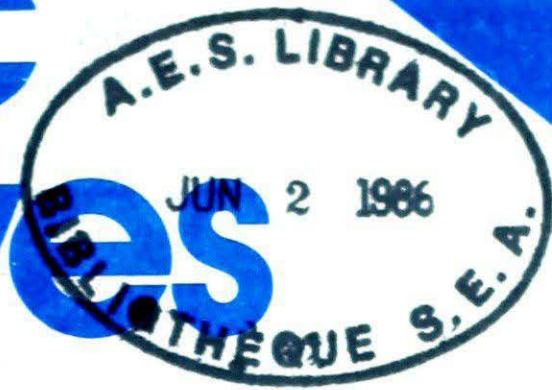


# Climatic Perspectives



A weekly review of Canadian climate

May 13 to 19, 1986

Vol.8 No.20

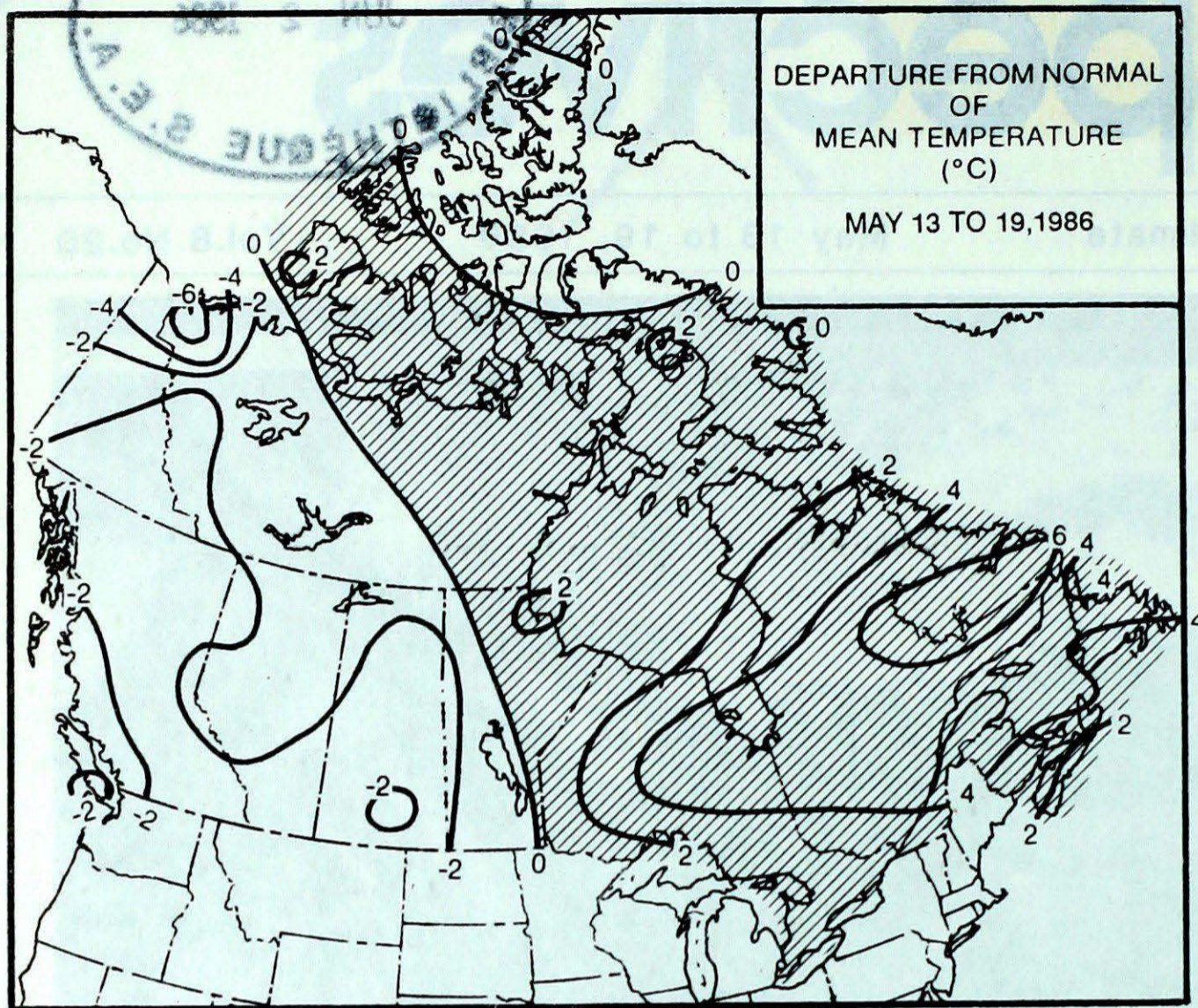
\*AES N-9 7340 VIS 16MY86 1837Z 48.0N 61.0W 1: 4.01



This NOAA 9 visual satellite photograph of May 16, 1986, shows dense smoke being streamed south-eastwards from the source of several major forest fires, which were burning out of control in New Brunswick and Newfoundland. For more information about the forest fires see page 3.

- **Thousands flee forest fires in Atlantic Canada**
- **Southern Alberta crippled by severe spring snowstorm**

# TEMPERATURE



## ACROSS THE COUNTRY...

### Yukon and Northwest Territories

The Yukon was cloudy and cool, which helped keep snow runoff to a minimum. Flooding was the main concern, as most rivers have broken open. In the Northwest Territories, typical spring weather prevailed, with extensive low cloud and a mixture of snow, freezing rain and rain. In the Territories, ice on the lakes and rivers was beginning to show signs of decay. Warmer weather returned towards the end of the period.

### British Columbia

Several weather systems brought cool and changeable weather to the province. Most locations received significant amounts of precipitation, ranging up to 90 mm along the coast. A spring snowstorm dumped to 30 cm of snow on northern B.C. The dull, unsettled conditions have set back agriculture by up to three weeks. A dusting of snow blanketed hill tops in the southern valleys. On May 13, a thunderstorm produced strong winds with gusts to 115 km/h at Castlegar, which uprooted trees and damaged buildings and vehicles.

### Prairie Provinces

One of the worst spring blizzards in Alberta's history dumped up to 50 cm of snow on parts of southern Alberta. The storm, which began on May 13 and lasted for two days, paralyzed all modes of transportation. Many highways around Calgary and Red Deer were closed, as were most schools. The wet snow, which fell mainly south of Edmonton, was blown into two-metre-high drifts by 80 km/h winds. The heavy snow and strong winds brought down hydro and telephone lines and toppled transmission towers. Some rural locations remained without power until the weekend. In Saskatchewan, the storm produced 30 mm of precipitation. Ten to 15 cm of snow fell in the southwest. Record low temperatures were experienced in the wake of the system, but readings recovered to normal values over the Victoria Day weekend.

## WEEKLY TEMPERATURE EXTREME (C)

		MAXIMUM		MINIMUM
BRITISH COLUMBIA	PENTICTON	26	WILLIAMS LAKE	-6
YUKON TERRITORY	DAWSON	15	KOMAKUK BEACH A	-16
NORTHWEST TERRITORIES	HAY RIVER	23	HALL BEACH	-20
ALBERTA	MEDICINE HAT	26	LLOYDMINSTER A	-5
SASKATCHEWAN	MOOSE JAW	26	COLLINS BAY	-10
MANITOBA	DAUPHIN	24	CHURCHILL	-9
ONTARIO	OTTAWA INT'L	28	MOOSONEE	-6
QUEBEC	MONTREAL INT'L	30	KUUJJIARAPIK	-6
NEW BRUNSWICK	CHATHAM	29	MONCTON	-2
NOVA SCOTIA	GREENWOOD	30	GREENWOOD	-1
			SHELBURNE	
PRINCE EDWARD ISLAND	CHARLOTTETOWN	26	CHARLOTTETOWN	0
NEWFOUNDLAND	GOOSE	31	ST ANTHONY	-6

## ACROSS THE NATION

WARMEST MEAN TEMPERATURE	17	WINDSOR	ONT
COOLEST MEAN TEMPERATURE	-11	MOULD BAY	NWT

**Ontario**

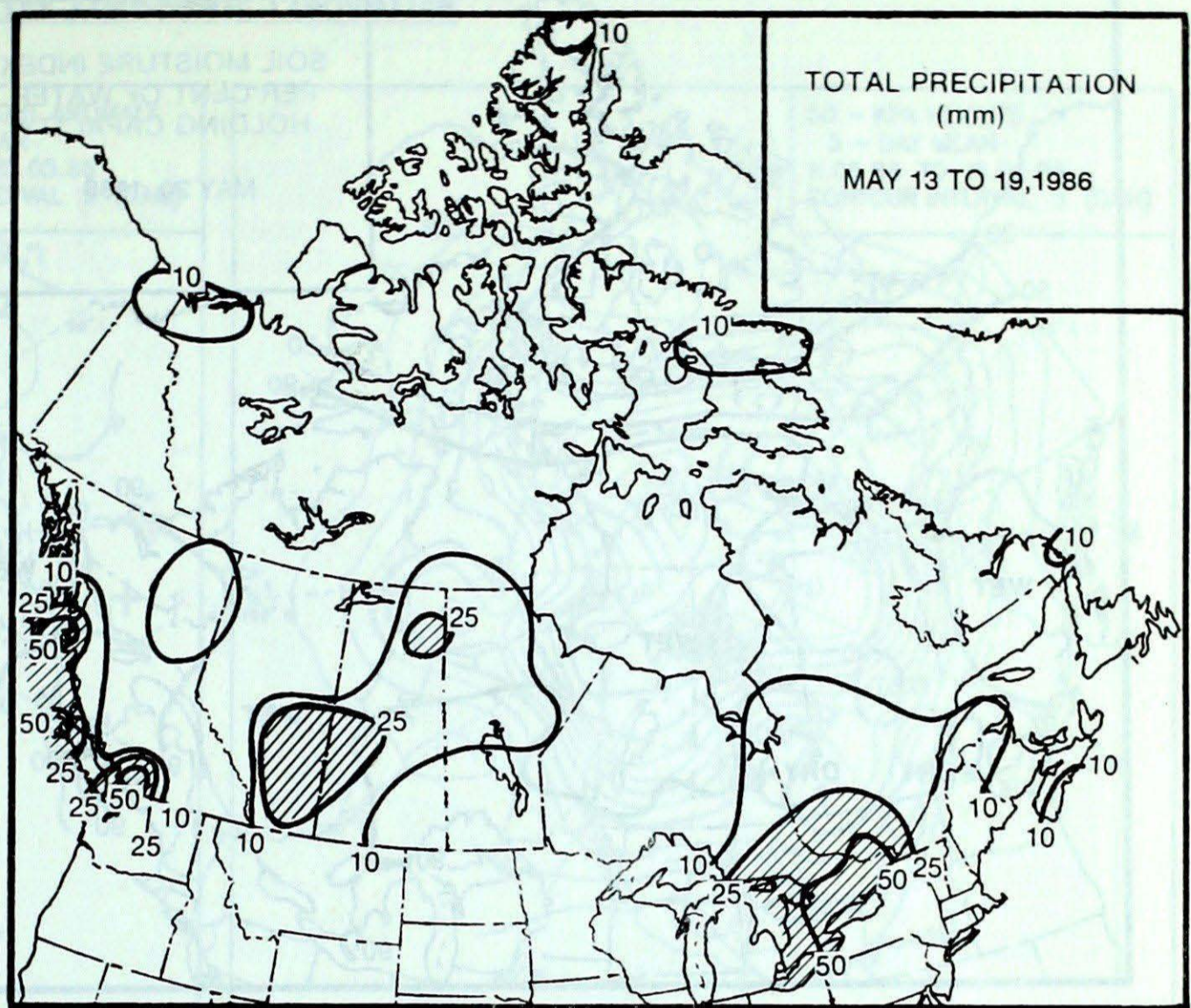
The storm track gradually sagged southwards, bringing disturbances across southern and central Ontario. The increased precipitation was welcomed in the south, due to the lack of rain the last few weeks. Thunderstorms with hail moved across southwestern Ontario on May 17. In northern Ontario, the Indian community of Winisk was ravaged by flood waters, due to melting snow and heavy precipitation. Some forest fires were burning in northeastern Ontario, but all were under control. High pressure dominated the weather picture in northwestern Ontario over the weekend.

**Quebec**

Clouds and showers moved into the province. The southwest received 20 to 40 millimetres of rain, with up to 70 mm of rain falling near Gatineau. On May 18, heavy thunderstorms moved across the Trois Rivières district. Strong winds, exceeding 100 km/h, downed power lines and destroyed several buildings at St. Barnabé and Ste-Angèle-de-Laval. Eight forest fires were reported burning in the province.

**Atlantic Provinces**

Dry conditions, which began earlier this month, were a contributing factor for the large forest fire outbreak in eastern Canada this week. Warm and sunny weather most of the week did not help the situation. During the middle of the week, daytime temperatures climbed to record high values in both New Brunswick and Newfoundland, worsening the fire situation. As a result, many fires burned out of control. In the Maritimes, the situation improved over the weekend, when a frontal trough brought scattered shower and thundershower activity to the region. It wasn't until Victoria Day that cooler, damp weather moved into the fire-prone areas of Newfoundland. In Labrador, colder temperatures and rain over the holiday weekend effectively doused forest fires, which had ignited near Goose Bay on May 15.

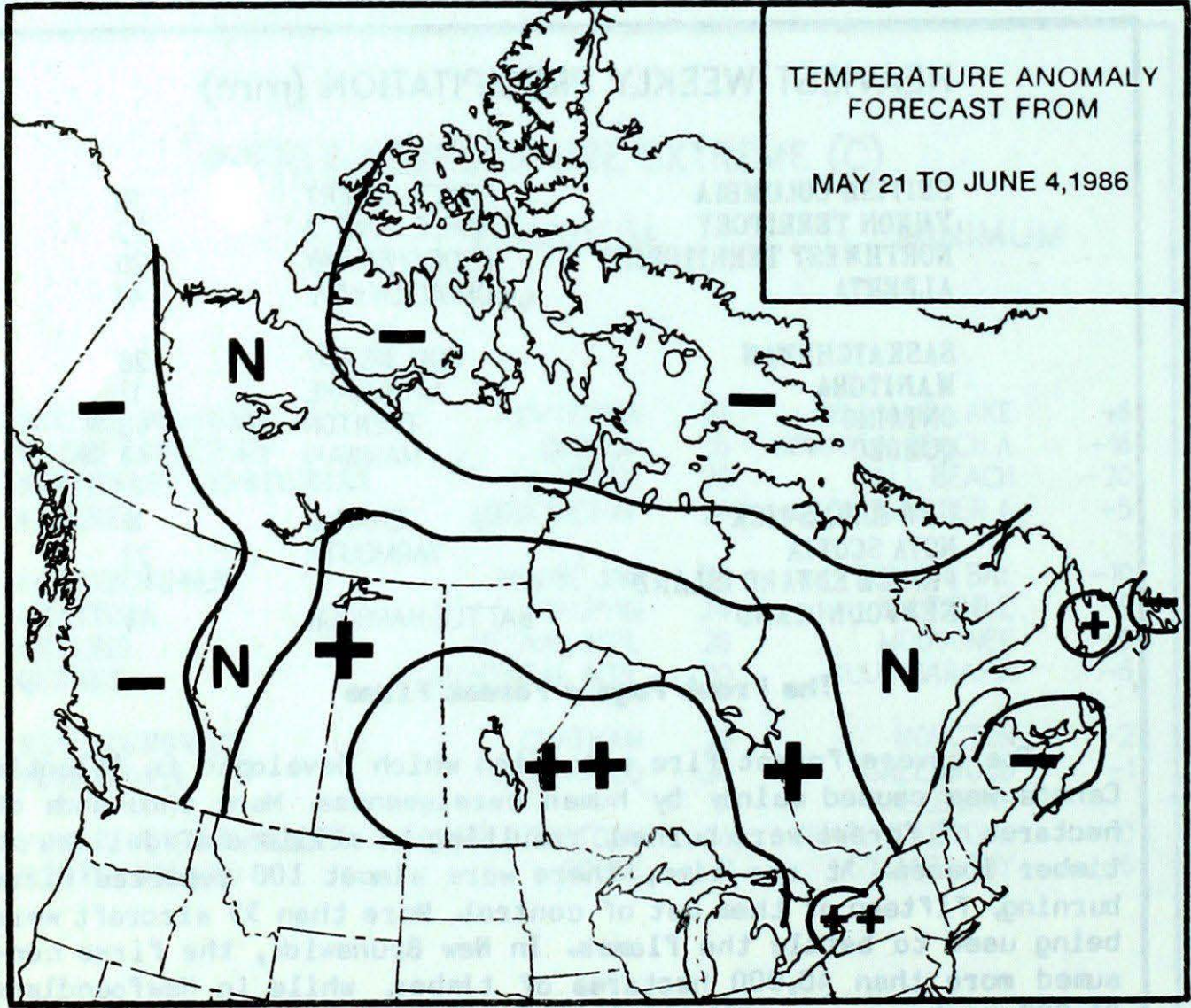
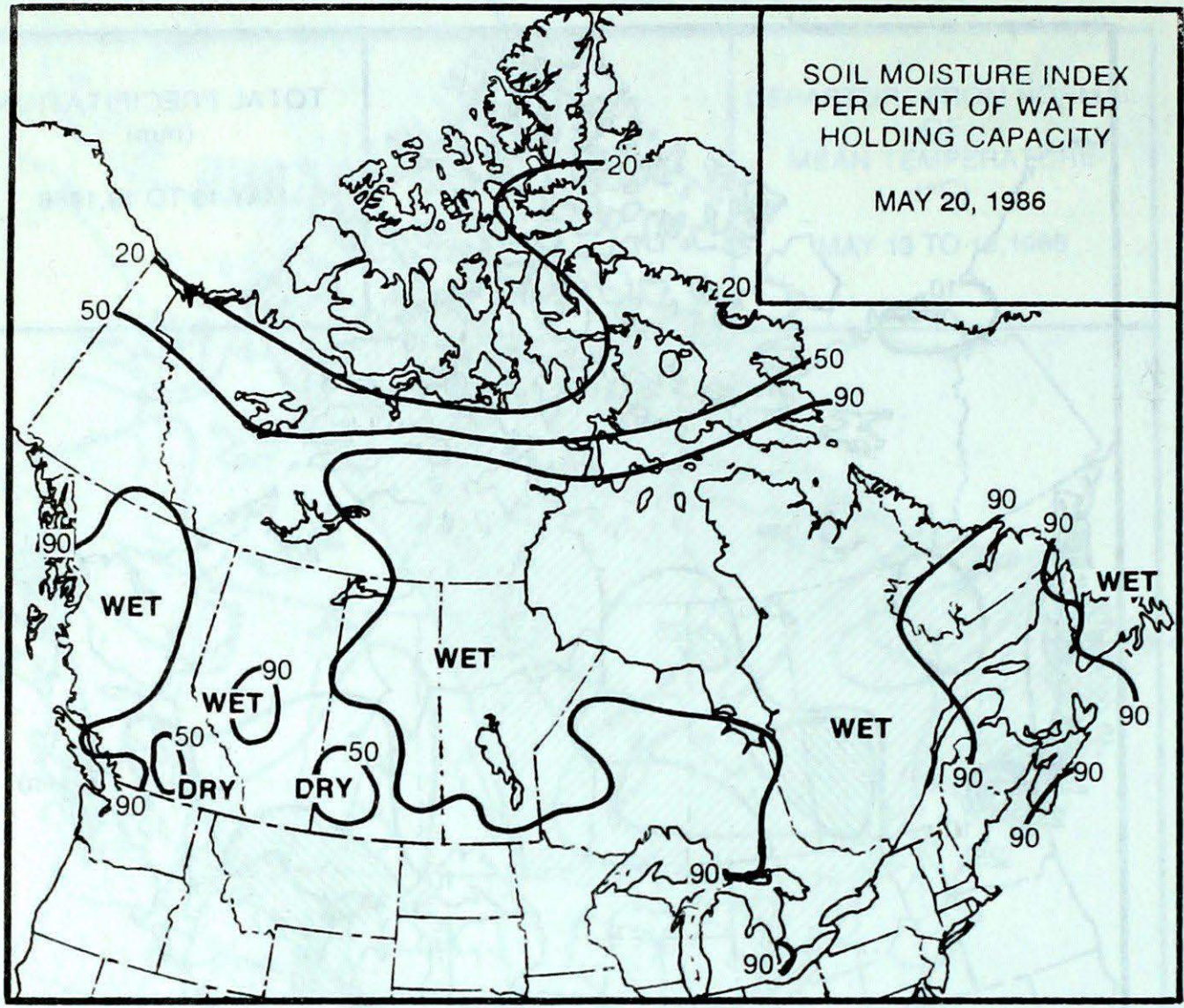
**HEAVIEST WEEKLY PRECIPITATION (mm)**

BRITISH COLUMBIA	PRINCE RUPERT	91
YUKON TERRITORY	SHINGLE POINT A	22
NORTHWEST TERRITORIES	FROBISHER BAY	20
ALBERTA	EDMONTON INT'L	41
SASKATCHEWAN	COLLINS BAY	28
MANITOBA	LYNN LAKE	17
ONTARIO	TRENTON	68
QUEBEC	MANIWAKI	49
NEW BRUNSWICK	CHARLO	16
NOVA SCOTIA	YARMOUTH	23
PRINCE EDWARD ISLAND		
NEWFOUNDLAND	BATTLE HARBOUR	14

**The Front Page - Forest Fires**

The severe forest fire situation which developed in Atlantic Canada was caused mainly by human carelessness. Many thousands of hectares of forest were burned, resulting in millions of dollars of timber losses. At one time, there were almost 100 reported fires burning, fifteen of them out of control. More than 35 aircraft were being used to battle the flames. In New Brunswick, the fires consumed more than 40,000 hectares of timber, while in Newfoundland 81,000 hectares has been burned. The fires in New Brunswick have already burned 25 times as much timber as last year. In central Newfoundland it was much the same. Thousands of people were evacuated. The Trans Canada Highway was closed, and many communities were shrouded in smoke. In the communities of Grand Falls and Windsor, residence sprayed water on their homes. On the outskirts of the towns, the flames were kept at bay by water bombers; even so, some buildings were burned to the ground.

# FORECAST



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

**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.

## CLIMATIC PERSPECTIVES VOLUME 8

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 Editor (English) A.K. Radomski  
 Editor (French) A.A. Gaillet  
 Staff Writer M. Skarpathiotakis  
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 Cartography G. Young/T. Chivers  
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**Regional Correspondents**  
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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.

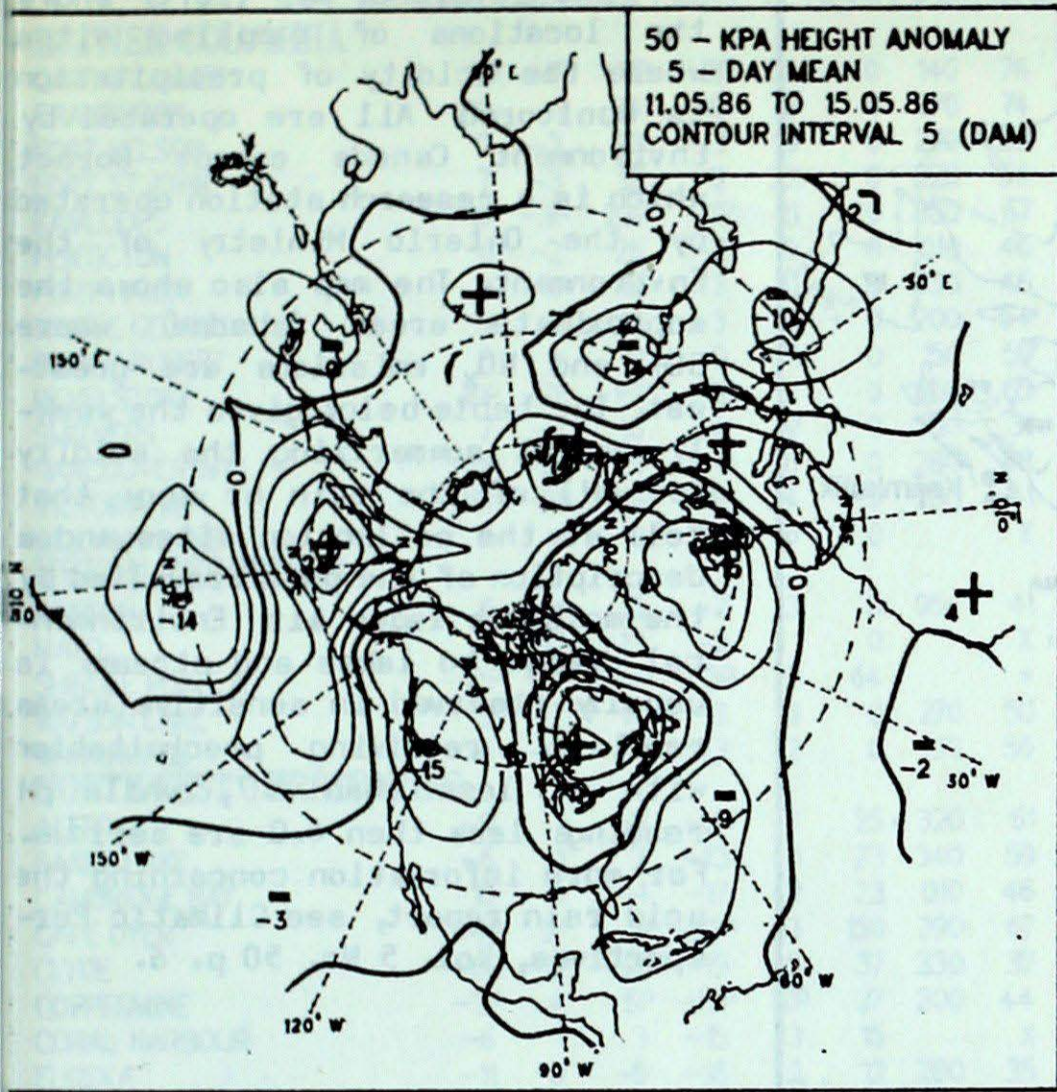
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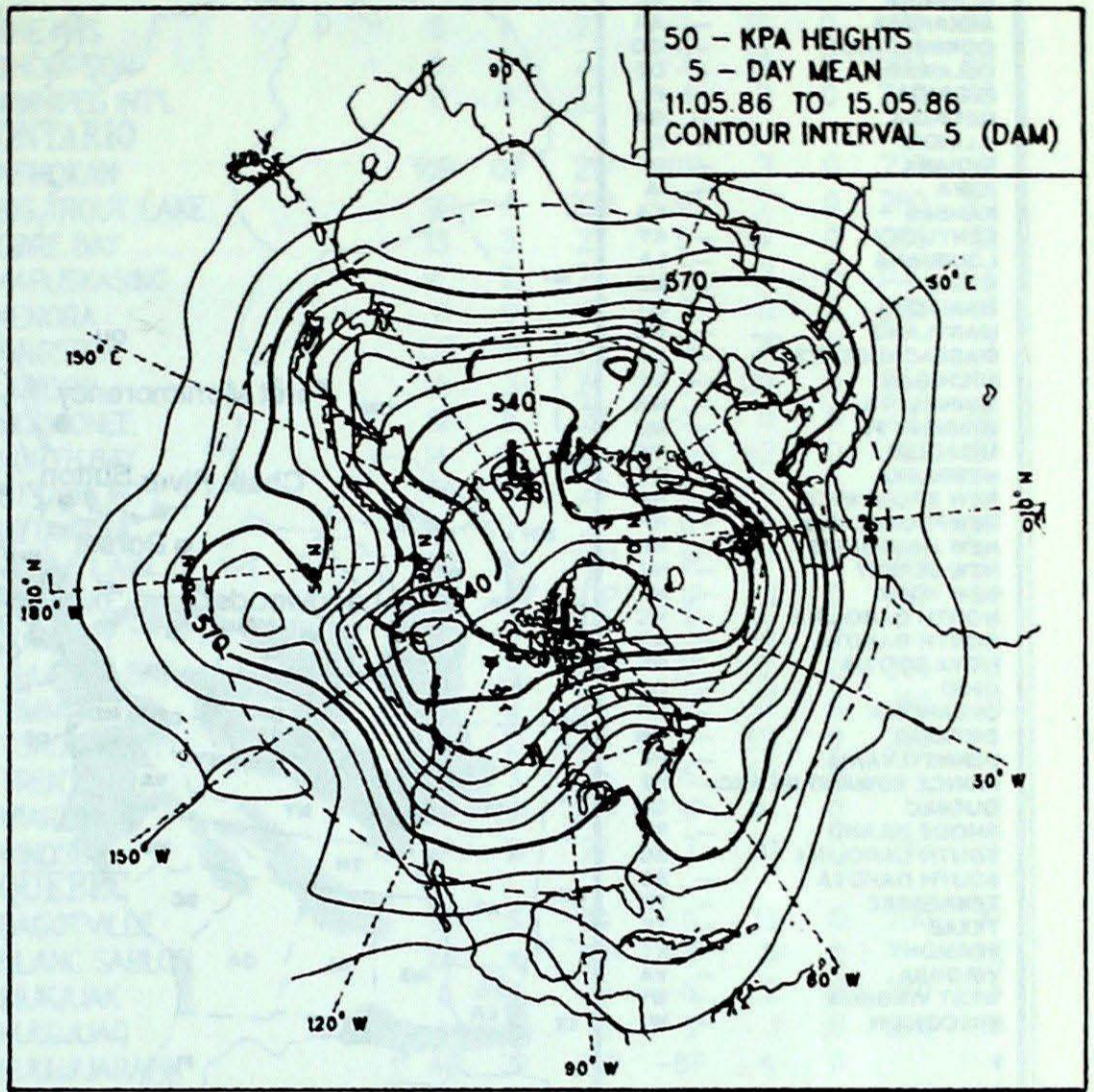
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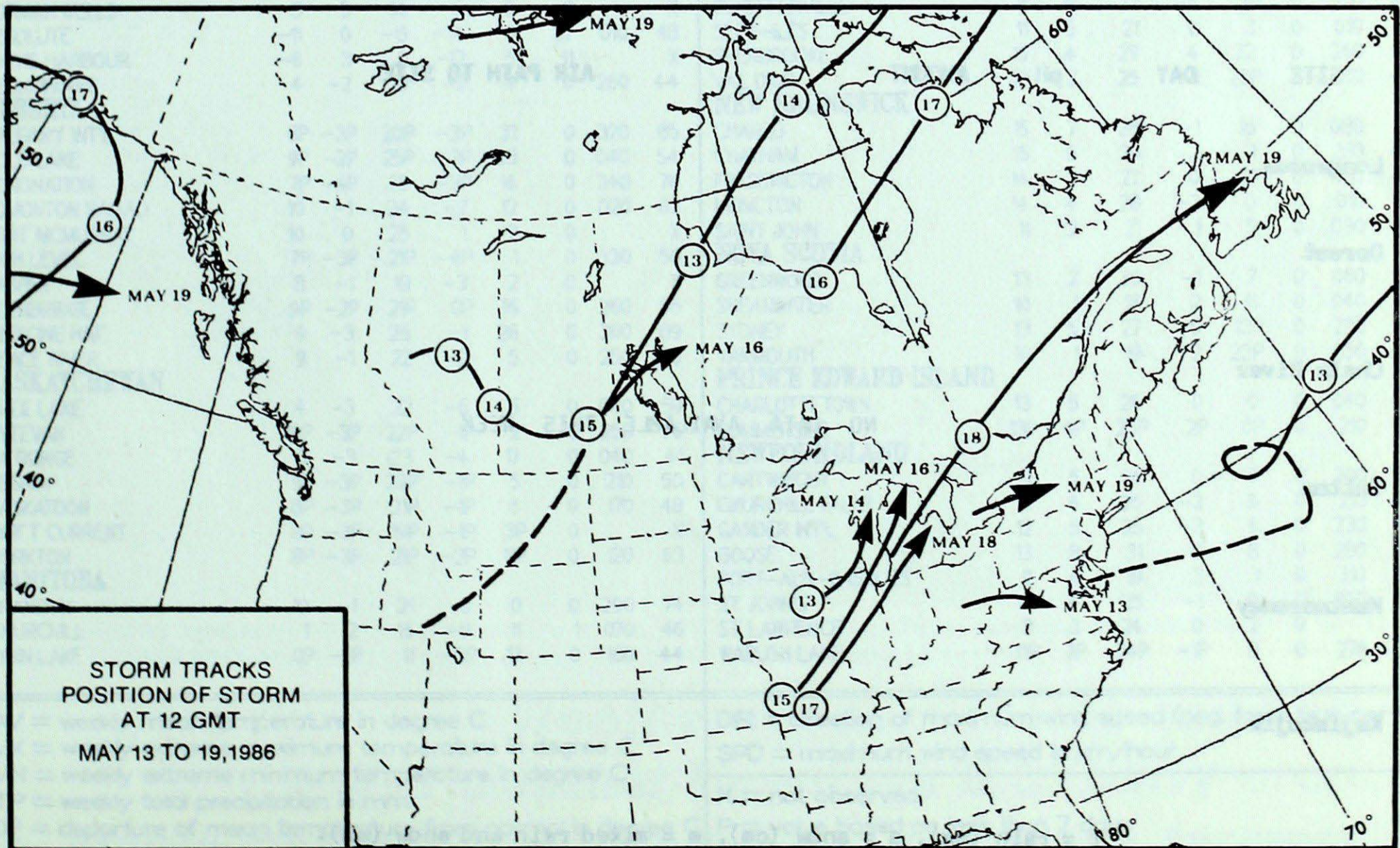
50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)  
May 11 to May 15, 1986

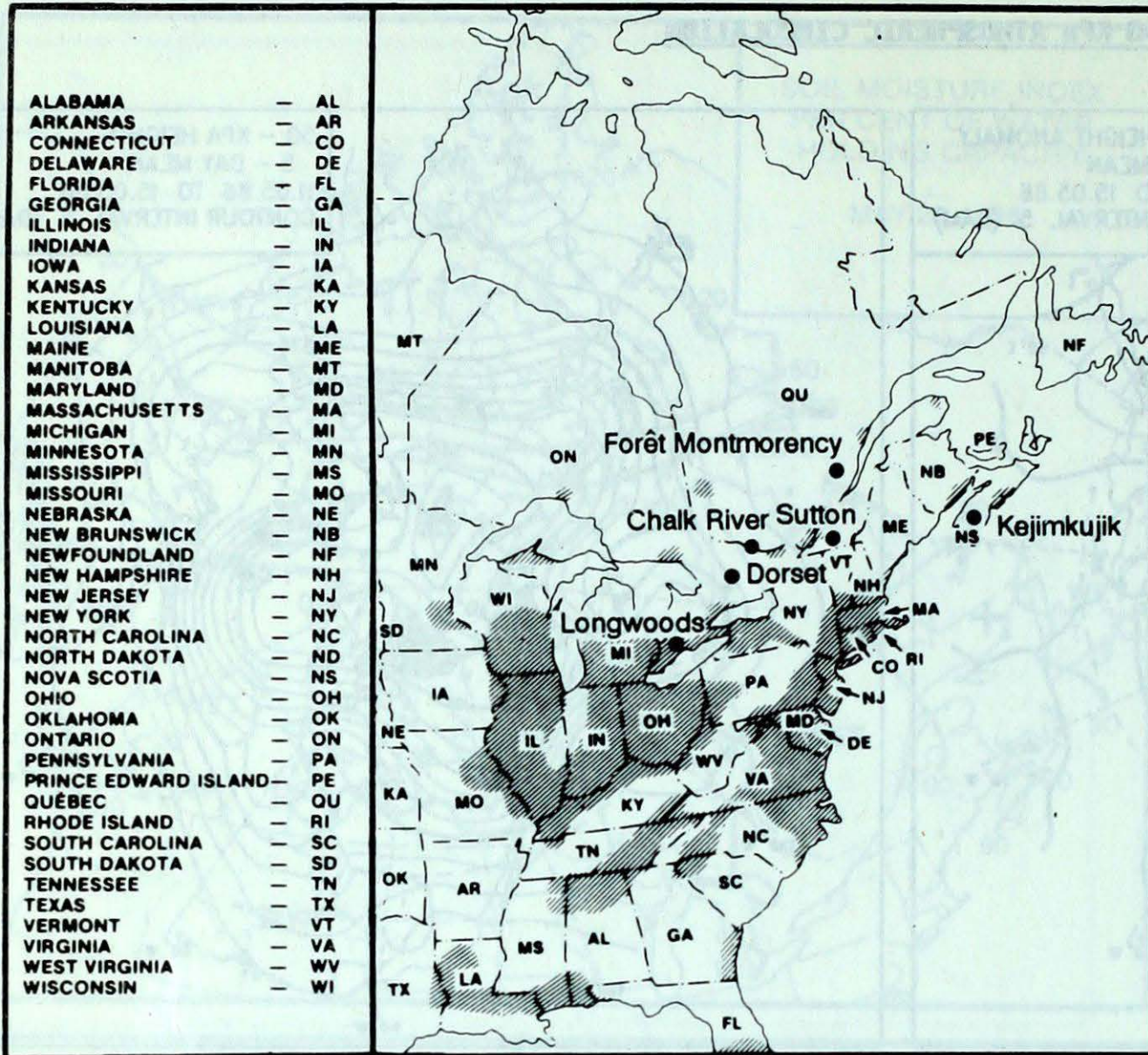


MEAN 50 KPa HEIGHTS (dam)  
May 11 to May 15, 1986



# 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<sub>2</sub> and NO<sub>x</sub> 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.

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods				
Dorset				
Chalk River				
NO DATA AVAILABLE THIS WEEK				
Sutton				
Montmorency				
Kejimikujik				

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

## TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT MAY 20, 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
<b>BRITISH COLUMBIA</b>									THE PAS	8	*	23	-1	17	0	170	56
CAPE ST. JAMES	8P	-1P	11P	2P	35	0	140	74	THOMPSON	5	0	22	-3	13	0	060	46
CRANBROOK	10	-1	24	0	6	0	270	74	WINNIPEG INT'L	11	0	23	-1	3	0	240	43
FORT NELSON	7	-3	20	-3	19	0	220	33	<b>ONTARIO</b>								
FORT ST. JOHN	7	-3	18	-2	22	0	220	54	ATIKOKAN	10P	0P	21P	0P	3	0	220	41
KAMLOOPS	11P	-3P	23P	1P	11	0	350	67	BIG TROUT LAKE	9P	*	22P	-3P	7	0	280	43
PENTICTON	11	-2	26	-2	9	0	010	46	GORE BAY	13	3	22	5	34	0	050	52
PORT HARDY	9	0	18	3	51	0	330	46	KAPUSKASING	14	5	26	-2	2	0	030	44
PRINCE GEORGE	8	*	18	-3	10	0	200	54	KENORA	11	0	21	2	0	0	230	37
PRINCE RUPERT	8	0	12	0	91	0	150	59	KINGSTON	13P	1P	21P	9P	2P	0		X
REVELSTOKE	10P	-2P	18P	1P	21	0	300	65	LONDON	16	3	24	9	39	0	250	48
SMITHERS	7	-2	16	-4	9	0	180	31	MOOSONEE	12	6	27	-6	0	0	290	44
VANCOUVER INT'L	10P	-2P	15P	4P	36	0	280	48	NORTH BAY	14	3	24	4	42	0	160	37
VICTORIA INT'L	10P	-2P	15P	3P	24	0	280	41	OTTAWA INT'L	17	4	28	6	60	0		X
WILLIAMS LAKE	6	*	19	-6	6	0		X	PETAWAWA	14	2	27	0	35	0		X
<b>YUKON TERRITORY</b>									PICKLE LAKE	12P	4P	23P	1P	27	0	270	52
DAWSON	6	*	15	-2	13	0	060	41	RED LAKE	10P	1P	22P	1P	1	0	250	50
MAYO	7	-1	13	-2	1	0		X	SUDBURY	14	3	23	2	33	0		X
SHINGLE POINT A	-10P	-5P	-6P	-13P	22	64		*	THUNDER BAY	11P	2P	24P	2P	17	0	290	48
WATSON LAKE	5	-2	14	-3	3	0	270	50	TIMMINS	12	2	24	-2	17	0	160	31
WHITEHORSE	4	-3	11	-3	2	0	190	56	TORONTO INT'L	15	2	26	4	53	0	260	44
<b>NORTHWEST TERRITORIES</b>									TRENTON	15	3	25	6	68	0		X
ALERT	-11	1	-5	-14	11	25	320	61	WIARTON	14P	3P	23P	3P	41	0		X
BAKER LAKE	-6	1	3	-13	1	23	340	59	WINDSOR	17	2	27	7	31	0	140	74
CAMBRIDGE BAY	-10	0	-1	-17	2	23	010	46	<b>QUEBEC</b>								
CAPE DYER	-4P	2P	1P	-10P	13	150	290	67	BAGOTVILLE	15	5	29	0	13	0	280	37
CLYDE	-8P	-1P	-2P	-19	5	37	330	37	BLANC SABLON	6P	*	12P	-1P	1P	0		X
COPPERMINE	-3P	*	5P	-15P	2P	27	200	44	INUKJUAQ	0	1	8	-6	2	8	340	44
CORAL HARBOUR	-6	1	3	-15	3	15		X	KUJUUJUAQ	4	3	16	-5	1	8	290	50
EUREKA	-11	0	-6	-16	2	12	280	35	KUJUUJARAPIK	4P	2P	25P	-6P	4	0		*
FORT SMITH	7	-1	22	-2	6	0		X	MANIWAKI	14	3	25	0	49	0	170	35
FROBISHER BAY	-2	1	5	-8	20	12	340	56	MONT JOLI	14	5	25	-2	14	0	030	39
HALL BEACH	-8P	2P	1P	-20P	4	43	300	57	MONTREAL INT'L	17	3	30	6	21	0	040	46
INUVIK	-7	-7	1	-11	14	17		X	NATASHQUAN	10	5	22	1	2	0	270	35
MOULD BAY	-11	1	-9	-15	2	32		X	QUEBEC	16	4	29	3	25	0	090	69
NORMAN WELLS	3	-3	14	-5	0	0		X	SCHEFFERVILLE	8	6	22	-6	3P	0	220	48
RESOLUTE	-11	0	-8	-14	3	37	010	48	SEPT-ILES	11	5	21	0	3	0	010	41
SACHS HARBOUR	-6	3	0	-12	5	11		X	SHERBROOKE	15	4	29	4	22	0	260	56
YELLOWKNIFE	4	-2	18	-5	4	0	260	44	VAL D'OR	13	3	25	-1	25P	0	010	46
<b>ALBERTA</b>									<b>NEW BRUNSWICK</b>								
CALGARY INT'L	6P	-3P	20P	-3P	31	0	320	85	CHARLO	15	7	28	-1	16	0	080	31
COLD LAKE	9P	-2P	25P	-2P	33	0	040	54	CHATHAM	15	5	29	-2	1	0	250	48
CORONATION	7P	-4P	25	-3P	16	0	340	78	FREDERICTON	14	3	27	0	2P	0	030	48
EDMONTON NAMAO	10	-1	24	-2	12	0	020	63	MONCTON	14	4	28	-2	0	0	010	50
FORT MCMURRAY	10	0	25	1	2	0		X	SAINT JOHN	11	2	21	1	5	0	030	57
HIGH LEVEL	7P	-3P	21P	-4P	1	0	030	50	<b>NOVA SCOTIA</b>								
JASPER	8	-1	19	-3	2	0		X	GREENWOOD	13	2	30	-1	7	0	060	65
LETHBRIDGE	9P	-2P	21P	0P	16	0	260	96	SHEARWATER	10	1	18	2	11	0	040	48
MEDICINE HAT	9	-3	26	-1	26	0	260	89	SYDNEY	13	5	27	0	13P	0	200	57
PEACE RIVER	9	-1	22	-2	5	0	250	56	YARMOUTH	10	1	19	2	23P	0	050	50
<b>SASKATCHEWAN</b>									<b>PRINCE EDWARD ISLAND</b>								
CREE LAKE	4	-3	22	-6	5	0	040	59	CHARLOTTETOWN	13	5	26	0	0	0	040	44
ESTEVAN	10P	-3P	22P	-1P	2	0	250	76	SUMMERSIDE	13P	4P	25P	2P	0P	0	210	50
LA RONGE	5	-3	23	-4	17	0	040	41	<b>NEWFOUNDLAND</b>								
REGINA	9P	-3P	22P	-1P	5	0	210	50	CARTWRIGHT	9	5	24	0	7	0	200	50
SASKATOON	8P	-3P	21P	-1P	5	0	170	48	CHURCHILL FALLS	10	6	25	-3	6	0	210	44
SWIFT CURRENT	8P	-3P	19P	-1P	3P	0		X	GANDER INT'L	12	5	25	-3	6	0	230	46
YORKTON	8P	-3P	21P	-2P	11P	0	120	63	GOOSE	13	8	31	0	8	0	280	54
<b>MANITOBA</b>									PORT-AUX-BASQUES	9	4	19	3	1	0	310	63
BRANDON	10	-1	21	0	0	0	290	74	ST JOHN'S	10	4	25	-1	0	0	260	67
CHURCHILL	1	2	16	-9	11	1	070	46	ST LAWRENCE	8	3	24	0	2	0		X
LYNN LAKE	0P	-5P	11	-8P	17	0	160	44	WABUSH LAKE	11P	7P	24P	-1P	8	0	270	33

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