



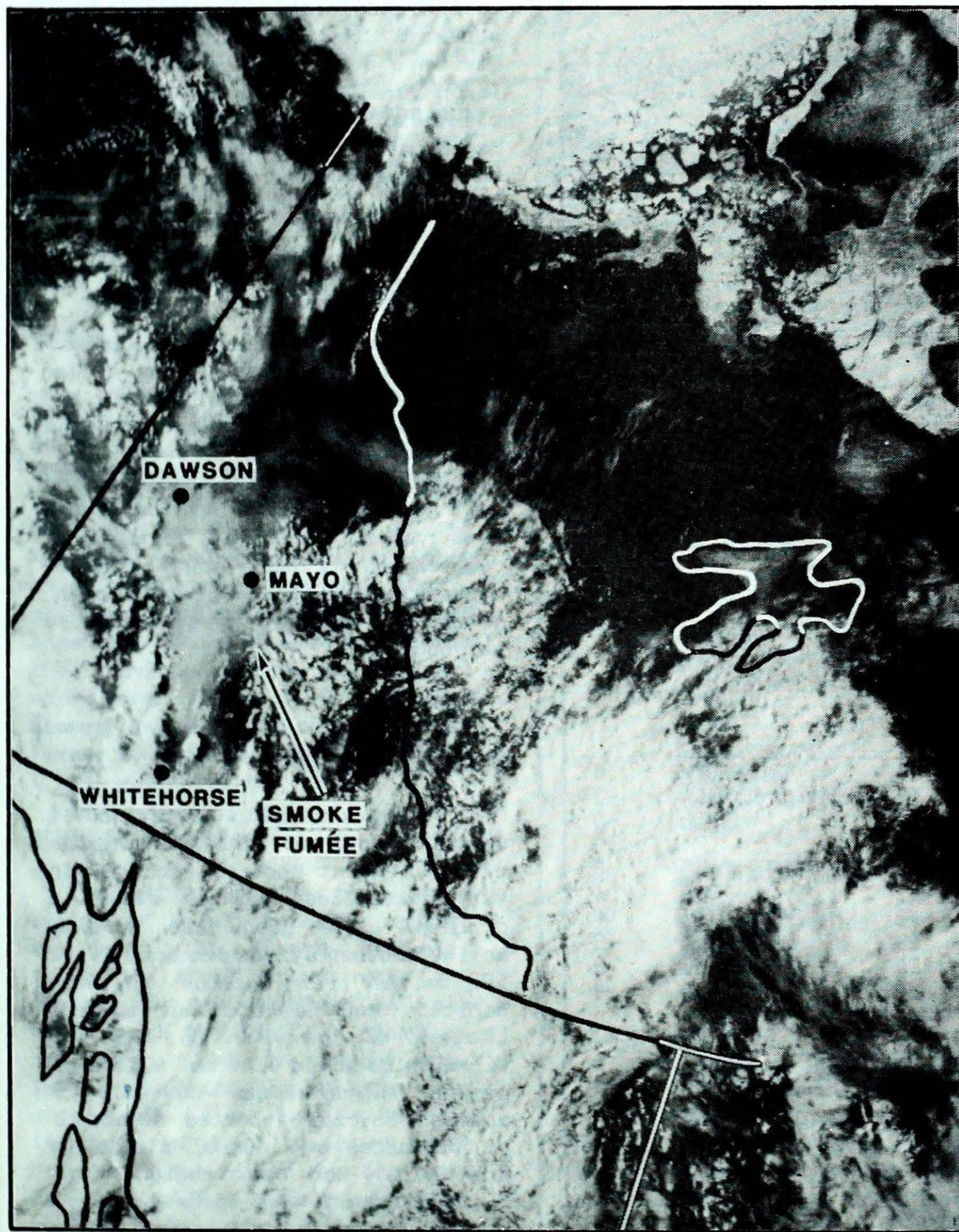
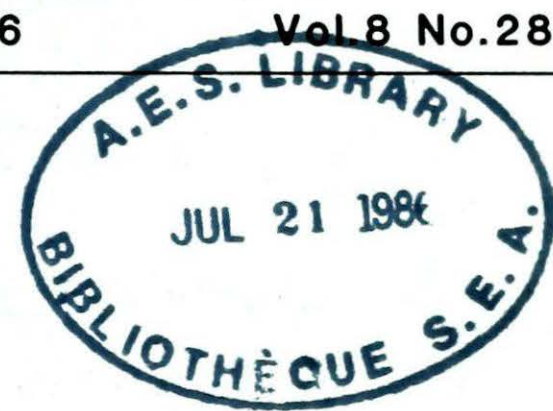
Climatic Perspectives

A weekly review of Canadian climate

July 8 to 14, 1986

Vol 8 No.28

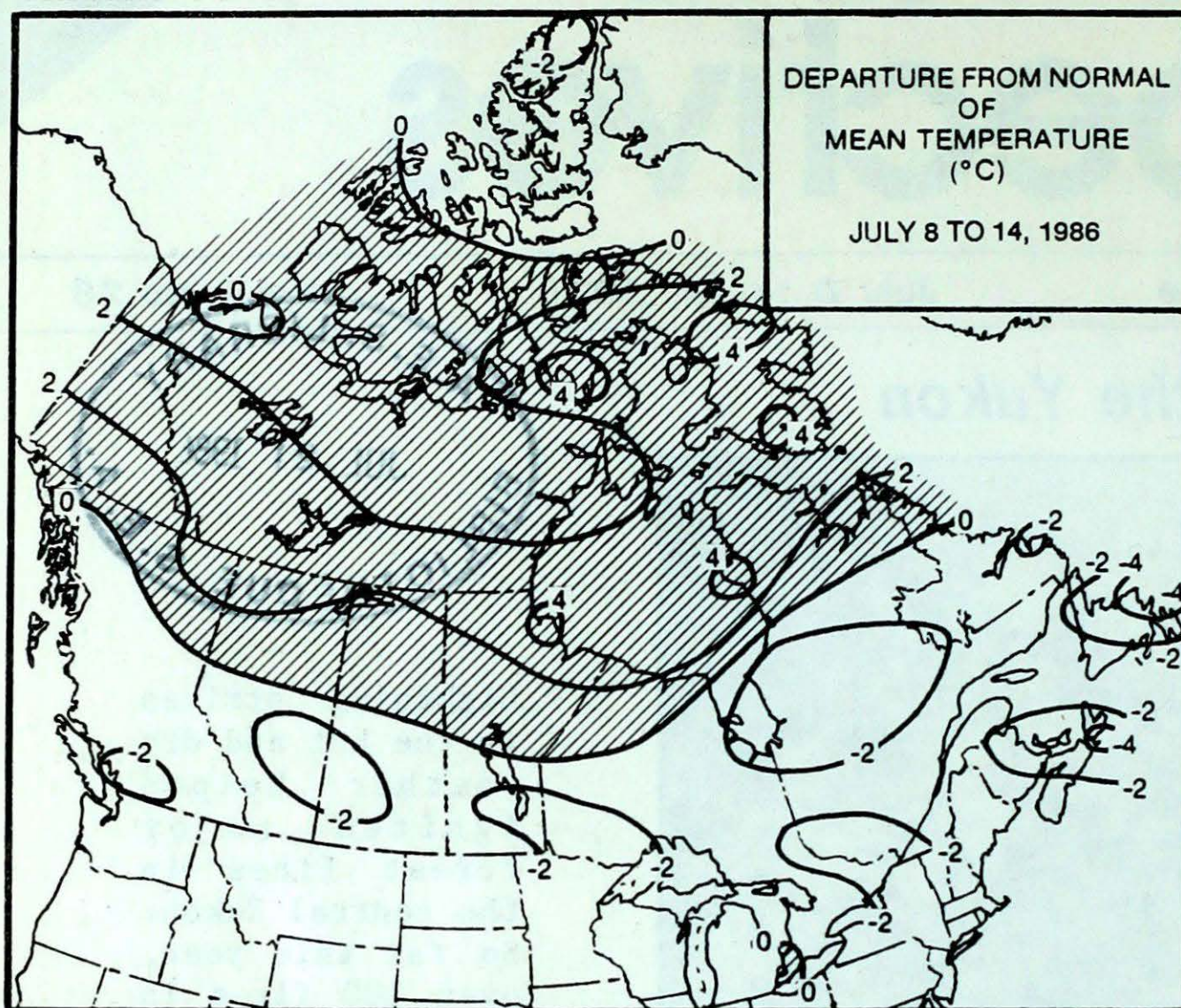
● Major forest fires in the Yukon



Lightning strikes in the hot and dry weather helped ignited major forest fires in the central Yukon. So far this year, over 100 fires in this area have destroyed in excess of 41 thousand hectares of timber. Smoke from the fires have hampered flight operations in the Yukon. This July 4, 1986 Meteor 3 Soviet satellite picture shows the extent of smoke from fires in the central Yukon.

- *Unsummer like in Southern Canada but very summery in the North*
- *Outbreak of tornadoes in Southern Ontario*

TEMPERATURE



ACROSS THE COUNTRY...

Yukon and Northwest Territories

The North was warm this week. Eastern Arctic was especially warm where mean temperatures were about 4° above normal. The temperatures climbed near 20° in southern Baffin Island and snow on the ground disappeared. Shipping routes in Baffin Bay were now opened. Only southern Yukon received 20 to 50 mm of rain, elsewhere it was relatively dry. Major forest fires continued to burn in central Yukon.

British Columbia

Unsummer like weather continued. The temperatures were a few degrees below normal throughout the Province. The coastal areas and the North has had plenty of rain, elsewhere showery type of precipitation fell but dry conditions persisted near Fort St. John. Hay harvest was delayed in Prince George due to heavy rains. Despite poor weather, attendance to Expo '86 was described as good.

Prairie Provinces

The week could be summarized as unsettled and cool across the Prairies. Frequent showers occurred in many localities allowing crops to progress at a good rate. A slow moving weather system produced 25 to 50 mm of rain across southern Manitoba and Saskatchewan towards the end of the week. On July 10, Winnipeg received 41.6 mm. A line of severe thunderstorms on July 9 spawned several reported sightings of tornadoes and funnel clouds in the Calgary-Red Deer region. Fortunately damage was minimal. Heavy downpours in Calgary resulted in overloaded storm sewer system and localized flooding. An outbreak of thunderstorms on July 13 dropped marble to golf ball size hail in parts of southern Manitoba and Saskatchewan causing some crop damage.

WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM		MINIMUM	
BRITISH COLUMBIA	FORT NELSON	28	CRANBROOK	6
YUKON TERRITORY	DAWSON	27	KOMAKUK BEACH A	-2
NORTHWEST TERRITORIES	FORT SIMPSON	29	CLYDE	-3
	NORMAN WELLS			
ALBERTA	MEDICINE HAT	30	ROCKY MTN HOUSE	6
SASKATCHEWAN	ESTEVAN	29	MEADOW LAKE	4
MANITOBA	CHURCHILL	29	THOMPSON	3
ONTARIO	WINDSOR	30	MOOSONEE	3
QUEBEC	MONTREAL INT'L	28	QUAQTAQ	-1
NEW BRUNSWICK	MONCTON	30	MONCTON	1
NOVA SCOTIA	SHELBURNE	30	SYDNEY	5
PRINCE EDWARD ISLAND	SUMMERSIDE	27	CHARLOTTETOWN	9
NEWFOUNDLAND	BADGER	26	BADGER	1

ACROSS THE NATION

WARMEST MEAN TEMPERATURE	22	WINDSOR	ONT
COOLEST MEAN TEMPERATURE	1	ALERT	NWT

Ontario

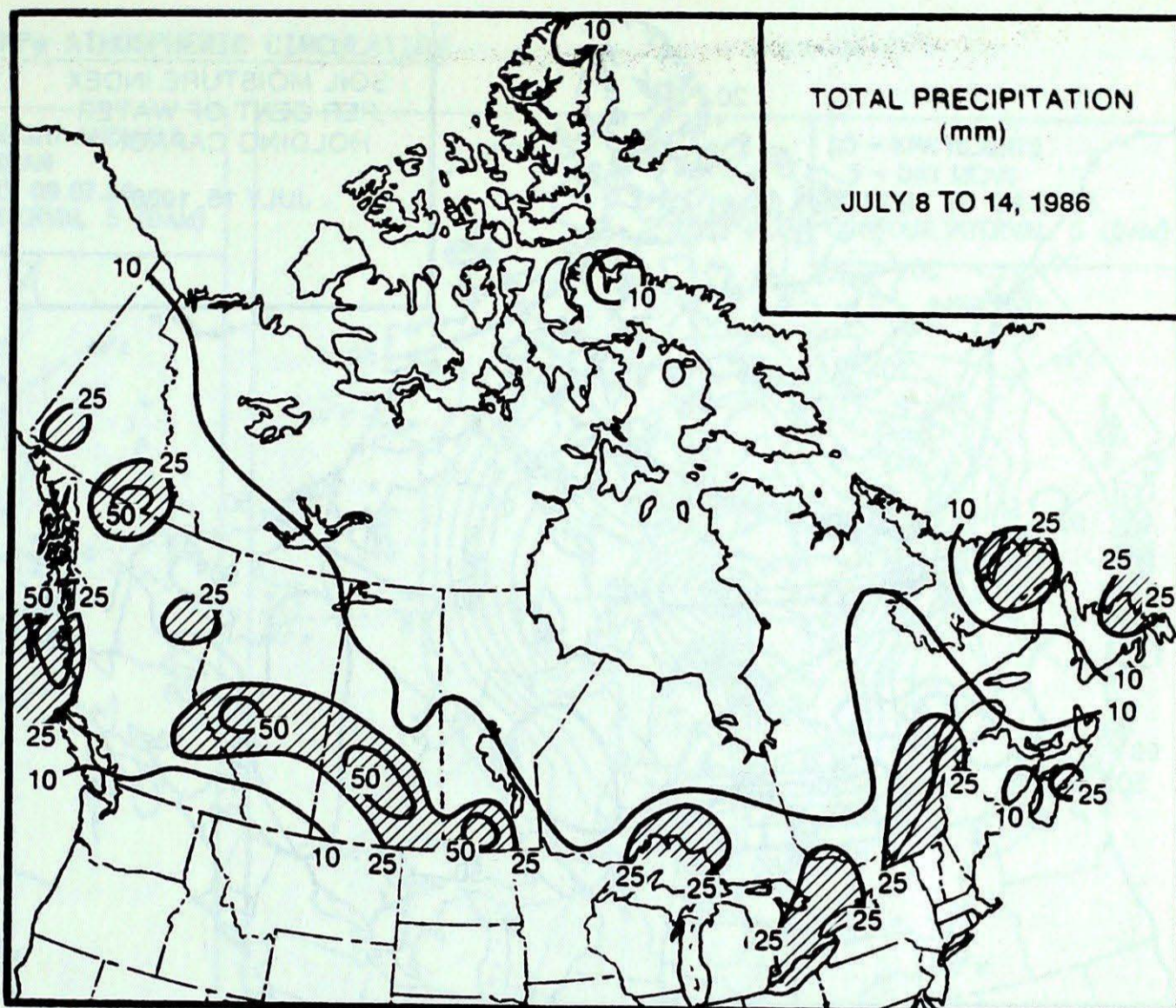
The weather was unseasonably cool with heavy rainfalls occurring over the weekend. The temperatures were 2 to 5 degrees below normal; on July 10, the mercury dropped to the freezing level at Winisk. Towards the weekend, a cool air mass swept the province producing numerous record low daytime temperatures including 13.7° at Thunder Bay on July 12, which broke the old record of 14.4° set in 1913. Heavy downpours of 20 to 40 mm were recorded in southern Ontario over the weekend. On July 8, a probable tornado touched down in Windsor, yet another possible tornado caused damages in southcentral Ontario on July 13.

Quebec

Last week's cool weather persisted into this week. At least 14 daily record-low temperatures were established. Weekly temperature ranged from 1° below normal at Kuujuaq to 4° below normal at Montréal; however the extreme North experienced above normal temperatures. Showery weather produced less than 15 mm of rain throughout the Province except at Montréal where over 22 mm fell. Cool and showery weather subdued many forest fires; by the end of the week, only 1 fire was burning.

Atlantic Provinces

Unsettled weather produced a mixture of rain and sunshine across the East Coast. Towards mid-week, record-low temperatures were registered in the Maritimes and Labrador as the daytime readings failed to climb above mid-teens. In Labrador, the temperatures were nearly 10° below normal. On July 14, rains in the 10 to 20 mm range brought some relief to the arid farmlands of New Brunswick. The dry weather in Nova Scotia proved beneficial to the haying operations. Thundershowers with pea-size hail were observed at Gander on July 10. Shipping routes to coastal communities in northern Labrador were congested as hard glacier-type ice moved close to shore.

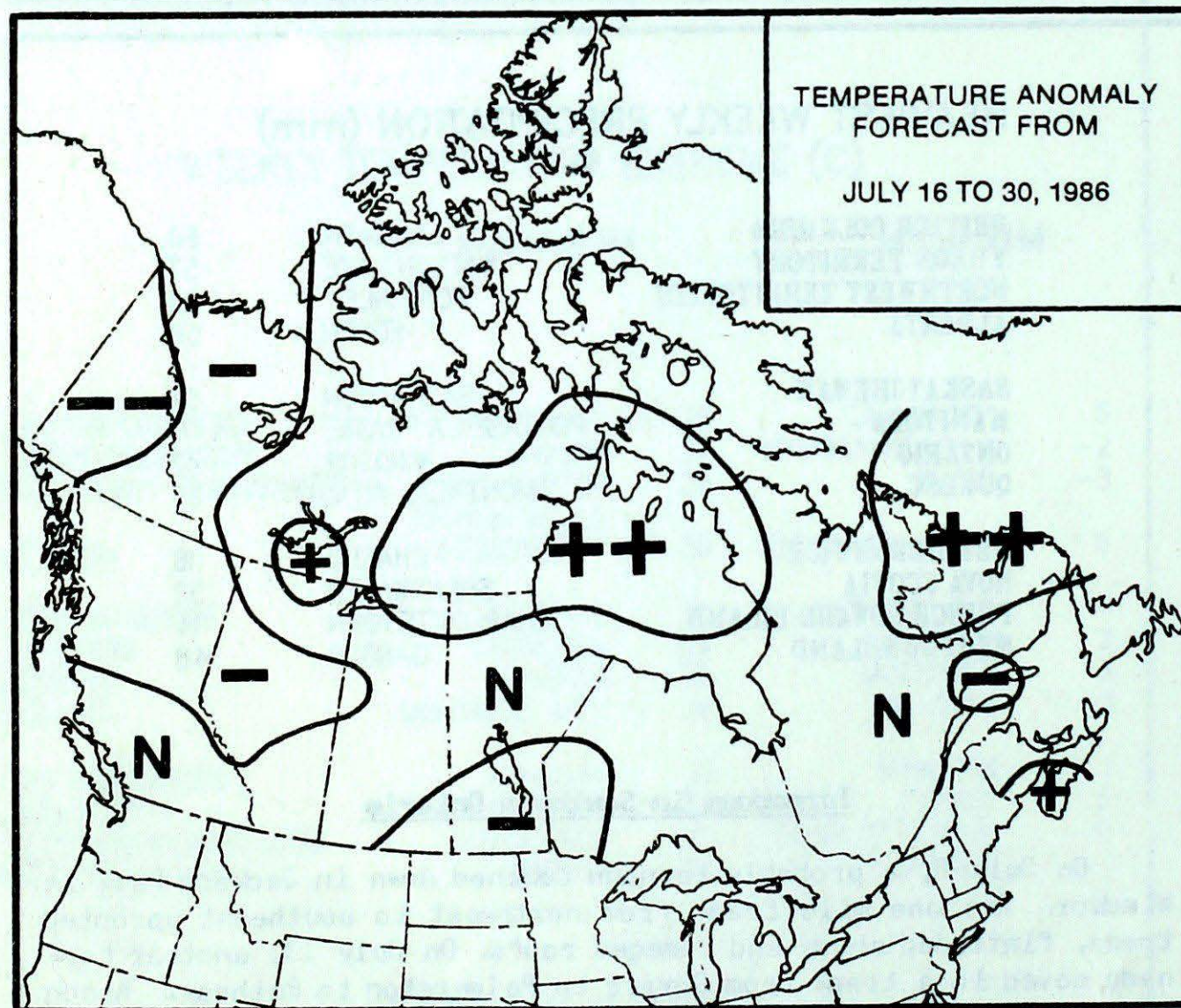
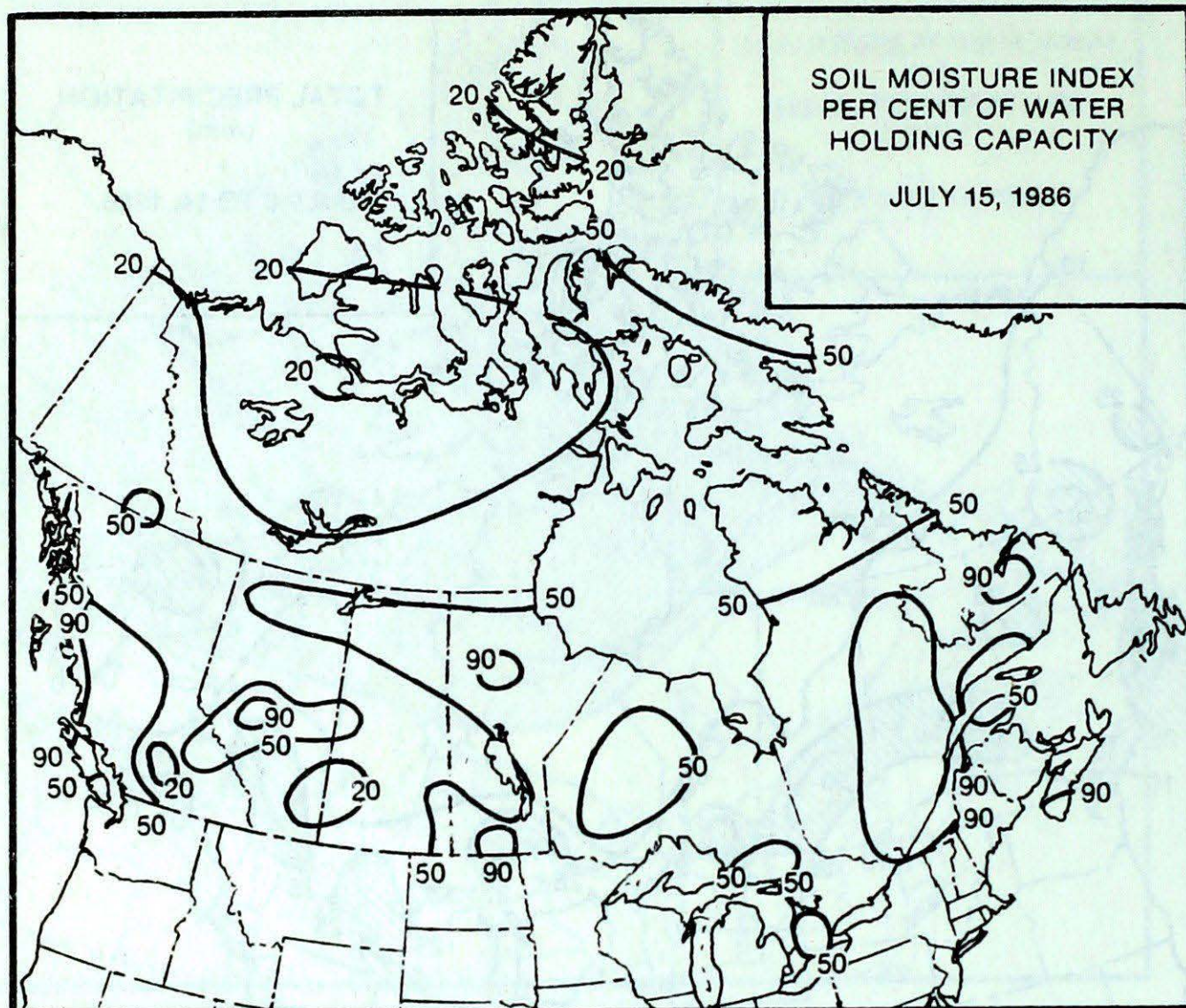
**HEAVIEST WEEKLY PRECIPITATION (mm)**

BRITISH COLUMBIA	LANGARA	60
YUKON TERRITORY	WATSON LAKE	57
NORTHWEST TERRITORIES	POND INLET	23
ALBERTA	EDSON	68
SASKATCHEWAN	SASKATOON	57
MANITOBA	PORTAGE LA PRAIRIE	71
ONTARIO	WINDSOR	42
QUEBEC	MONTREAL INT'L	39
NEW BRUNSWICK	CHARLO	18
NOVA SCOTIA	SHEARWATER	33
PRINCE EDWARD ISLAND	CHARLOTTETOWN	14
NEWFOUNDLAND	GANDER	48

Tornadoes in Southern Ontario

On July 8, a probable tornado touched down in Jackson Park in Windsor. The one mile track from northwest to southeast uprooted trees, flattened sheds and damaged roofs. On July 13, another tornado moved in a track from Gorrie to Palmerston to Rothsay. Along the 4 kilometre track, crops and barns were destroyed. On the same day, wind damaged trees in Etobicoke.

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 8

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 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.

The purpose of the publication is to make topical information available to the public concerning the Canadian Climate and its socio-economic impact.

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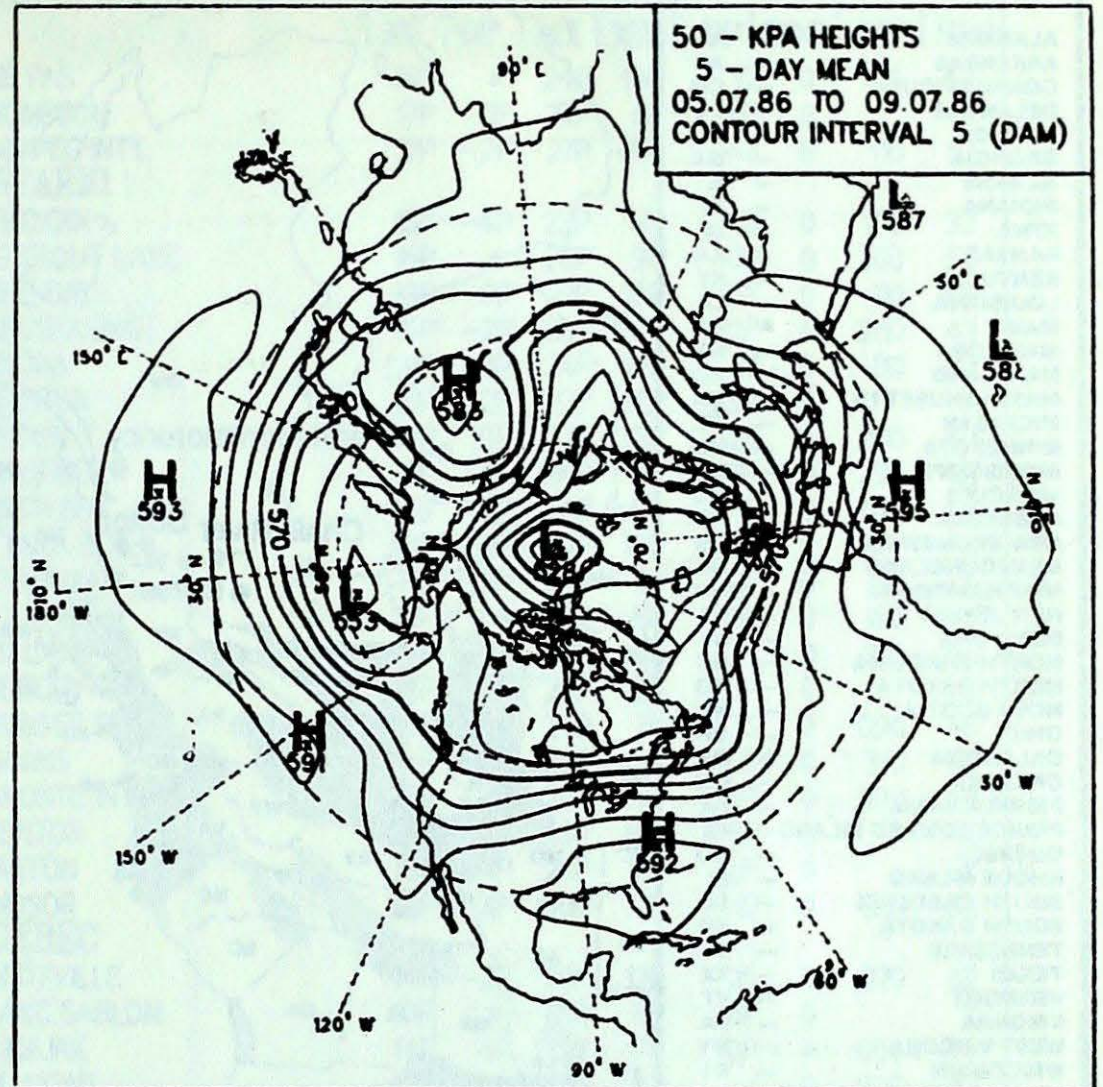
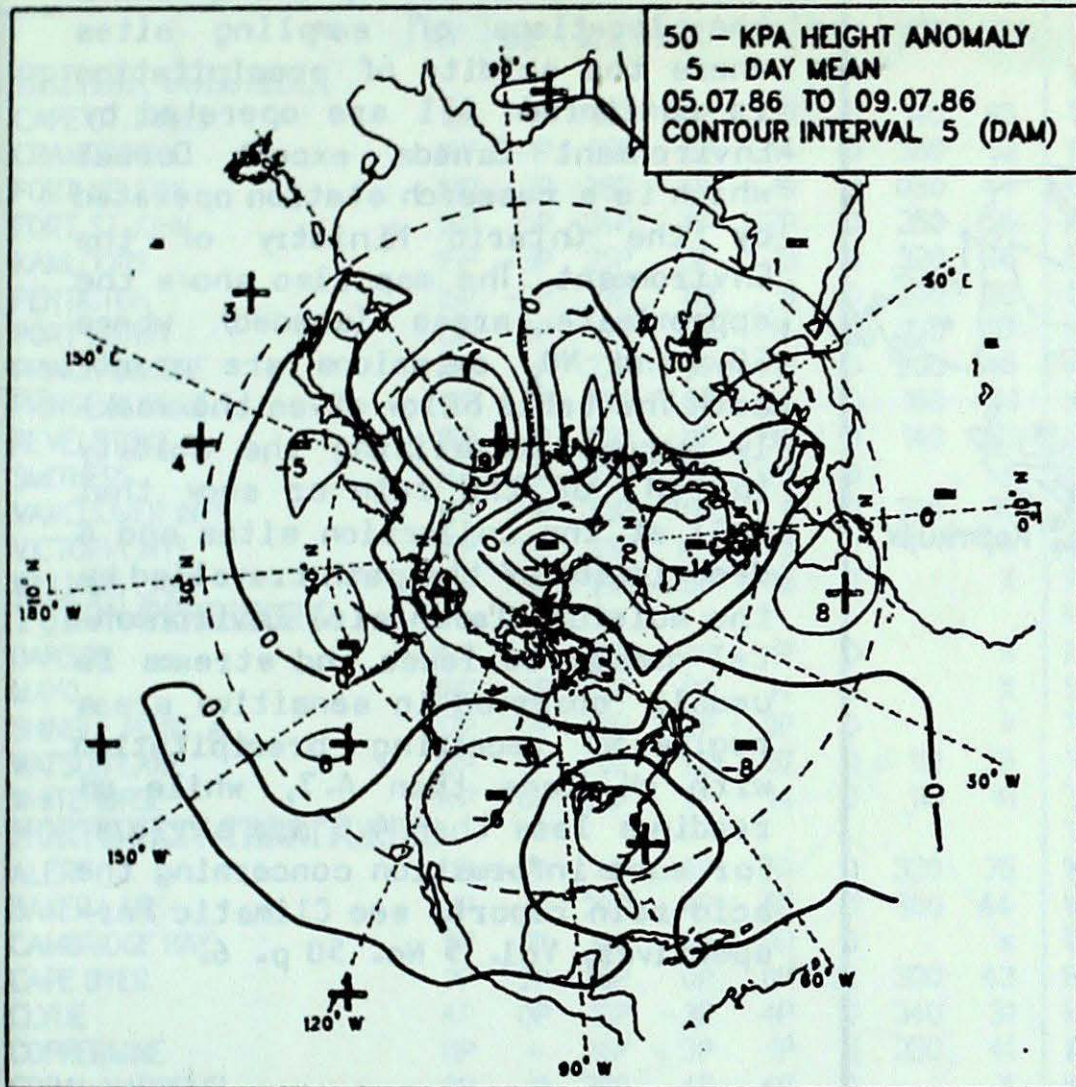
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Weekly issue including	
monthly supplement:	\$35.00
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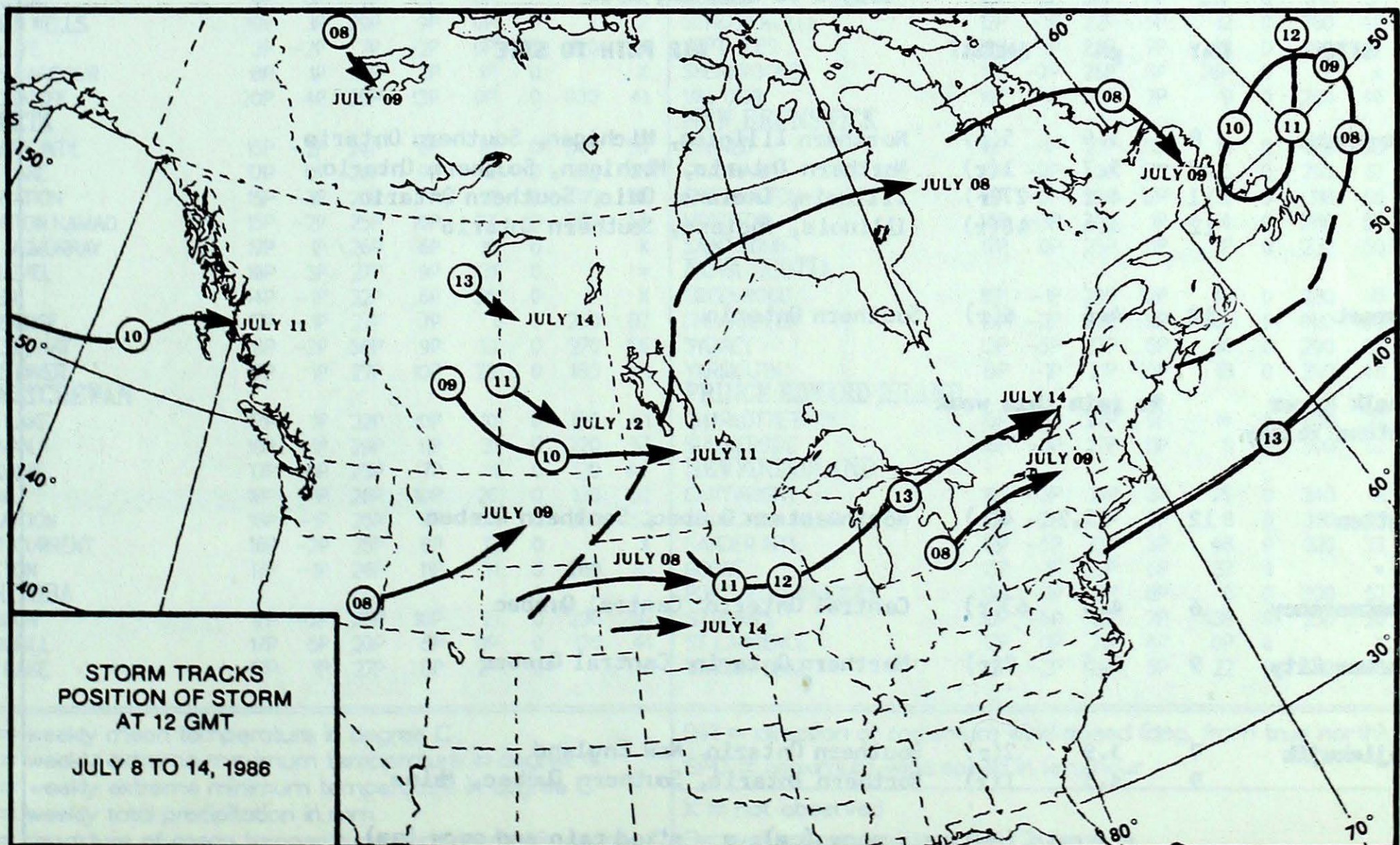
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50 KPa ATMOSPHERIC CIRCULATION



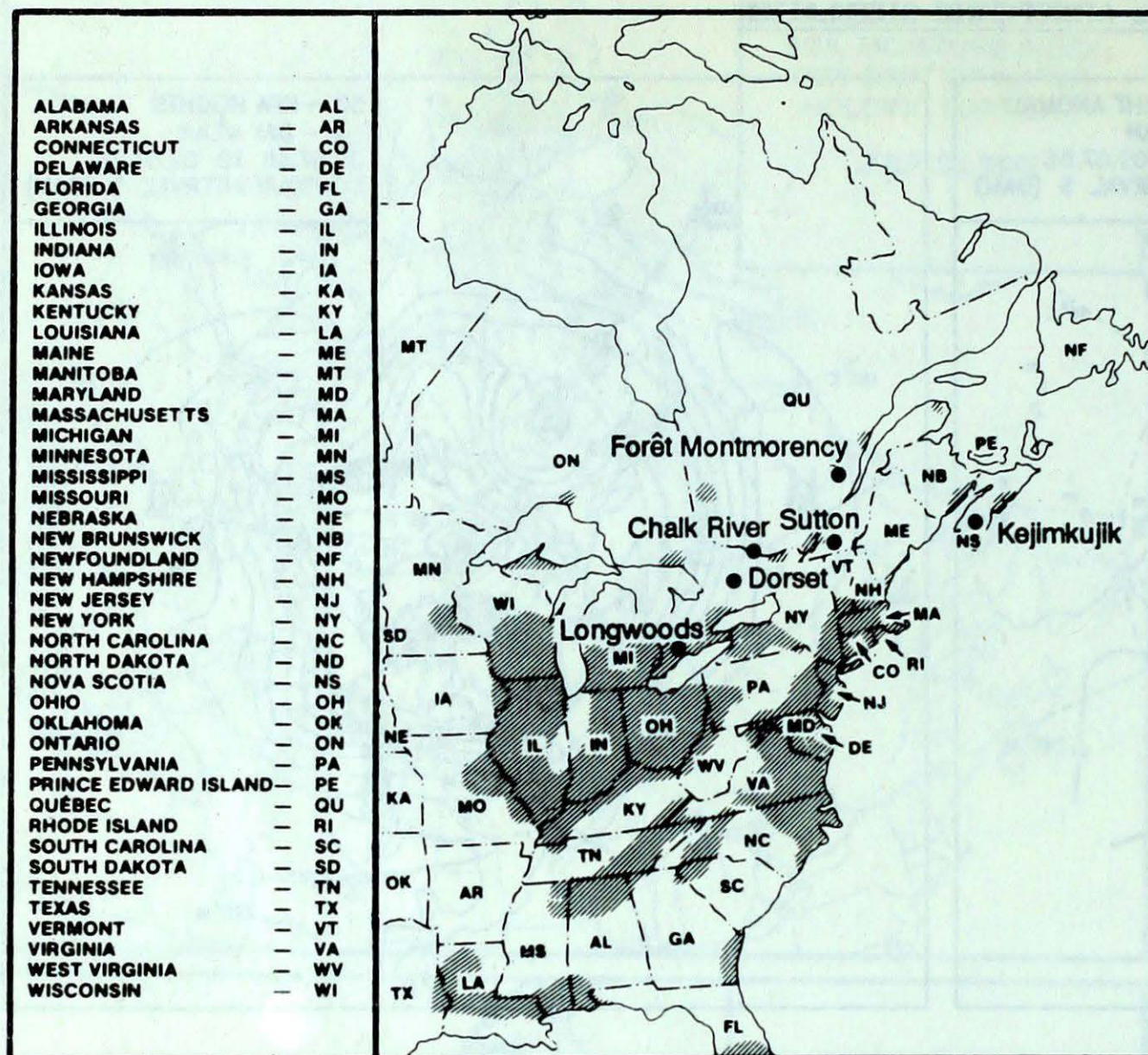
MEAN 50 KPa HEIGHT ANOMALY (dam)
July 5 to July 9, 1986

MEAN 50 KPa HEIGHTS (dam)
July 5 to July 9, 1986



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 SO_2 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.

JULY 6 TO JULY 12, 1986

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	8	3.9	5(r)	Northern Illinois, Michigan, Southern Ontario
	10	5.7	1(r)	Northern Ontario, Michigan, Southern Ontario
	11	4.2	27(r)	Illinois, Indiana, Ohio, Southern Ontario
	12	4.4	48(r)	Illinois, Indiana, Southern Ontario
Dorset	12	4.6	6(r)	Southern Ontario
Chalk River Ottawa Valley	No rain this week			
Sutton	12	5.2	4(r)	Northwestern Quebec, Southern Quebec
Montmorency	6	4.8	63(r)	Central Ontario, Central Quebec
Quebec City	9	5.5	2(r)	Northern Ontario, Central Quebec
Kejimikujik	7	3.9	2(r)	Southern Ontario, New England
	9	4.5	1(r)	Northern Ontario, Southern Quebec, Maine

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

TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT JULY 15, 1986

STATION	TEMPERATURE				PRECIP.		WIND MX		STATION	TEMPERATURE				PRECIP.		WIND MX	
	AV	DP	MX	MN	TP	SOG	DIR	SPD		AV	DP	MX	MN	TP	SOG	DIR	SPD
BRITISH COLUMBIA																	
CAPE ST. JAMES	12P	-1P	16P	10P	28	0	140	93	THE PAS	18P	*	24P	10P	12	0	140	43
CRANBROOK	16P	-1P	25P	6P	14	0	360	52	THOMPSON	17P	1P	27P	6P	8P	0		*
FORT NELSON	19P	2P	28P	9P	19	0	030	44	WINNIPEG INT'L	17P	-2P	27P	11P	43	0	110	52
FORT ST. JOHN	16P	0P	24P	11P	32P	0	250	56	ONTARIO								
KAMLOOPS	18P	-3P	25P	12P	21	0	320	46	ATIKOKAN	15P	-4P	23P	8P	8	0	100	33
PENTICTON	18P	-2P	27P	8P	5	0	200	33	BIG TROUT LAKE	16P	*	26P	9P	0P	0	300	56
PORT HARDY	13P	0P	17P	10P	14	0	130	37	GORE BAY	18P	0P	27P	13P	16P	0	110	46
PRINCE GEORGE	15P	*	22P	9P	18	0	200	46	KAPUSKASING	16P	-2P	25P	7P	0P	0	280	43
PRINCE RUPERT	12P	-1P	15P	8P	56	0	160	41	KENORA	16P	-3P	24P	12P	18	0	110	33
REVELSTOKE	16P	-1P	25P	11P	36	0	140	63	KINGSTON	18P	-2P	22P	14P	25P	0		X
SMITHERS	14P	-1P	22P	9P	8	0		*	LONDON	20P	0P	27P	13P	29	0	280	43
VANCOUVER INT'L	16P	-1P	23P	11P	9	0	200	35	MOOSONEE	13P	-2P	24P	3P	0P	0	290	48
VICTORIA INT'L	16P	0P	21P	10P	5	0		*	NORTH BAY	16P	-2P	24P	12P	31P	0	070	44
WILLIAMS LAKE	13P	*	21P	8P	16	0		X	OTTAWA INT'L	18P	-4P	29P	10P	11P	0		X
YUKON TERRITORY									PETAWAWA	17P	-2P	28P	8P	12P	0		X
DAWSON	17P	*	27P	6P	17	0		*	PICKLE LAKE	16P	-1P	23P	8P	0P	0	160	37
MAYO	18P	2P	26P	9P	14	0		X	RED LAKE	16P	-2P	23P	8P	5	0	100	48
SHINGLE POINT A	12P	0P	21P	2P	0P	0		*	SUDBURY	17P	-2P	26P	12P	18P	0		X
WATSON LAKE	15P	0P	26P	9P	57	0	110	56	THUNDER BAY	15P	-3P	24P	7P	35	0	090	46
WHITEHORSE	14P	0P	22P	7P	14	0	110	41	TIMMINS	16P	-1P	25P	9P	0P	0	310	37
NORTHWEST TERRITORIES									TORONTO INT'L	20P	1P	28P	14P	28P	0	270	59
ALERT	1P	-2P	4P	0P	12P	0	330	76	TRENTON	19P	-1P	28P	14P	25P	0		X
BAKER LAKE	11P	1P	20P	4P	5P	0	360	44	WIARTON	18P	-1P	24P	12P	13P	0		X
CAMBRIDGE BAY	9P	1P	19P	3P	0P	0		*	WINDSOR	23P	1P	30P	17P	42	0	310	80
CAPE DYER	7P	2P	16P	0P	0P	22	320	43	QUEBEC								
CLYDE	4P	0P	19P	-3P	4P	0	340	31	BAGOTVILLE	16P	-2P	26P	12P	25	0	270	52
COPPERMINE	11P	*	26P	3P	1P	1	230	41	BLANC SABLON	10P	*	15P	6P	6P	0		X
CORAL HARBOUR	9P	1P	20P	4P	4P	0		X	INUKJUAK	14P	4P	23P	7P	0P	*	060	46
EUREKA	4P	-2P	10P	0P	0P	0	360	41	KUUJUAQ	12P	0P	21P	4P	1	0	030	52
FORT SMITH	18P	2P	27P	6P	13	0		X	KUUJUARAPIK	9P	-3P	18P	1P	4	0	240	43
FROBISHER BAY	13P	6P	22P	3P	1P	0	330	44	MANIWAKI	16P	-3P	28P	7P	10P	0	300	37
HALL BEACH	7P	2P	17P	2P	0P	0	160	35	MONT JOLI	15P	-3P	24P	8P	26	0	250	59
INUVIK	16P	1P	24P	6P	0P	0		X	MONTREAL INT'L	18P	-3P	28P	11P	39P	0	260	46
MOULD BAY	4P	0P	7P	-1P	0P	0		X	NATASHQUAN	13P	-1P	19P	8P	6	0	280	50
NORMAN WELLS	19P	3P	29P	9P	0P	0		X	QUEBEC	18P	-2P	28P	11P	22P	0	310	57
RESOLUTE	3P	-2P	7P	-2P	0P	0	120	56	SCHEFFERVILLE	12P	-1P	22P	5P	12	0	360	48
SACHS HARBOUR	8P	1P	18P	2P	1P	0		X	SEPT-ILES	14P	-1P	23P	7P	13	0	290	67
YELLOWKNIFE	20P	4P	29P	13P	0P	0	030	41	SHERBROOKE	16P	-2P	26P	5P	26P	0		*
ALBERTA									VAL D'OR	16P	-1P	25P	7P	9	0	280	46
CALGARY INT'L	15P	-2P	24P	6P	18	0	340	59	NEW BRUNSWICK								
COLD LAKE	17P	0P	24P	9P	46	0	270	37	CHARLO	16P	-1P	27P	11P	19	0	310	56
CORONATION	15P	-3P	25P	7P	19	0	310	56	CHATHAM	17P	-2P	30P	12P	16	0	290	57
EDMONTON NAMAO	15P	-2P	25P	10P	39	0	290	50	FREDERICTON	18P	-2P	30P	12P	16	0	310	50
FORT MCMURRAY	17P	1P	26P	6P	10	0		X	MONCTON	16P	-3P	30P	1P	14	0	280	50
HIGH LEVEL	19P	3P	27P	9P	31	0		*	SAINT JOHN	17P	0P	25P	11P	7P	0	230	50
JASPER	14P	-1P	22P	6P	25	0		X	NOVA SCOTIA								
LETHBRIDGE	17P	-1P	27P	7P	1	0	260	87	GREENWOOD	18P	-1P	29P	12P	4P	0	280	70
MEDICINE HAT	18P	-2P	30P	9P	13	0	270	56	SHEARWATER	16P	-2P	27P	11P	33P	0	080	50
PEACE RIVER	17P	1P	27P	10P	23	0	180	41	SYDNEY	13P	-5P	22P	5P	16	0	290	48
SASKATCHEWAN									YARMOUTH	15P	-1P	21P	10P	18	0	290	46
CREE LAKE	17P	1P	22P	10P	10	0	180	41	PRINCE EDWARD ISLAND								
ESTEVAN	18P	-1P	29P	11P	31	0	220	57	CHARLOTTETOWN	15P	-3P	27P	9P	14	0	230	37
LA RONGE	17P	0P	23P	7P	11	0	120	44	SUMMERSIDE	16P	-3P	27P	11P	11	0	300	52
REGINA	18P	-1P	26P	10P	26	0	130	52	NEWFOUNDLAND								
SASKATOON	18P	-1P	25P	9P	57	0	260	52	CARTWRIGHT	10P	-3P	21P	3P	25	0	340	41
SWIFT CURRENT	16P	-2P	25P	8P	12	0		X	CHURCHILL FALLS	13P	-2P	22P	5P	8	0	350	50
YORKTON	17P	-1P	26P	11P	31	0	260	41	GANDER INT'L	12P	-5P	23P	3P	48	0	320	33
MANITOBA									GOOSE	15P	-1P	25P	6P	37	0		*
BRANDON	17P	-2P	26P	10P	21	0	290	56	PORT-AUX-BASQUES	12P	-1P	18P	8P	5	0	300	52
CHURCHILL	17P	5P	29P	5P	0P	0	120	41	ST JOHN'S	10P	-6P	12P	7P	13P	0	250	56
LYNN LAKE	17P	1P	27P	8P	2P	0		*	ST LAWRENCE	12P	0P	21P	4P	0P	0		X
									WABUSH LAKE	12P	-2P	21P	5P	22	0	010	46

AV = weekly mean temperature in degree C
 MX = weekly extreme maximum temperature in degree C
 MN = weekly extreme minimum temperature in degree C
 TP = weekly total precipitation in mm
 DP = departure of mean temperature from normal in degree C
 SOG = snow depth on ground in cm, last day of the period

DIR = direction of maximum wind speed (deg. from true north)
 SPD = maximum wind speed in km/hour

X = not observed

P = value based on less than 7 days

* = missing