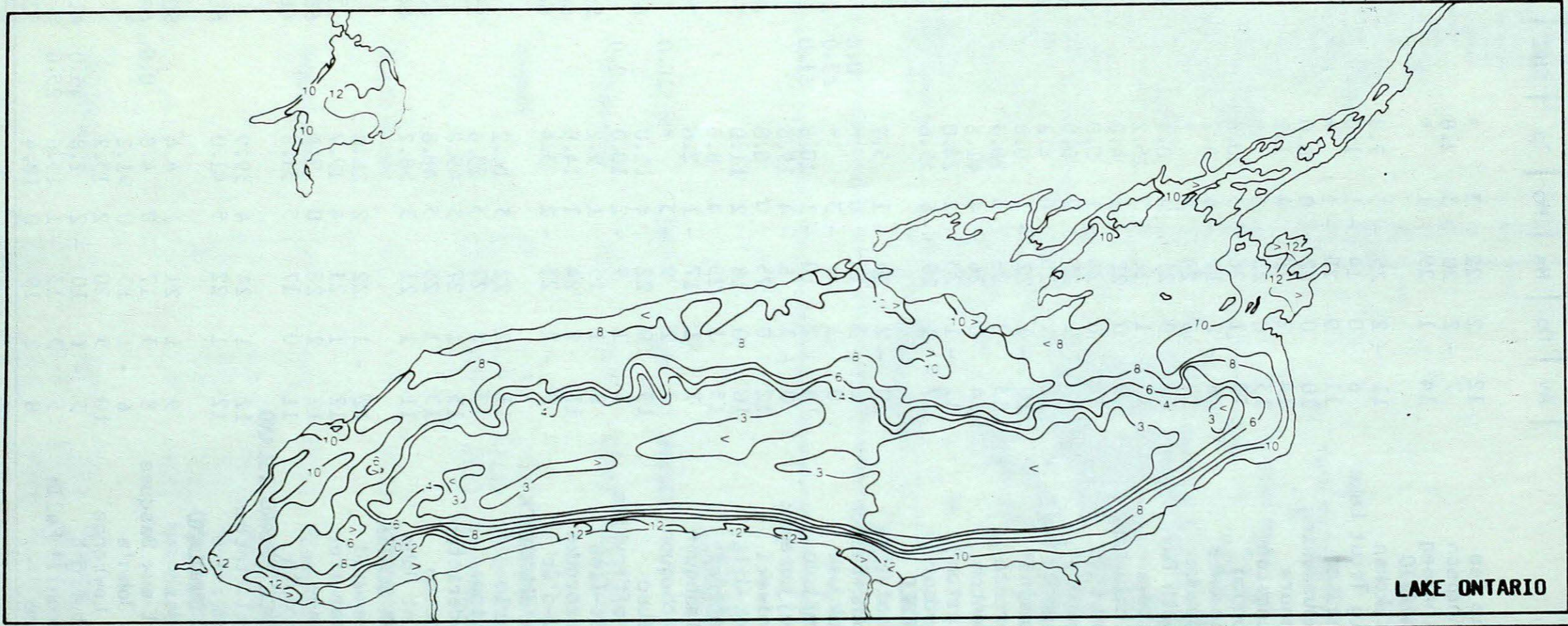
TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT MAY 28, 1985

STATION	TEMP				PRECIP		SUN	STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H		Av	Dp	Mx	Mn	Tp	SOG	H
<b>YUKON TERRITORY</b>								The Pas	12	2	22	3	*		*
Dawson	8	-2	22	-2	0.0		X	Thompson	7	-2	20	-3	2.8		76.8
Mayo A	9	-1	20	-1	0.0		X	Winnipeg	14	1	29	1	*		*
Shingle Point	0	2	8	-6	0.2	0.0	*	<b>ONTARIO</b>							
Watson Lake	8	-1	20	-2	0.5		92.4	Atikokan	11	-2	25	-3	7.8		74.1
Whitehorse	8	-1	20	-3	3.3		*	Big Trout Lake	6	0	14	-1	1.0		58.7
<b>NORTHWEST TERRITORIES</b>								Earlton	11	0	25	-1	*		X
Coppermine	-1	3	3	-6	*	8.0	*	Kapusking	10	0	22	0	0.0		*
Fort Smith	7	-1	20	-3	6.6		*	Kenora	14	2	26	4	1.2		X
Inuvik	2	-1	11	-4	4.4	0.0	*	Kingston	13	0	23	6	*		*
Norman Wells	7	0	16	-1	0.4		*	London	15	1	26	3	20.8		63.5
Yellowknife	4	-2	14	0	26.8	40.9	*	Moosonee	6	-2	17	-4	4.2		*
Baker Lake	-1	4	2	-5	*		*	Muskoka	12	0	24	0	*		X
Coral Harbour	0	5	2	-4	*		*	North Bay	12	0	21	4	0.4		53.0
Cape Dyer	0	6	5	-4	4.8	80.0	X	Ottawa	15	1	26	7	15.2		*
Clyde	-2	3	2	-8	1.0	52.0	26.1	Pickle Lake	9	0	22	-1	4.8		X
Frobisher Bay	2	4	5	0	14.0	3.0	5.5	Red Lake	11	0	26	-1	0.0		80.6
Alert	-8	0	-1	-15	1.6	42.0	94.7	Sudbury	12	1	25	2	0.8		67.7
Eureka	-3	3	4	-10	0.2	24.0	85.0	Thunder Bay	11	1	25	0	4.2		72.6
Hall Beach	0	7	2	-4	*	15.0	X	Timmins	10	-1	22	-1	0.8		X
Resolute	-2	6	3	-7	2.2	12.0	*	Toronto	13	0	26	3	28.3		X
Cambridge Bay	-3	4	2	-6	*	33.0	*	Trenton	14	0	26	4	41.6		X
Mould Bay	-5	3	-1	-12	0.8	13.0	*	Warton	11	-1	23	2	24.0		63.2
Sachs Harbour	-3	3	1	-7	5.8	18.0	12.5	Windsor	17	1	29	6	35.6		X
<b>BRITISH COLUMBIA</b>								<b>QUEBEC</b>							
Cape St. James	9	0	13	6	13.4		*	Bagotville	10	-2	20	-1	5.7		X
Cranbrook	16	5	28	6	11.5	70.1		Blanc-Sablon	6	3	15	0	*	0.0	*
Fort Nelson	11	0	23	0	3.6	66.1		Inukjuak	0	1	5	-3	*	23.0	10.8
Fort St. John	12	0	23	5	0.6		X	Kuujuaq	4	2	10	-1	10.8	61.0	19.8
Kamloops	18	2	30	9	12.2	46.4		Kuujuarapik	0	-3	6	-4	19.6		5.4
Penticton	18	3	30	9	12.8	56.9		Maniwaki	12	0	25	0	0.0		67.7
Port Hardy	12	1	20	5	6.5	26.2		Mont-Joli	10	0	18	2	11.0		59.4
Prince George	13	2	24	2	9.4	52.0		Montréal	15	1	25	4	8.8		*
Prince Rupert	10	1	18	3	17.2	28.5		Natashquan	7	1	17	-1	2.6		70.4
Revelstoke	17	5	30	8	24.0	46.7		Nitchequon	2	-2	9	-3	*	10.0	*
Smithers	13	2	21	2	12.6	36.6		Québec	13	0	22	4	11.0		65.8
Vancouver	16	2	22	10	3.2	44.1		Schefferville	3	1	9	-2	10.0	0.0	*
Victoria	14	1	21	6	4.8		*	Sept-Iles	8	1	15	1	5.2		59.1
Williams Lake	13	3	25	5	2.4	53.0		Sherbrooke	13	2	24	1	14.8		66.3
<b>ALBERTA</b>								Val-d'Or	9	-2	23	-2	3.4		66.0
Calgary	13	2	27	4	16.8	48.3		<b>NEW BRUNSWICK</b>							
Cold Lake	13	1	27	5	3.8	48.3		Charlo	11	2	22	3	14.2		*
Coronation	13	1	28	4	15.4	58.4		Chatham	13	2	27	3	23.6		55.0
Edmonton N. Area	14	1	28	4	12.0		*	Fredericton	13	1	27	3	45.8		*
Fort McMurray	12	1	27	-1	0.0	85.0		Moncton	13	1	25	5	48.8		60.9
High Level	10	-1	24	-2	2.0		*	Saint John	11	1	21	3	58.2		44.4
Jasper	12	2	25	3	12.8	45.8		<b>NOVA SCOTIA</b>							
Lethbridge	15	2	29	5	14.3		*	Greenwood	12	-1	22	2	26.4		X
Medicine Hat	16	2	30	7	4.2	62.7		Shearwater	12	1	21	4	19.7		55.9
Peace River	12	1	25	4	2.4		X	Sydney	12	2	28	0	9.4		68.9
<b>SASKATCHEWAN</b>								Yarmouth	11	0	17	5	31.8		46.4
Cree Lake	7	X	23	-2	0.3		76.4	<b>PRINCE EDWARD ISLAND</b>							
Estevan	15	3	30	7	2.8	49.0		Charlottetown	12	1	24	4	39.9		*
La Ronge	11	0	25	-3	0.8		*	Summerside	12	1	22	5	41.0		60.3
Regina	15	3	29	7	15.2	46.9		<b>NEWFOUNDLAND</b>							
Saskatoon	14	1	27	5	7.8		*	Gander	9	1	21	1	4.4		50.0
Swift Current	14	2	28	5	*		*	Port aux Basques	8	3	17	0	4.8	0.0	64.9
Yorkton	14	2	27	1	16.9	60.9		St. John's	6	-1	13	0	91.2		*
<b>MANITOBA</b>								St. Lawrence	10	5	20	2	13.2		X
Brandon	13	1	29	2	1.6		*	Cartwright	3	-1	10	-2	2.8	45.0	41.6
Churchill	1	1	5	-2	8.8	0.0	18.1	Churchill Falls	5	3	13	-1	15.6	25.0	*
Lynn Lake	6	-3	20	-2	1.8	106.3		Goose	8	2	19	0	18.4		52.4

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

GREAT LAKES SURFACE WATER TEMPERATURES FOR MAY 24, 1985



The maps show the actual surface water temperature distribution of Lake Ontario and Lake Erie. The shading of the satellite picture on the front page corresponds directly to these temperatures and is interpreted by a computer to produce an accurate temperature analysis.