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VOL 5 ISS 37

CLIMATIC PERSPECTIVES

Climatic Perspectives

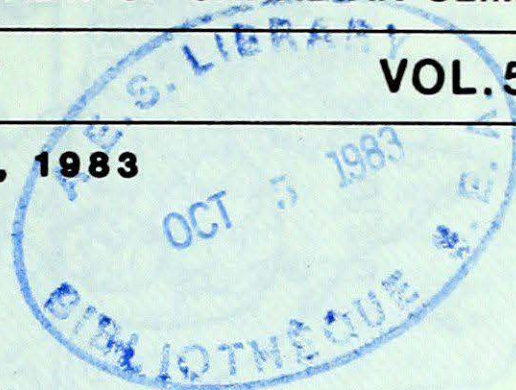
A WEEKLY REVIEW OF CANADIAN CLIMATE

SEPTEMBER 16, 1983

(Aussi disponible en français)

VOL. 5 NO. 37

FOR THE PERIOD SEPTEMBER 6-12, 1983



• **Cool and damp weather helps control forest fires in Northwestern Ontario**

• **Widespread frost on the Prairies**

• **Severe weather in New Brunswick and Ontario**

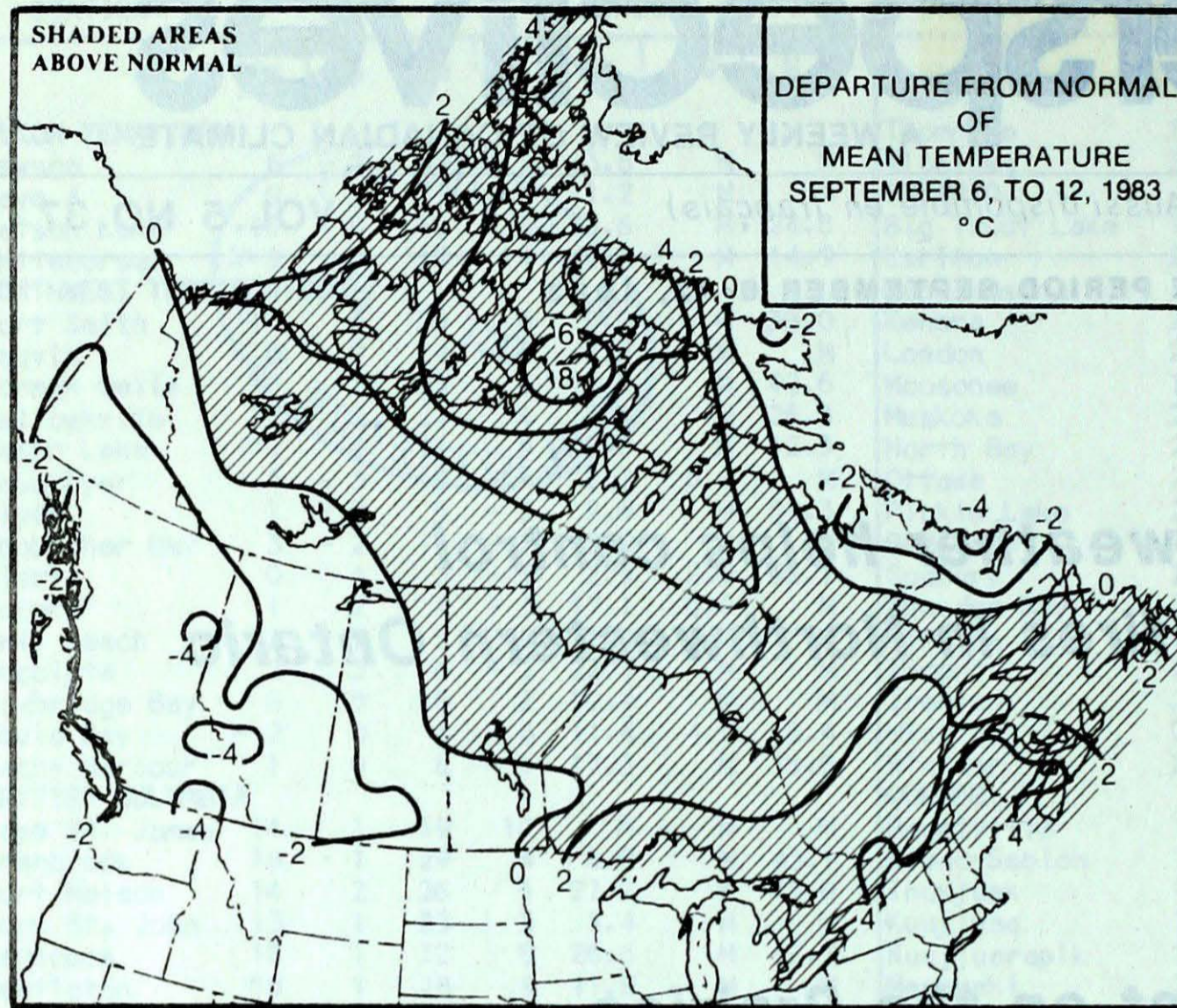
• **Wet weather delays harvesting in British Columbia**

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NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic stations.

Canada

ACROSS THE COUNTRY...



Yukon and Northwest Territories

Mean temperatures were 2 to 4 degrees below normal almost everywhere; only the High Arctic experienced temperatures about 5° above normal. In the Yukon, overnight temperatures fell below the freezing mark after mid-week. Weather disturbances crossing the Mackenzie Valley dropped 30 to 50 mm of rain in the Mackenzie District. On September 5, Eagle Plains on the Dempster Highway received 5 cm of snow and all mountain tops in the Yukon were snow covered.

In the Beaufort Sea, westerly winds pushed the pack ice into the drill sites, hampering operations. More than normal amounts of pack ice remained in Davis Strait and Baffin Bay.

British Columbia

Cool and wet weather prevailed. Rainfall amounts ranged from 20 to 70 mm. Due to the inclement weather, harvest completion and slash burning has been delayed in many interior communities. The apple and grape harvest started in the Okanagan Valley.

Prairie Provinces

It was cool and unsettled in all areas. In Alberta several record minimum temperatures were established. Widespread frost was reported in many farming communities. The autumn harvest was almost complete in the south and nearing completion in northern areas. Forest fires in central Manitoba were under control.

Ontario

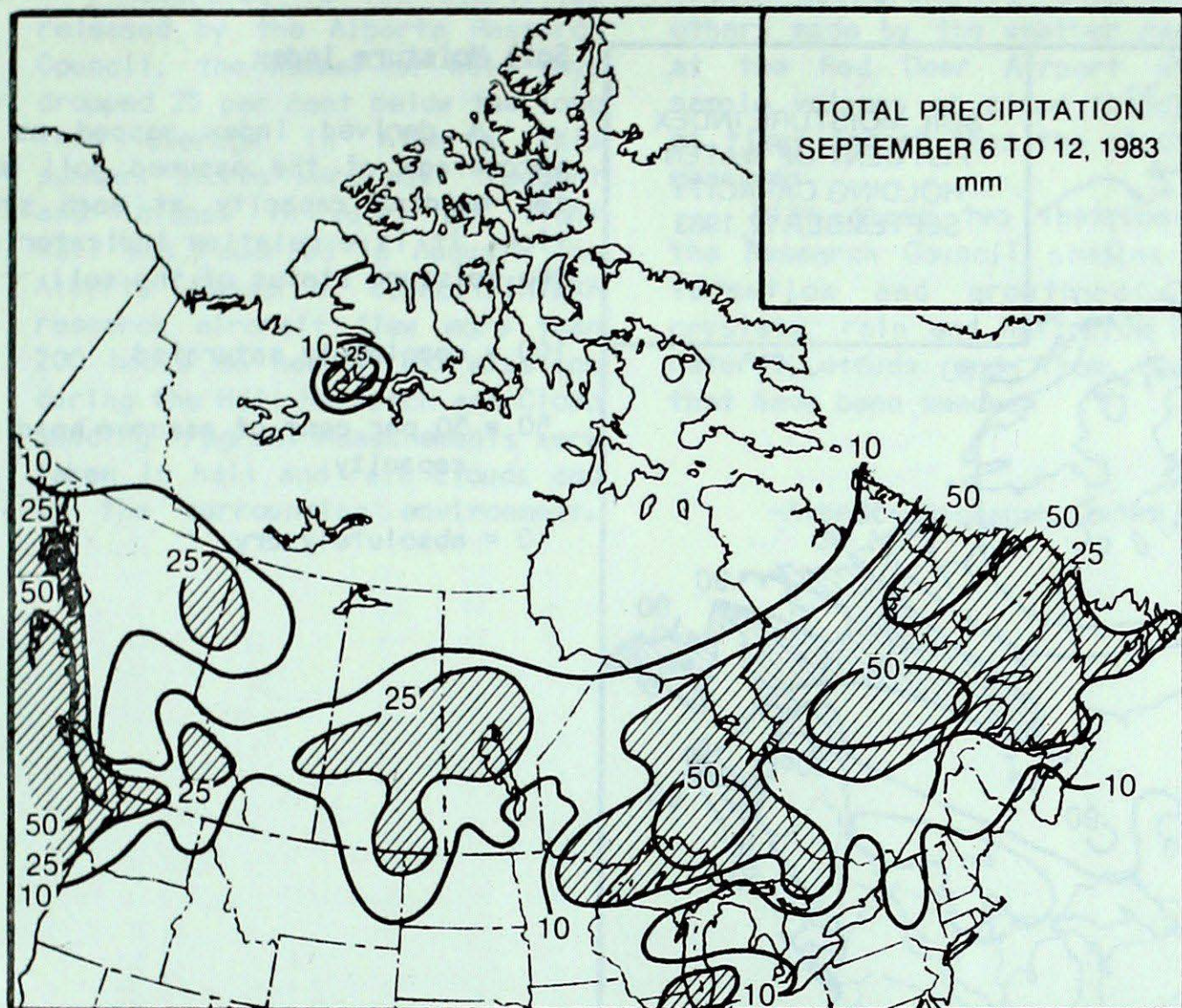
The arrival of rain and cooler temperatures provided much more favourable weather in helping fight the raging forest fires in North-western Ontario. According to the Ministry of Natural Resources, most of the fires were under control. So far this year, about 106 forest fires have burned nearly 434,800

WEEKLY TEMPERATURES EXTREMES (°C)

		<u>MAXIMUM</u>		<u>MINIMUM</u>	
YUKON TERRITORY	15.5	Dawson	-11.0	Klondike	
		Watson Lake			
NORTHWEST TERRITORIES	19.7	Norman Wells	-11.5	Alert	
BRITISH COLUMBIA	24.0	Lytton	-3.7	Puntzi Mountain	
ALBERTA	25.2	Medicine Hat	-3.6	Edson	
SASKATCHEWAN	29.2	Estevan	-1.3	Prince Albert	
MANITOBA	27.7	Dauphin	0.3	Bissett	
ONTARIO	34.2	Toronto	-0.9	Armstrong	
QUEBEC	31.8	Bagotville	-1.7	Kuujuuaq	
		Montréal/Dorval			
		Roberval			
NEW BRUNSWICK	32.5	Chatham	6.6	St. Stephen	
NOVA SCOTIA	31.1	Greenwood	4.6	Truro	
PRINCE EDWARD ISLAND	28.7	Charlottetown	9.1	Charlottetown	
NEWFOUNDLAND	26.4	Deer Lake	-0.5	Badger	

ACROSS THE NATION

Warmest mean temperature	21.9	Kingston, ONT
Coollest mean temperature	-3.8	Mould Bay, NWT



hectares of timber - the worst losses in a decade. Hot, hazy and humid air covering southern Ontario produced record high temperatures and very uncomfortable conditions. On September 10, the temperatures climbed into the mid-thirties.

Wawa received deluges of rain - 117 mm. At Geraldton, 103 mm fell with nearly 92 mm of rain falling on September 8 alone. On September 6, a waterspout touched the shore just north of Oliphant on the Bruce Peninsula destroying a number of boats and docks. On the same day, several funnel clouds were sighted near North Bay.

Québec

Southwestern Québec continued to endure hot and dry weather. Between the 5th and the 7th of September, numerous record high temperatures were set including some above 30°.

Most locations had between 10 and 30 mm of rain; however, Chibougamau received about 72 mm. In eastern Québec and near Lac Saint-Jean, the hay harvest was poor this year - yields were one-half of last year's and prices are more than double.

Atlantic Provinces

An intense storm lashed New Brunswick. On September 7, heavy rains and strong winds gusting near 75 km/h struck central New Brunswick. At Mcmanee and Carroll's Crossing, a few barns were levelled, several cottages were destroyed, trees were toppled and power lines were knocked down leaving residents without electricity for hours.

Before this severe weather, very warm air covering the East Coast produced record high temperatures in the low-thirties throughout the Provinces.

Once again, Newfoundland received moderate to heavy rainfalls of 30 to 50 mm; some fields have become nearly water logged. Dry weather is urgently needed to complete the harvesting of vegetable crops. The recent wet weather has contributed to some potatoe blight. In Prince Edward Island, the dry and warm weather was ideal for the

HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	17.7	Watson Lake
NORTHWEST TERRITORIES	50.0	Coppermine
BRITISH COLUMBIA	72.8	McInnes Island
ALBERTA	26.2	Coronation
SASKATCHEWAN	44.1	Regina
MANITOBA	49.7	The Pas
ONTARIO	116.9	Wawa
QUEBEC	72.4	Chibougamau
NEW BRUNSWICK	27.4	Chatham
NOVA SCOTIA	23.2	Sydney
PRINCE EDWARD ISLAND	13.8	Summerside
NEWFOUNDLAND	69.4	Hopedale

Alberta Agriculture

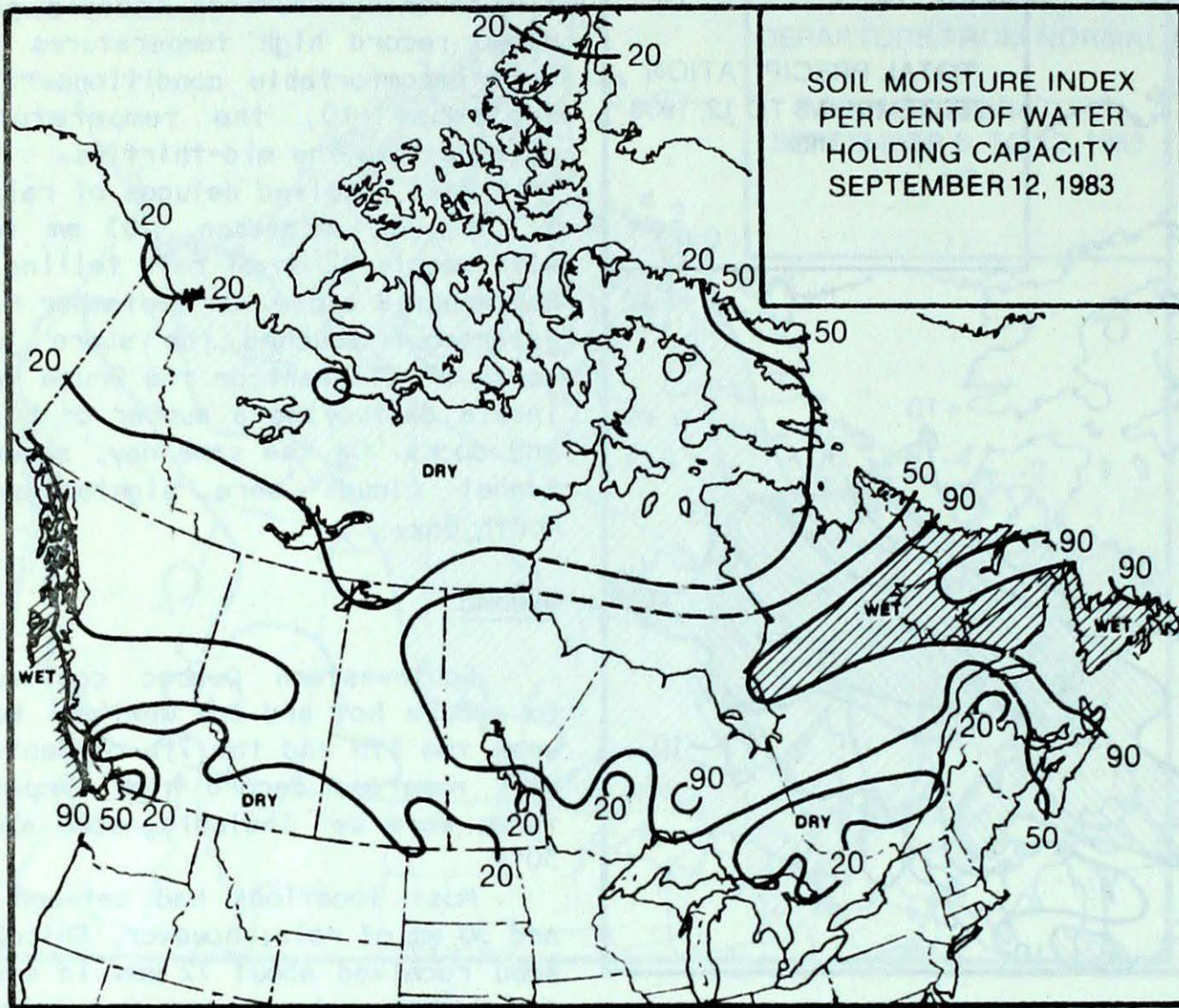
Cool and damp weather in September has slowed the harvest. Nearly 80 per cent of the crops have been cut. In southern Alberta, about 90 per cent of harvesting was complete. The depleted soil moisture and heavy grasshopper infestations have delayed the seeding of fall crops in the

southern regions. Less than the expected area will be seeded this fall.

Frost covered most of the province, and grades of the unswathed crops are expected to drop. However, most of the crops have been harvested and the damage is expected to be minimal.

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SOIL MOISTURE



Soil Moisture Index

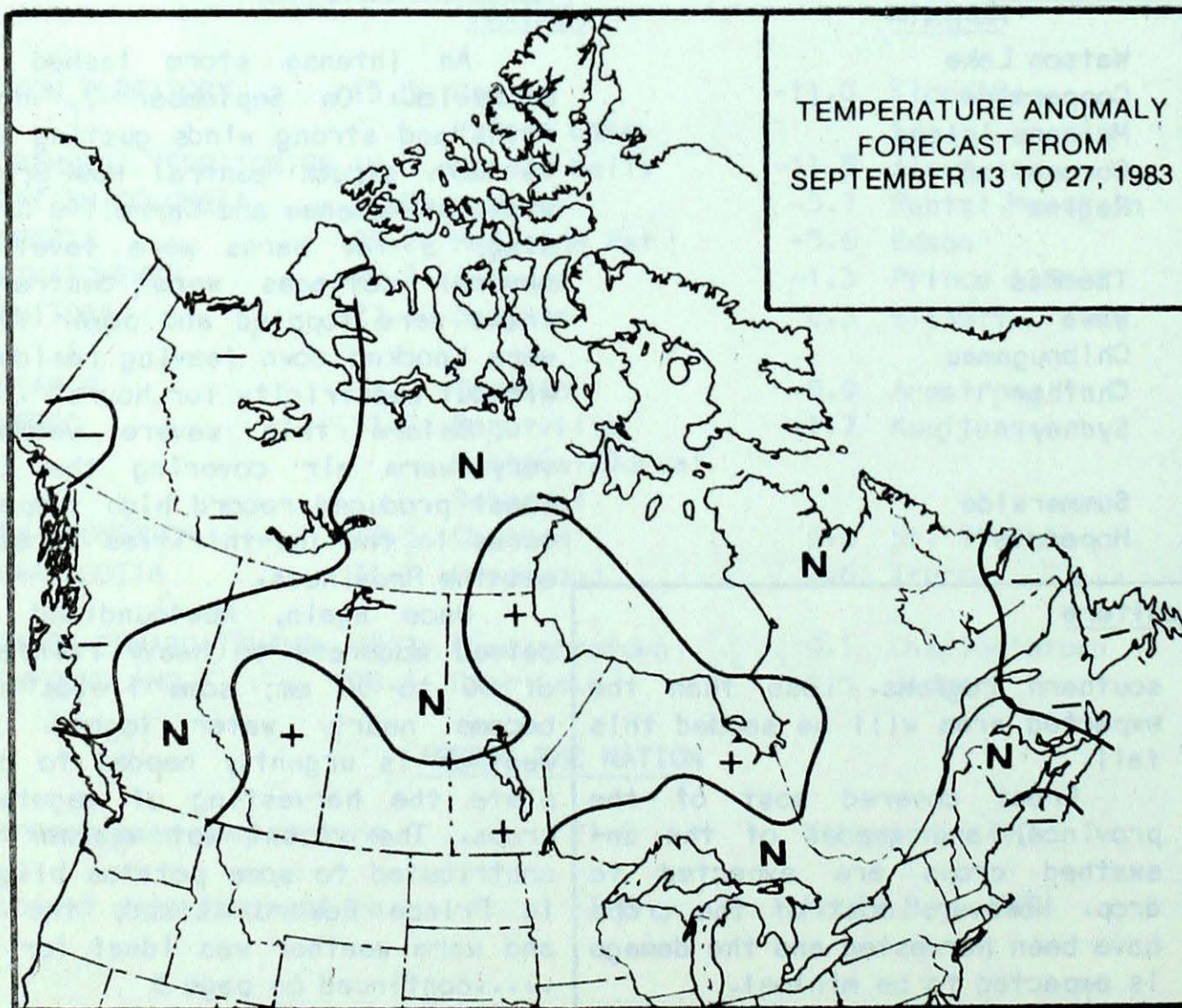
A derived index mapped as a percentage of the assumed soil water holding capacity at each station. It is a relative indicator of the moisture status of the soil.

100 = completely saturated

50 = 50 per cent of assumed holding capacity

0 = absolutely dry

TEMPERATURE ANOMALY FORECAST



Temperature Anomaly Forecast

The temperature anomaly forecast, for each of the 70 Canadian stations, is prepared by searching historical weather maps to find cases similar to the present one. The principle used is that a prediction for the next 15 days may be based on what is known to have actually happened during 15-day periods. After the five best cases are selected, the surface temperature anomalies are calculated. This results in five separate forecasts, which are averaged to provide the forecast depicted.

++ much above normal

+ above normal

N normal

- below normal

-- much below normal

Hail Season In Alberta

According to the statistics released by the Alberta Research Council, the number of hail days dropped 25 per cent below the long term average in Alberta this summer. Storms were most frequent and intense in July, but light hail was reported in August. The Alberta Research Council/INTERA research aircraft flew more than 200 hours on nearly 100 missions during the Hail Research and Cloud Seeding Program. Measurements were taken in hail and rain clouds and in the surrounding environment.

These measurements complement others made by the weather radars at the Red Deer Airport which sample volumes of cloud thousands of times larger than the aircraft measures.

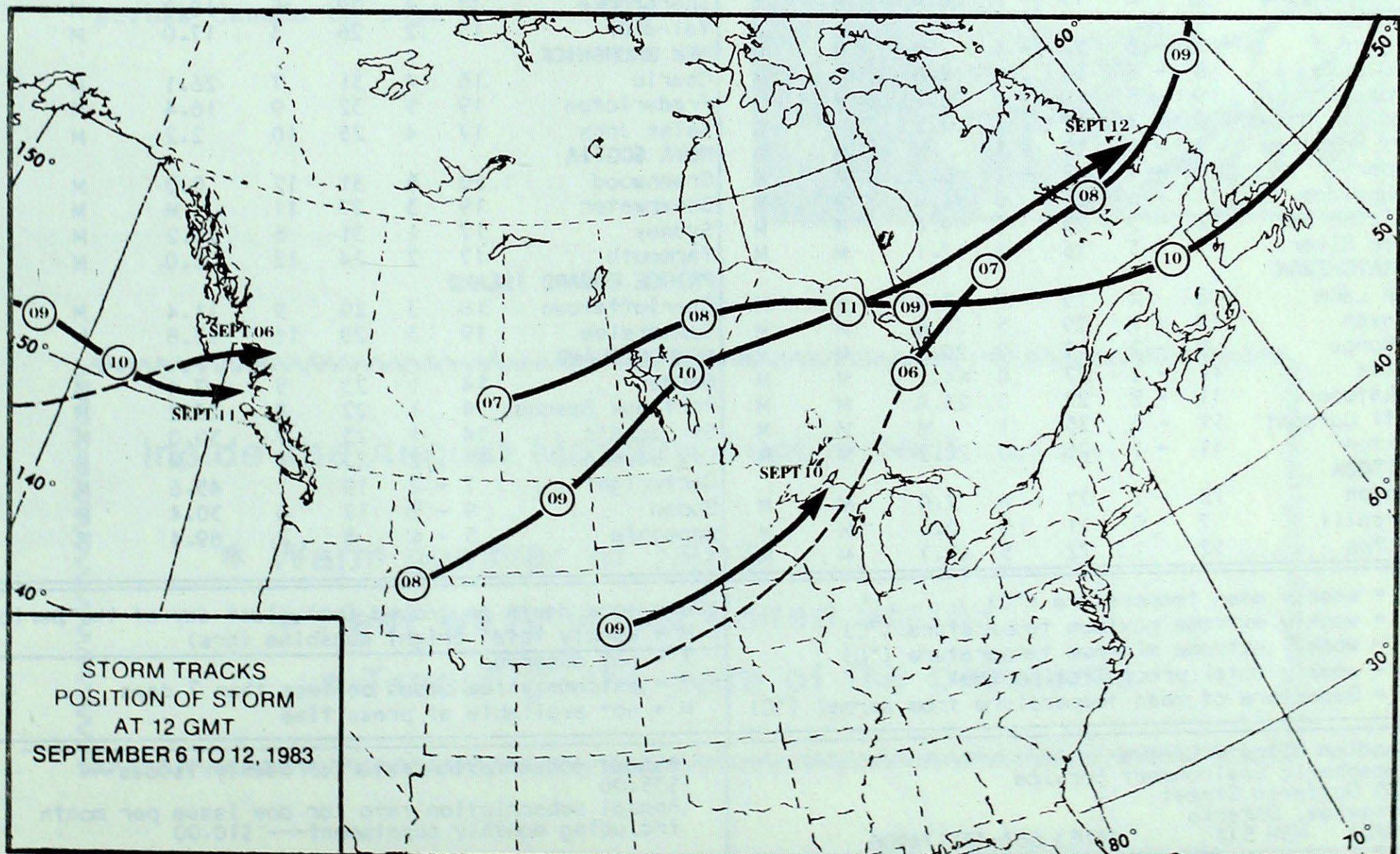
With these two instruments, the Research Council studies the formation and growth of ice crystals, rain and hail from both natural clouds and from clouds that have been seeded.

-Alberta Research Council

...continued from page 3

harvest. About 50 per cent of the cereal crop and 60 per cent of the tobacco crop have been harvested. In New Brunswick, the yield of potatoes was low, but the quality was good. In Nova Scotia, the warm weather has helped the late planted corn mature. The hay harvest was described as one of the best in recent years.

STORM TRACKS



TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT SEPTEMBER 13, 1983

STATION	TEMP				PRECIP		SUN	STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H		Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY								Thompson	9	0	20	2	27.3	M	M
Dawson	5	-3	16	-7	0.0	M	M	Winnipeg	13	-1	24	2	12.2	M	M
Mayo A	6	-2	15	-7	0.0	M	M	ONTARIO							
Watson Lake	6	-3	16	-2	17.7	M	M	Big Trout Lake	11	1	22	4	32.5	M	M
Whitehorse	5	-4	15	-4	1.8	M	49.9	Earlton	17	4	26	8	M	M	M
NORTHWEST TERRITORIES								Kapuskasing	13	1	23	2	81.4	M	M
Fort Smith	8	-1	17	-2	0.4	M	48.0	Kenora	14	1	21	6	2.8	M	M
Inuvik	6	2	15	-1	1.0	M	23.2	London	20	3	33	9	3.8	M	M
Norman Wells	8	0	20	-1	2.4	M	M	Moosonee	12	1	22	1	23.0	M	M
Yellowknife	8	0	17	3	0.2	M	M	Muskoka	19	4	30	6	M	M	M
Baker Lake	6	2	11	2	6.2	M	M	North Bay	16	2	24	6	30.4	M	M
Cape Dyer	1	0	5	-3	0.0	0.0	M	Ottawa	20	4	31	10	10.4	M	M
Clyde	2	1	7	-3	0.0	M	M	Pickle Lake	12	2	21	3	15.4	M	M
Frobisher Bay	3	-1	11	-3	0.0	M	M	Red Lake	12	-1	19	0	21.3	M	M
Alert	-3	4	5	-12	12.4	7.0	M	Sudbury	17	3	26	8	13.4	M	M
Eureka	0	5	5	-7	0.0	M	M	Thunder Bay	16	3	26	4	29.2	M	M
Hall Beach	4	3	9	0	0.0	M	M	Timmins	14	2	23	1	41.4	M	M
Resolute	1	4	6	-7	0.4	M	M	Toronto	21	4	34	10	1.2	M	M
Cambridge Bay	6	4	11	2	2.4	M	M	Trenton	20	3	31	9	1.2	M	M
Mould Bay	-4	1	4	-8	1.0	5.0	9.9	Warton	20	4	31	10	3.8	M	M
Sachs Harbour	0	1	5	-5	8.0	M	M	Windsor	21	2	34	0	22.9	M	M
BRITISH COLUMBIA								QUEBEC							
Cape St. James	13	0	17	10	53.9	M	M	Bagotville	16	3	32	7	33.6	M	M
Cranbrook	10	-4	22	0	2.9	M	M	Blanc-Sablon	9	-1	17	1	26.4	M	M
Fort Nelson	7	-4	18	-2	25.6	M	M	Inukjuak	8	3	13	1	0.2	M	M
Fort St. John	7	-4	14	0	26.9	M	M	Kuujuuaq	4	-3	11	-2	2.2	M	M
Kamloops	14	-3	24	6	M	M	M	Kuujuuarapik	9	1	15	5	25.9	M	M
Penticton	13	-3	23	4	12.6	M	M	Manawaki	17	4	30	3	11.2	M	M
Port Hardy	11	-1	16	5	56.9	M	M	Mont-Joli	15	2	27	8	41.8	M	M
Prince George	8	-3	17	-1	6.6	M	M	Montréal	21	4	32	8	9.0	M	M
Prince Rupert	12	0	16	5	47.3	M	M	Natashquan	12	2	22	3	22.2	M	M
Revelstoke	10	-4	17	4	31.2	M	M	Nitchequon	10	2	16	5	31.4	M	M
Smithers	9	-3	17	-2	8.3	M	M	Québec	17	2	31	-3	10.5	M	M
Vancouver	13	-2	19	8	23.7	M	M	Schefferville	8	1	18	-1	56.6	M	M
Victoria	13	-2	22	6	20.6	M	M	Sept-Îles	12	2	18	4	22.8	M	M
Williams Lake	8	-2	19	-2	20.0	M	M	Sherbrooke	17	4	29	6	18.0	M	M
ALBERTA								Val-d'Or	15	2	26	3	17.0	M	M
Calgary	8	-3	22	-1	M	M	M	NEW BRUNSWICK							
Cold Lake	8	-3	17	0	14.8	M	M	Charlo	16	4	31	7	26.1	M	M
Coronation	9	-3	19	-1	26.2	M	M	Fredericton	19	5	32	9	16.4	M	M
Edmonton Namao	9	-3	17	1	15.2	M	M	Saint John	17	4	25	10	2.2	M	M
Fort McMurray	8	-2	17	-1	M	M	M	NOVA SCOTIA							
Jasper	7	-4	15	-2	6.2	M	M	Greenwood	20	5	31	12	0.0	M	M
Lethbridge	11	-3	25	0	4.2	M	M	Shearwater	19	3	27	11	M	M	M
Medicine Hat	12	-3	25	1	9.4	M	M	Sydney	17	1	31	6	23.2	M	M
Peace River	7	-3	16	-1	12.1	M	M	Yarmouth	17	2	24	12	2.0	M	M
SASKATCHEWAN								PRINCE EDWARD ISLAND							
Cree Lake	8	X	15	0	3.7	M	M	Charlottetown	18	3	29	9	11.4	M	M
Estevan	13	-1	29	5	37.6	M	M	Summerside	19	3	28	11	13.8	M	M
La Ronge	9	-2	17	0	29.0	M	M	NEWFOUNDLAND							
Regina	11	-2	27	0	44.1	M	M	Gander	14	1	23	5	7.4	M	M
Saskatoon	11	-2	22	0	23.4	M	M	Port aux Basques	14	1	22	8	23.2	M	M
Swift Current	11	-3	25	1	M	M	M	St. John's	14	1	23	7	30.0	M	M
Yorkton	11	-1	26	0	20.2	M	M	St. Lawrence	15	2	23	4	M	M	M
MANITOBA								Cartwright	7	-2	19	1	45.6	M	M
Brandon	12	-1	27	4	2.0	M	M	Goose	9	-2	17	0	30.4	M	M
Churchill	7	0	11	5	0.6	M	M	Hopedale	5	-4	8	2	69.4	M	M
The Pas	12	1	22	5	49.7	M	M								

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
 M = not available at press time

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