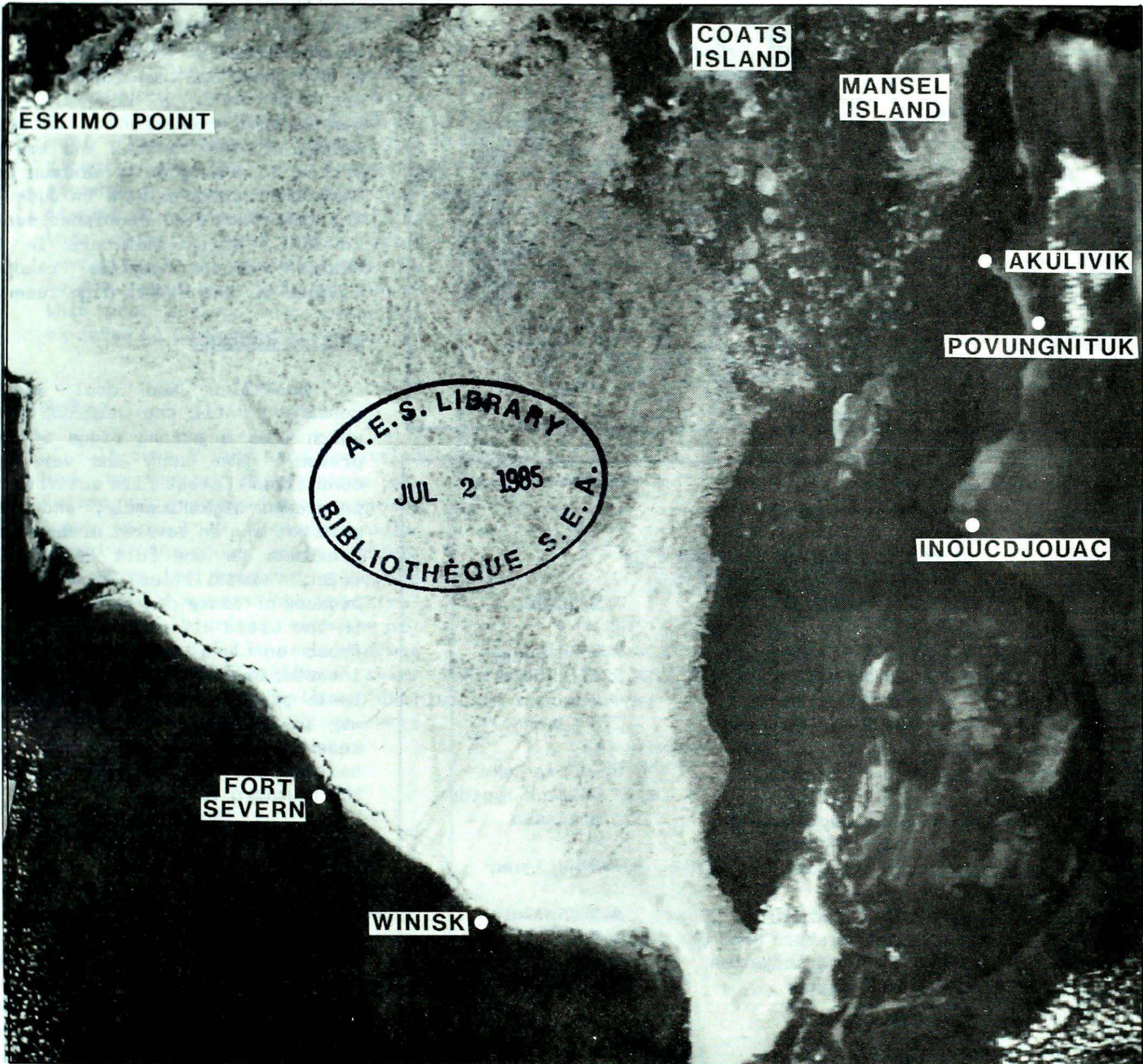


Climatic Perspectives

A weekly review of Canadian climat

June 11 to 17, 1985

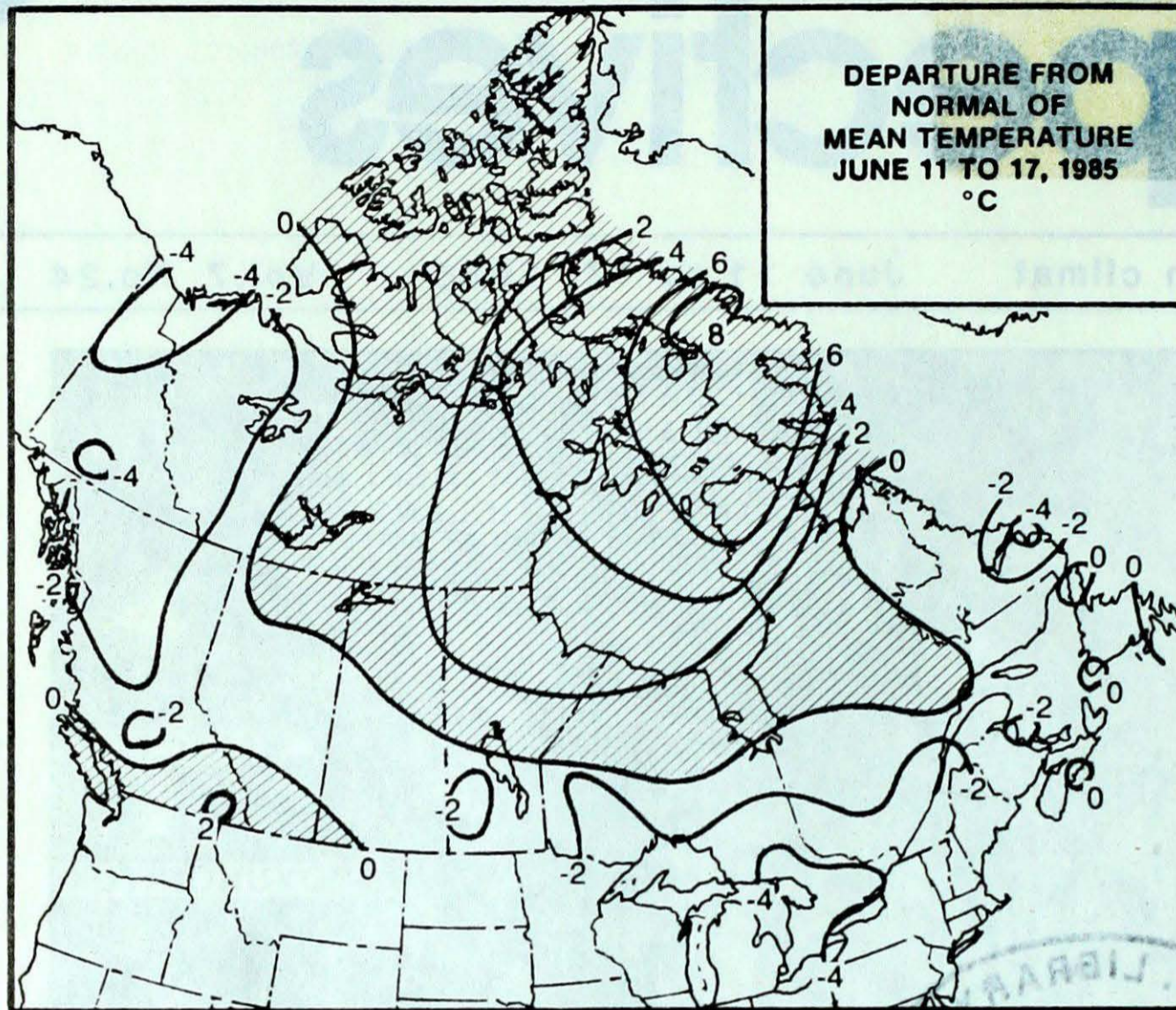
Vol.7 No.24



This NOAA 9 satellite image of June 13, 1985 shows the break-up of ice in Hudson Bay. See page 3 for more detail.

- ***Wet weather delays farm work in the East***
- ***Record warmth in the Eastern Arctic***

TEMPERATURE



ACROSS THE COUNTRY...

Yukon and Northwest Territories

A very cool unstable airmass stagnated over the Yukon. Clear skies overnight allowed temperatures to drop below freezing, and several new daily low temperature records were set. At Burwash, the thermometer dropped to -4.8°C on June 13, a new record low temperature for the month of June. In contrast, mean temperatures continued to be above normal in the central and eastern Arctic, with many daily maximum temperature records broken. On June 16, the temperature at Frobisher soared to 20°C , while elsewhere in the eastern Arctic daytime readings climbed to the mid to high teens.

British Columbia

Unsettled and cool weather continued until the weekend, after which time a strong ridge of high pressure gave sunny and very warm conditions. Forest fire activity has increased significantly, and fires were burning in several areas of the province. In the Fort Nelson district, visibilities were reduced because of smoke due to a major fire in the Liard River Basin. A killing frost on June 10 in the central interior caused some damage to vegetable gardens. Haying is well under way in the south. The first of the season garden vegetables and strawberries are now being harvested in the southern valleys.

Prairies

In Alberta fair weather earlier in the week gave way to a unseasonably cool and wet weekend everywhere. Several new daily low temperature records were set in Alberta on June 16. Forest fires have been effectively subdued by the poor weather conditions. The attendance at this year's Saskatchewan Airshow held at Moose Jaw during the weekend was less than half the expected turnout. Warm and dry weather in southern Saskatchewan and Manitoba during the month of May has officials worried about a grasshopper infestation this summer.

WEEKLY TEMPERATURE EXTREMES ($^{\circ}\text{C}$)

	MAXIMUM	MINIMUM
YUKON TERRITORY	19.1 Old Crow	- 7.0 Dezadeash
NORTHWEST TERRITORIES	25.5 Fort Smith	- 5.6 Tuktoyaktuk
BRITISH COLUMBIA	34.0 Lytton	- 4.0 Puntzi Mountain
ALBERTA	28.5 Medicine Hat	- 2.0 Edson
SASKATCHEWAN	28.5 Estevan	0.6 Cree Lake
MANITOBA	25.1 Gillam	- 1.4 Grand Rapids
ONTARIO	26.0 Kapuskasing Moosonee	- 1.6 Upsala
QUÉBEC	26.4 Bagotville	- 3.5 Kuujuaq
NEW BRUNSWICK	25.0 Chatham	4.3 Charlo
NOVA SCOTIA	24.1 Western Head	6.0 Truro
PRINCE EDWARD ISLAND	23.0 Charlottetown	7.6 Summerside
NEWFOUNDLAND	24.4 Badger	- 1.8 Wabush Lake

ACROSS THE NATION

Warmest mean temperature	18.5	Lytton, BC
Coollest mean temperature	- 0.4	Nicholson, NWT

Ontario

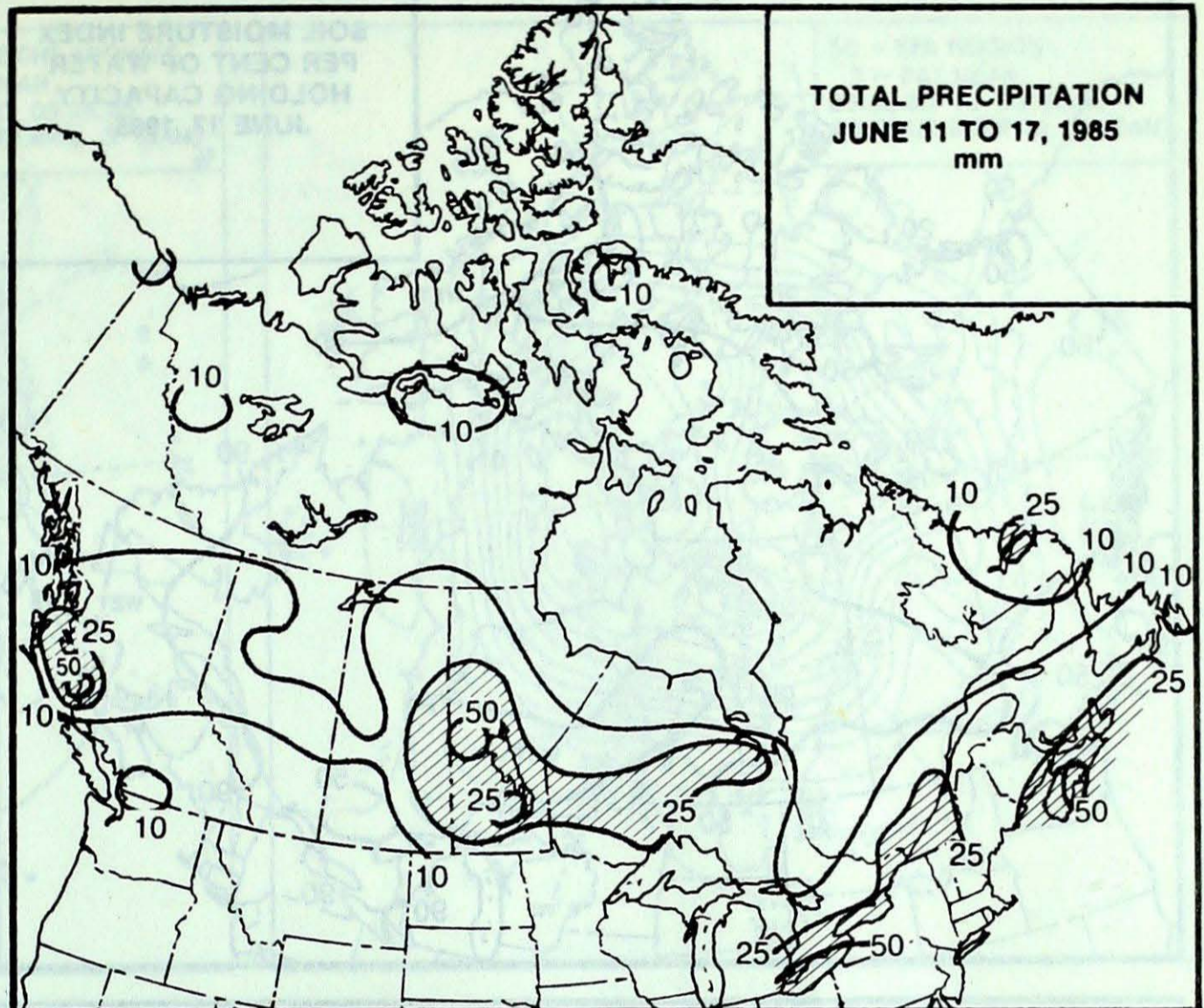
The week was cool and damp. During the first half of the week many daily low maximum temperature records were broken in southern and central Ontario. On the morning of June 15, temperatures in agricultural districts dropped to near freezing. The record warm weather experienced in southern Ontario during the latter half of April and early May has accelerated the ripening of the year's bumper strawberry crop; harvesting has started a couple of weeks earlier than normal. Great Lakes water levels are still unusually high due to the rapid snow melt and runoff this past spring, but levels are expected to peak shortly.

Québec

It was a cool and unsettled week as several disturbances affected the province. Mean temperatures were 2 to 4 degrees below normal in the south, while continuing above the seasoned values in the north. Showers occurred frequently and interfered with the hay harvest. Hail fell in several areas of the south. Significant rains fell in the Trois-Rivières district. Three forest fires were reported in the province.

Atlantic Provinces

Mostly showery weather conditions prevailed, but the weekend became warm and sunny. A few daily low temperature records were tied or broken during the middle of the week. Maximum temperatures climbed as high as the mid-twenties in the Maritimes, but the temperature in Newfoundland generally remained in the teens. The weather in Labrador was cold and raw. On June 11 several centimetres of snow fell at Goose Bay. The hay crop in central Nova Scotia is ready for cutting, but the fields are too wet to support farm machinery. In the northern regions of Nova Scotia many fields have not yet been seeded due to the wet weather.



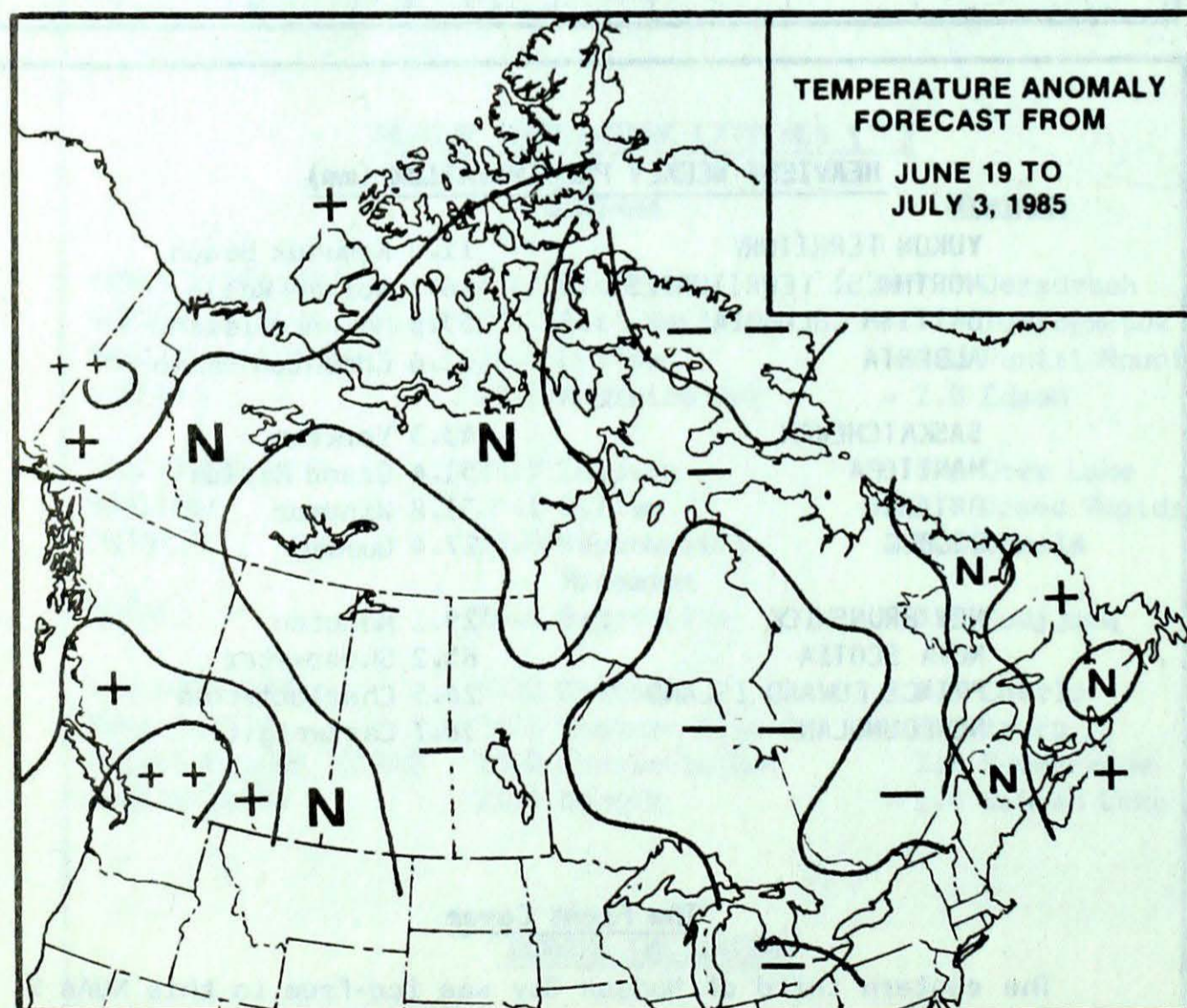
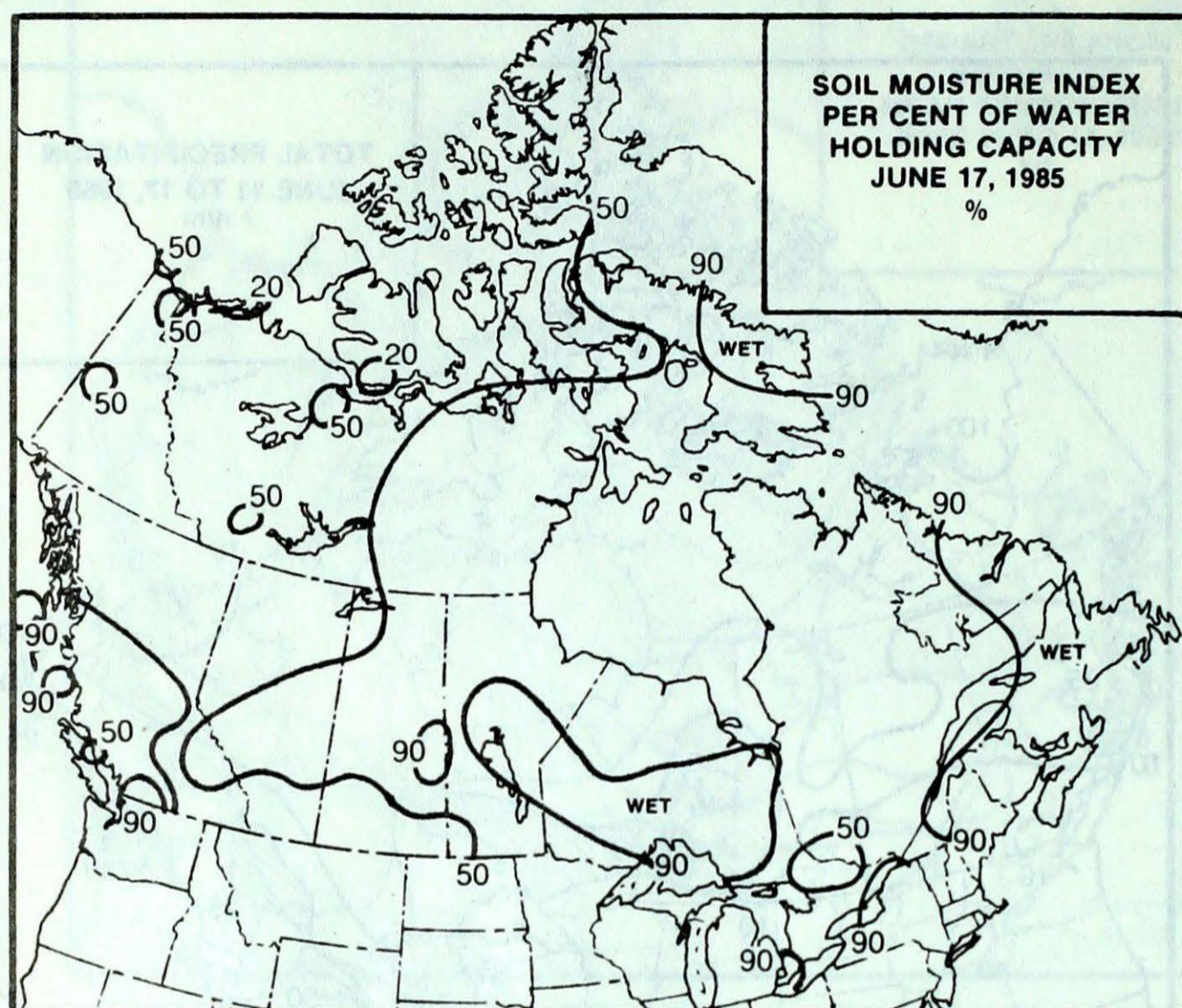
HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON TERRITORY	11.0 Komakuk Beach
NORTHWEST TERRITORIES	16.2 Norman Wells
BRITISH COLUMBIA	53.8 McInnes Island
ALBERTA	22.6 Edmonton Namao
SASKATCHEWAN	43.3 Yorkton
MANITOBA	51.4 Grand Rapids
ONTARIO	51.8 Windsor
QUÉBEC	27.4 Quebec
NEW BRUNSWICK	29.1 Moncton
NOVA SCOTIA	65.2 Shearwater
PRINCE EDWARD ISLAND	26.5 Charlottetown
NEWFOUNDLAND	36.7 Cartwright

The Front Cover

The eastern third of Hudson Bay was ice-free in this NOAA 9 satellite image of June 13, 1985. The remaining ice was fissured with cracks and leads and covered with many puddles of melt water. The surface temperatures of Hudson Bay are a major factor in controlling the climate of northern Quebec. Prevailing westerly winds blowing across the cold body of water from March until September are substantially cooled. For a given latitude, the average daily temperature at locations on the east side are as much as 2 to 3 degrees cooler than locations on the west side.

FORECAST



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.

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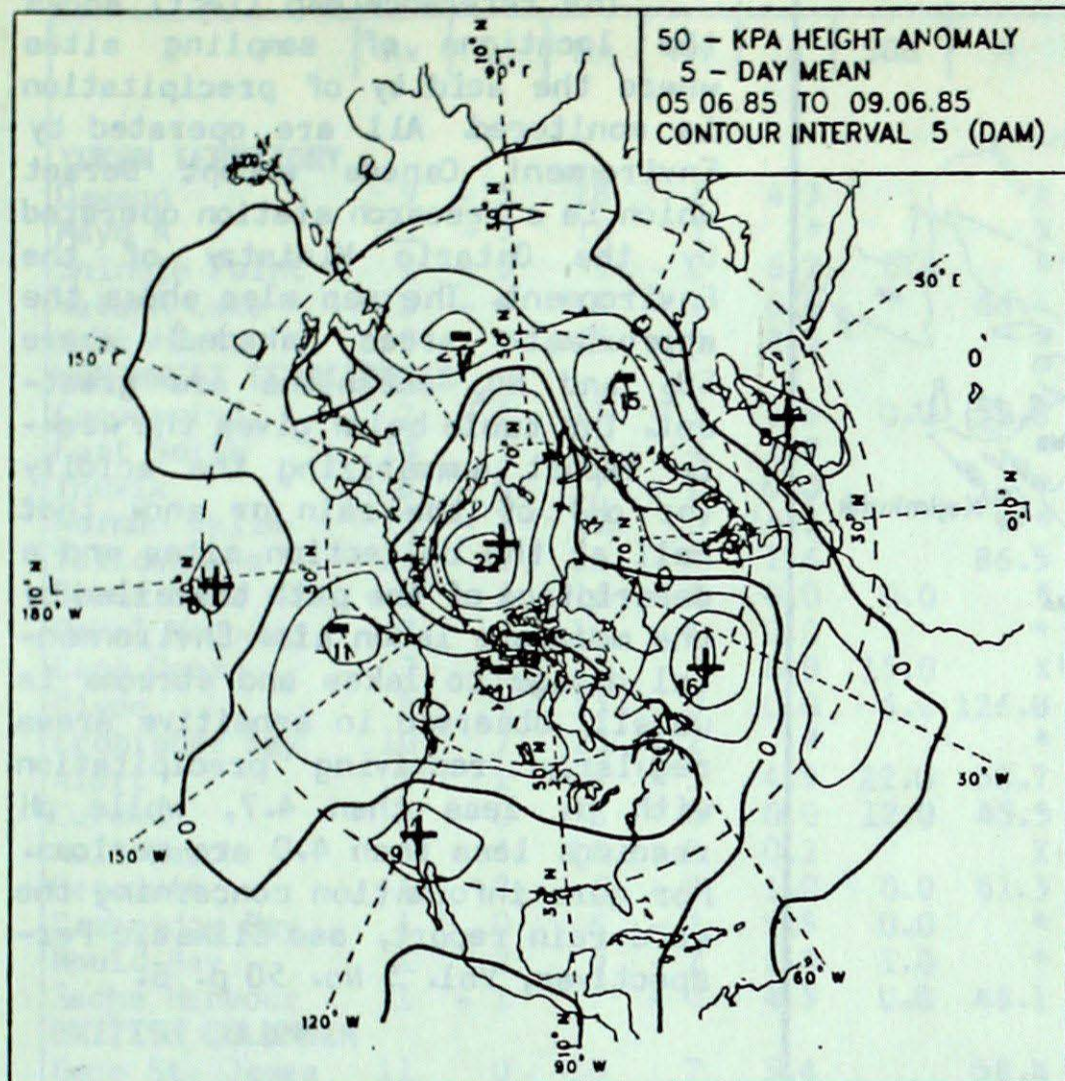
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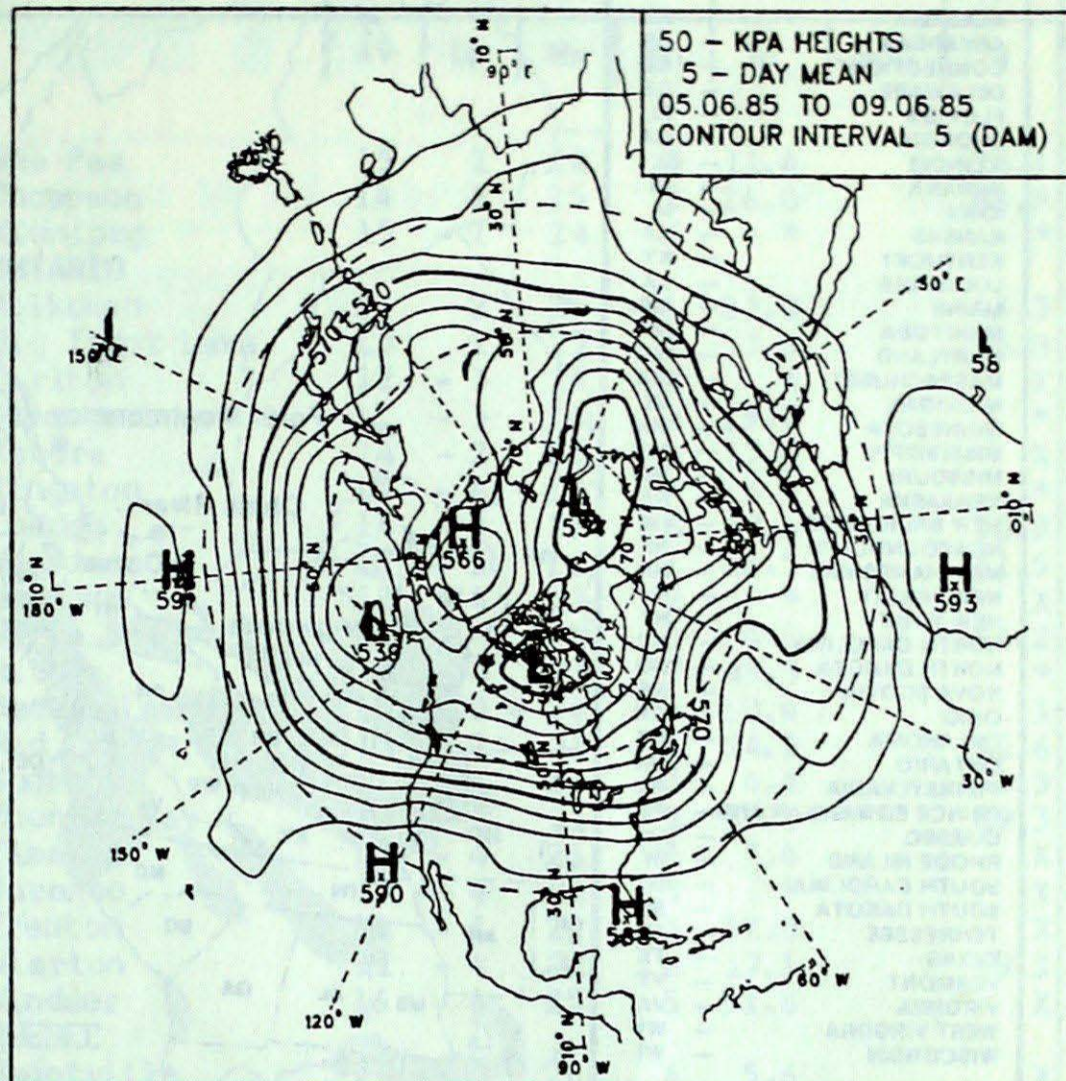
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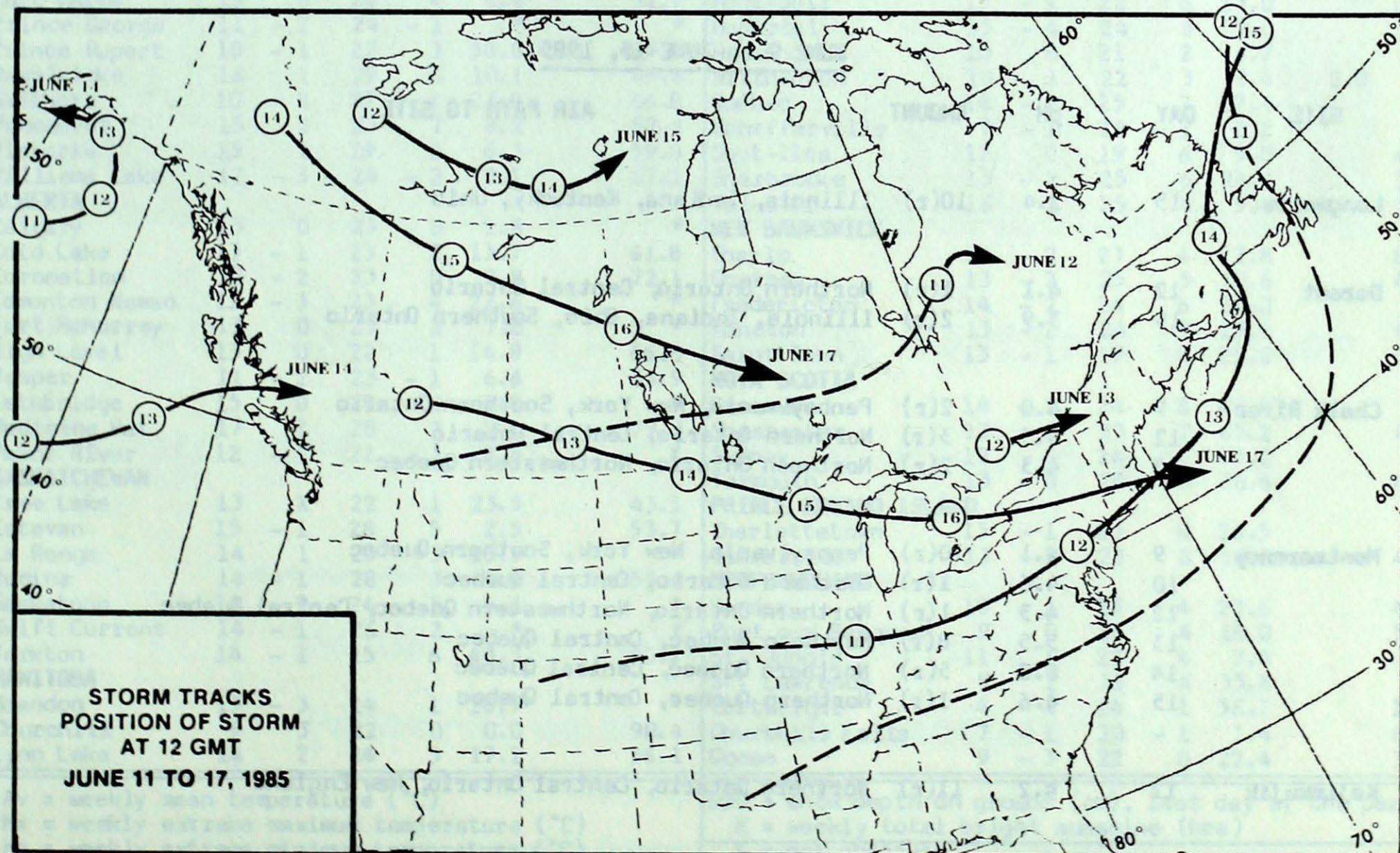
50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)
June 5 to June 9, 1985

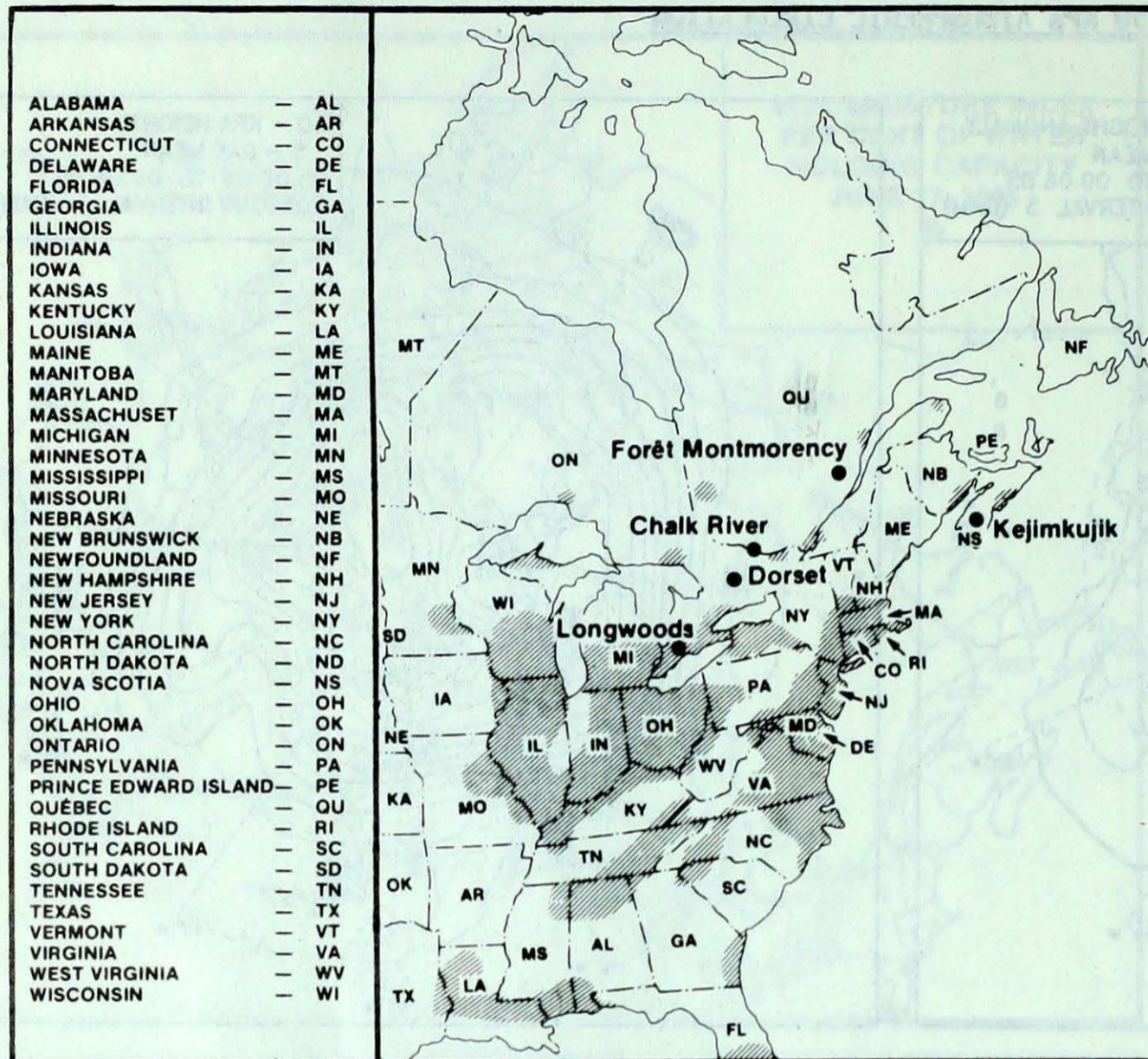


MEAN 50 KPa HEIGHTS (dam)
June 5 to June 9, 1985



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.

JUNE 9 to JUNE 15, 1985

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	15	3.4	10(r)	Illinois, Indiana, Kentucky, Ohio
Dorset	12	4.1	1(r)	Northern Ontario, Central Ontario
	15	3.9	2(r)	Illinois, Indiana, Ohio, Southern Ontario
Chalk River	9	4.0	2(r)	Pennsylvania, New York, Southern Ontario
	12	4.3	3(r)	Northern Ontario, Central Ontario
	13	4.3	2(r)	Northern Ontario, Northwestern Quebec
Montmorency	9	4.1	10(r)	Pennsylvania, New York, Southern Quebec
	10	4.6	1(r)	Northern Ontario, Central Quebec
	12	4.3	1(r)	Northern Ontario, Northwestern Quebec, Central Quebec
	13	5.5	8(r)	Northern Quebec, Central Quebec
	14	6.0	5(r)	Northern Quebec, Central Quebec
	15	4.6	1(r)	Northern Quebec, Central Quebec
Kejimikujik	12	4.2	11(r)	Northern Ontario, Central Ontario, New England

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

TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT JUNE 18, 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	15	1	24	3	11.4		75.1
Dawson	9	-5	18	1	4.3		X	Thompson	14	2	25	2	26.0		68.8
Mayo A	11	-3	18	1	*		X	Winnipeg	15	-1	24	6	*		*
Shingle Point	1	-5	9	-2	6.2	0.0	*	ONTARIO							
Watson Lake	10	-4	18	-1	6.8		66.4	Atikokan	11	-2	23	-1	23.0		45.3
Whitehorse	8	-4	15	-2	2.5		*	Big Trout Lake	13	2	25	4	3.0		56.0
NORTHWEST TERRITORIES								Earlton	12	-3	24	4	*		X
Coppermine	2	-1	13	-3	6.5	0.0	59.8	Kapuskasing	11	-3	26	2	19.7		*
Fort Smith	14	1	26	4	2.9		*	Kenora	14	-2	25	5	17.6		X
Inuvik	6	-6	17	-1	0.0		*	Kingston	13	-4	17	7	23.0		*
Norman Wells	12	-3	22	5	16.2		*	London	14	-4	23	6	42.5		30.8
Yellowknife	13	1	21	4	1.6		86.5	Moosonee	10	-1	26	1	28.5		31.5
Baker Lake	6	3	14	0	0.0	0.0	*	Muskoka	12	-4	23	2	*		X
Coral Harbour	7	6	16	1	0.0		*	North Bay	12	-4	21	5	4.8		44.2
Cape Dyer	7	6	13	0	0.0	15.0	X	Ottawa	14	-4	23	7	49.5		*
Clyde	5	4	13	0	0.0	6.0	126.8	Pickle Lake	13	0	24	3	10.4		X
Frobisher Bay	10	7	20	-2	*		*	Red Lake	12	-2	23	-1	24.9		42.6
Alert	1	1	6	-3	4.9	22.0	30.7	Sudbury	12	-4	22	3	4.4		54.3
Eureka	3	0	6	0	0.0	12.0	45.5	Thunder Bay	12	-2	21	2	33.0		69.3
Hall Beach	6	6	14	0	0.2		X	Timmins	11	-4	26	3	7.4		X
Resolute	1	2	6	-2	1.0	0.0	81.3	Toronto	13	-4	21	5	*		X
Cambridge Bay	1	0	6	-2	9.5	0.0	*	Trenton	14	-4	22	5	32.0		X
Mould Bay	1	2	5	-2	1.4	1.0	*	Warton	11	-4	22	6	17.1		39.3
Sachs Harbour	1	-1	7	-4	4.5	0.0	46.1	Windsor	16	-4	25	8	51.8		X
BRITISH COLUMBIA								QUEBEC							
Cape St. James	11	0	18	7	5.4		58.4	Bagotville	13	-2	26	4	5.6		X
Cranbrook	16	2	25	5	1.6		77.3	Blanc-Sablon	7	0	16	2	16.5		41.6
Fort Nelson	14	-1	25	3	0.0		73.6	Inukjuak	10	7	21	2	0.4		*
Fort St. John	12	-1	22	3	10.0		X	Kuujuuaq	6	0	17	-4	0.0		69.6
Kamloops	18	0	29	7	0.0		63.1	Kuujuarapik	7	2	24	-1	0.8		83.9
Penticton	18	1	28	8	0.4		59.9	Maniwaki	14	-2	24	5	16.2		*
Port Hardy	13	0	24	4	6.4		51.9	Mont-Joli	13	-1	22	6	13.0		60.5
Prince George	11	-2	24	-1	*		*	Montréal	15	-4	24	8	22.8		36.9
Prince Rupert	10	-1	22	3	38.8		44.5	Natashquan	10	0	21	2	6.7		*
Revelstoke	16	1	29	6	10.1		49.4	Nitchequon	10	1	22	3	8.4	0.0	*
Smithers	10	-2	27	-1	23.8		66.0	Québec	14	-2	25	7	27.4		*
Vancouver	15	0	23	7	8.2		52.4	Schefferville	7	-1	18	-1	0.2		*
Victoria	15	1	29	6	6.3		59.8	Sept-Iles	12	0	19	6	5.0		62.7
Williams Lake	12	-3	24	-2	9.1		67.1	Sherbrooke	13	-2	25	6	24.6		38.4
ALBERTA								Val-d'Or	16	2	25	4	9.4		52.0
Calgary	13	0	23	0	1.8		*	NEW BRUNSWICK							
Cold Lake	13	-1	23	2	13.7		61.8	Charlo	12	-2	23	4	12.8		60.2
Coronation	12	-2	23	0	2.8		72.1	Chatham	13	-2	25	5	10.6		49.0
Edmonton Namao	12	-3	23	4	22.6		*	Fredericton	14	-2	24	6	24.0		*
Fort McMurray	13	0	23	2	7.8		*	Moncton	13	-2	24	7	29.1		41.3
High Level	13	0	22	1	14.8		66.6	Saint John	13	-1	19	8	25.8		33.5
Jasper	11	-2	23	-1	6.6		64.9	NOVA SCOTIA							
Lethbridge	15	0	27	2	1.8		*	Greenwood	14	-2	24	8	47.4		X
Medicine Hat	17	1	28	2	2.0		79.9	Shearwater	13	0	23	7	65.2		43.4
Peace River	12	-1	22	3	8.8		X	Sydney	12	0	24	6	43.2		*
SASKATCHEWAN								Yarmouth	13	0	20	8	36.4		43.7
Cree Lake	13	X	22	1	23.5		43.1	PRINCE EDWARD ISLAND							
Estevan	15	-1	28	5	2.5		53.7	Charlottetown	13	-1	23	8	26.5		*
La Ronge	14	1	23	3	15.5		*	Summerside	13	-1	23	8	16.6		47.6
Regina	14	-1	28	3	11.2		55.4	NEWFOUNDLAND							
Saskatoon	14	-2	24	3	5.6		*	Gander	10	-1	23	4	23.6		43.4
Swift Current	14	-1	26	2	*		*	Port aux Basques	9	0	16	4	18.0		50.3
Yorkton	14	-1	25	6	43.3		50.7	St. John's	11	1	22	4	7.4		*
MANITOBA								St. Lawrence	9	1	18	4	35.8		X
Brandon	13	-3	24	1	26.7		*	Cartwright	4	-4	14	1	36.7		14.7
Churchill	9	3	22	0	0.0		90.4	Churchill Falls	7	-1	20	-1	1.4		64.6
Lynn Lake	14	2	24	3	17.2		56.1	Goose	9	-3	22	0	22.4		35.0

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