

Environment Canada / Environnement Canada

1005959D DEST EE

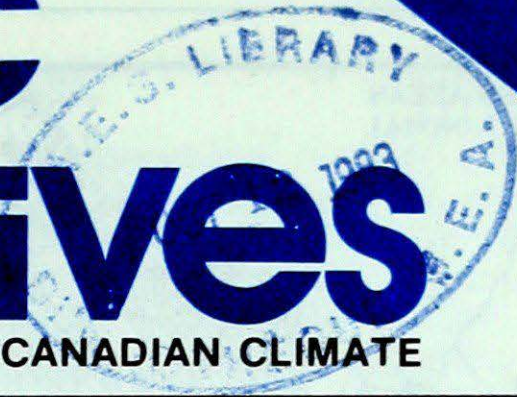
REF COPY 01

VOL 5 ISS 39
CLIMATIC PERSPECTIVES

Canadian Climate Centre

Climatic Perspectives

A WEEKLY REVIEW OF CANADIAN CLIMATE



SEPTEMBER 30, 1983

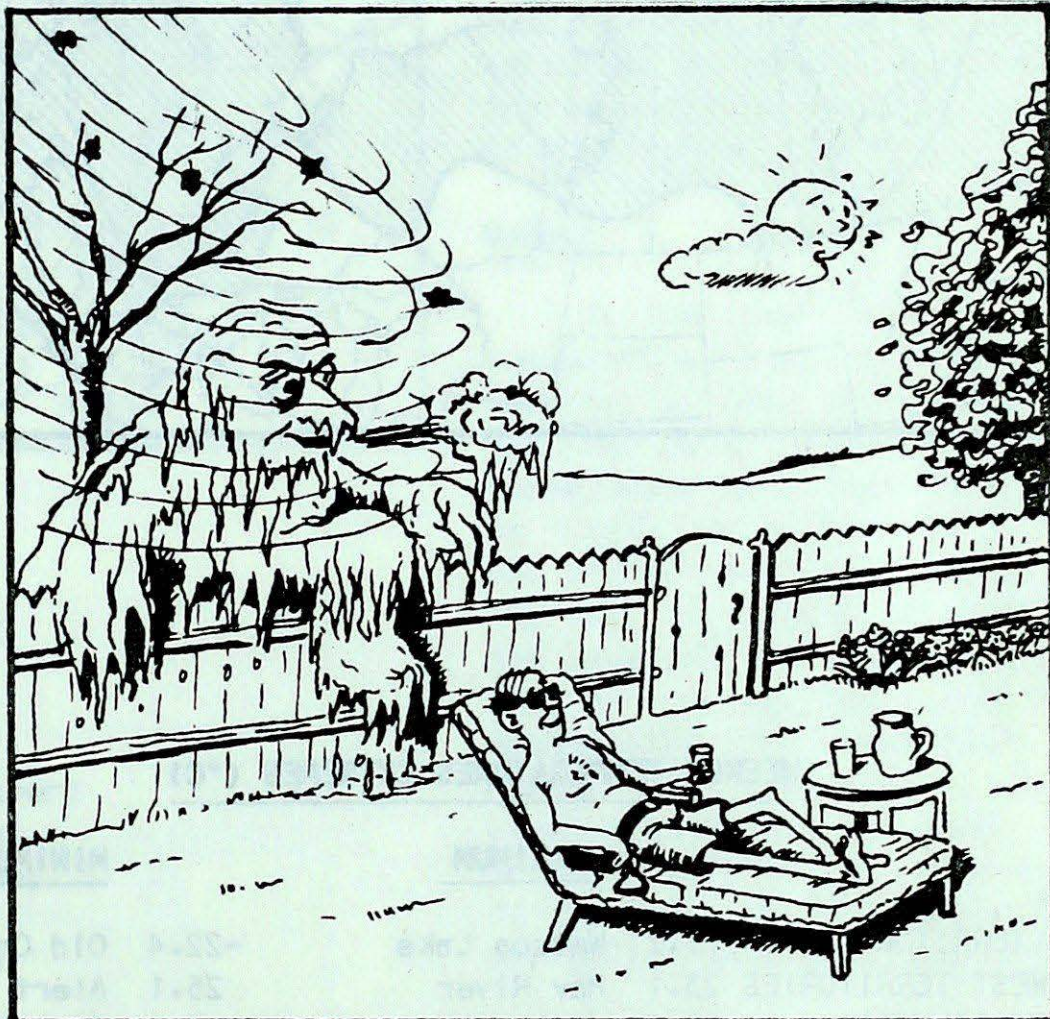
(Aussi disponible en français)

VOL. 5 NO. 39

FOR THE PERIOD SEPTEMBER 20-26, 1983

• Can winter be far behind! ... &#%!#?

As most Canadians continue to enjoy above-normal temperatures and ample sunshine, the relentless progression of the seasons is well in evidence in the Arctic. As the sun's rays diminish in power and the days shorten, cold air building up over the Arctic ocean forewarns us about what is to come. Alert, in northern Ellesmere Island, slipped to -25° on the 24th, and on the 26th, Old Crow, in Northern Yukon, plummeted to -22.4° , the lowest temperature ever recorded there in the month of September. The cold air at Old Crow was ushered in by 11 cm of snow and accompanied by blowing snow. The winter's snow cover has now been firmly established over the northern Yukon, the northern parts of the Districts of Mackenzie and Keewatin, and over most of the Arctic Islands.



■ Heavy rain over the north British Columbia coast

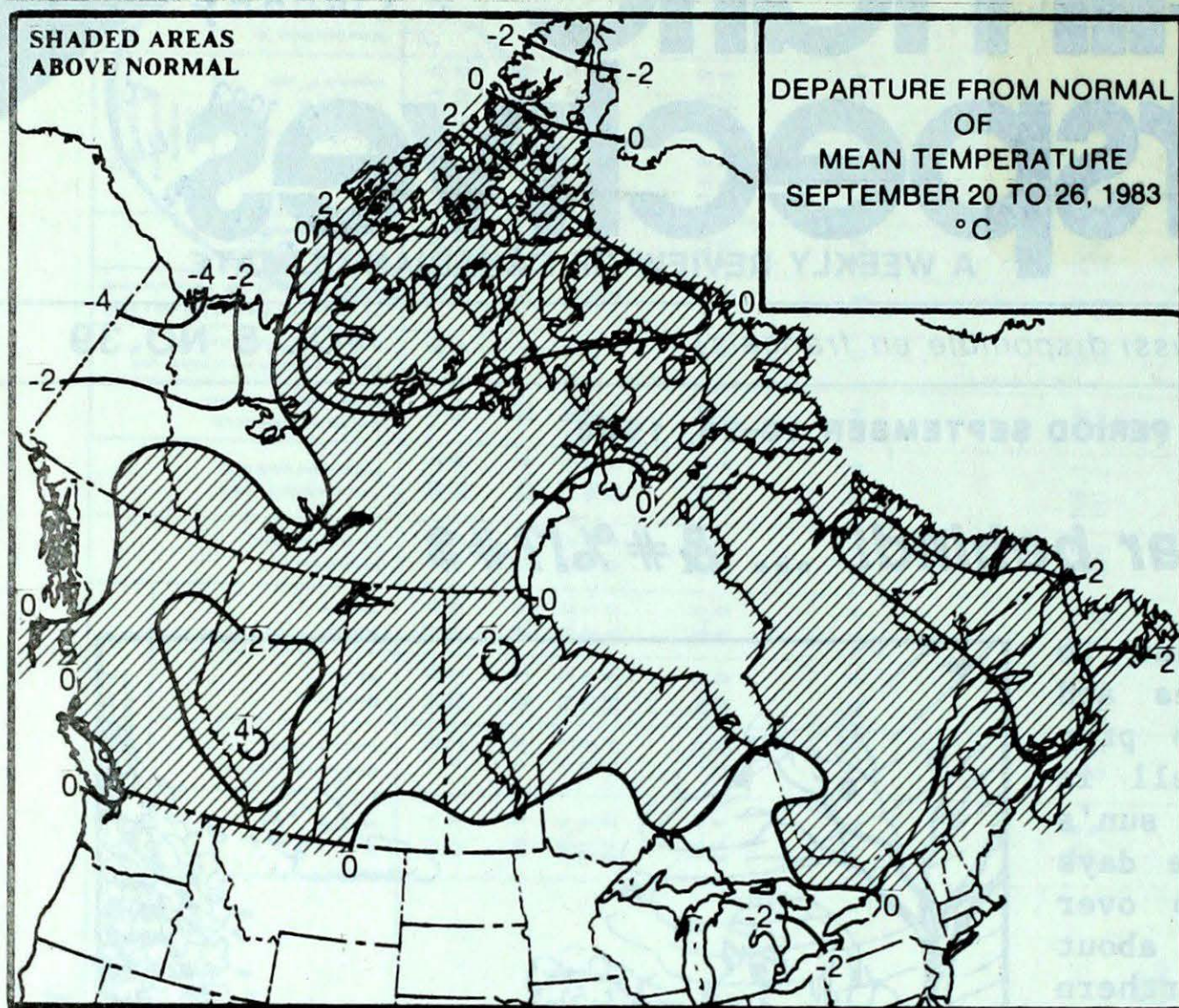
■ Some record-breaking warm days over Eastern Canada

■ Hurricanes and Tropical Storms

ISSN 0225-5707
UDC: 551.506.1(71)

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

Over Yukon, the week began on a placid note, with daytime temperatures over all of the territory except the far north rising into the comfortable teens. Haines Junction touched 21° on the 20th. In the meantime, cold air was well entrenched over northern Alaska and the Beaufort Sea. It began moving southward over the weekend, accompanied by snow and blowing snow, and new record-low daily maximum temperatures were on the 24th, 25th and 26th. Oglivie recorded 43 mm of precipitation, mostly in the form of snow. Most of the Northwest Territories reported benign weather for late September. Temperatures ran several degrees above normal, and daily highs rose into the twenties over the southern district of Mackenzie on the 22nd. Hay River was the warmest at 23°. Meanwhile, cold Arctic air remained firmly entrenched over the northern Archipelago.

British Columbia

Generally sunny weather prevailed, but over the north coast it was cloudy and wet. Prince Rupert was deluged with more than 280 mm of rain on the 24th and 25th. Cold Arctic air, which penetrated into the south early in the period, allowed night-time temperatures to fall to record-low values on the 20th, well below the freezing mark. A general killing frost has now occurred in most farming communities in the southern interior. Haying and slash burning continue; combining in the Peace River District is nearing completion.

Prairies

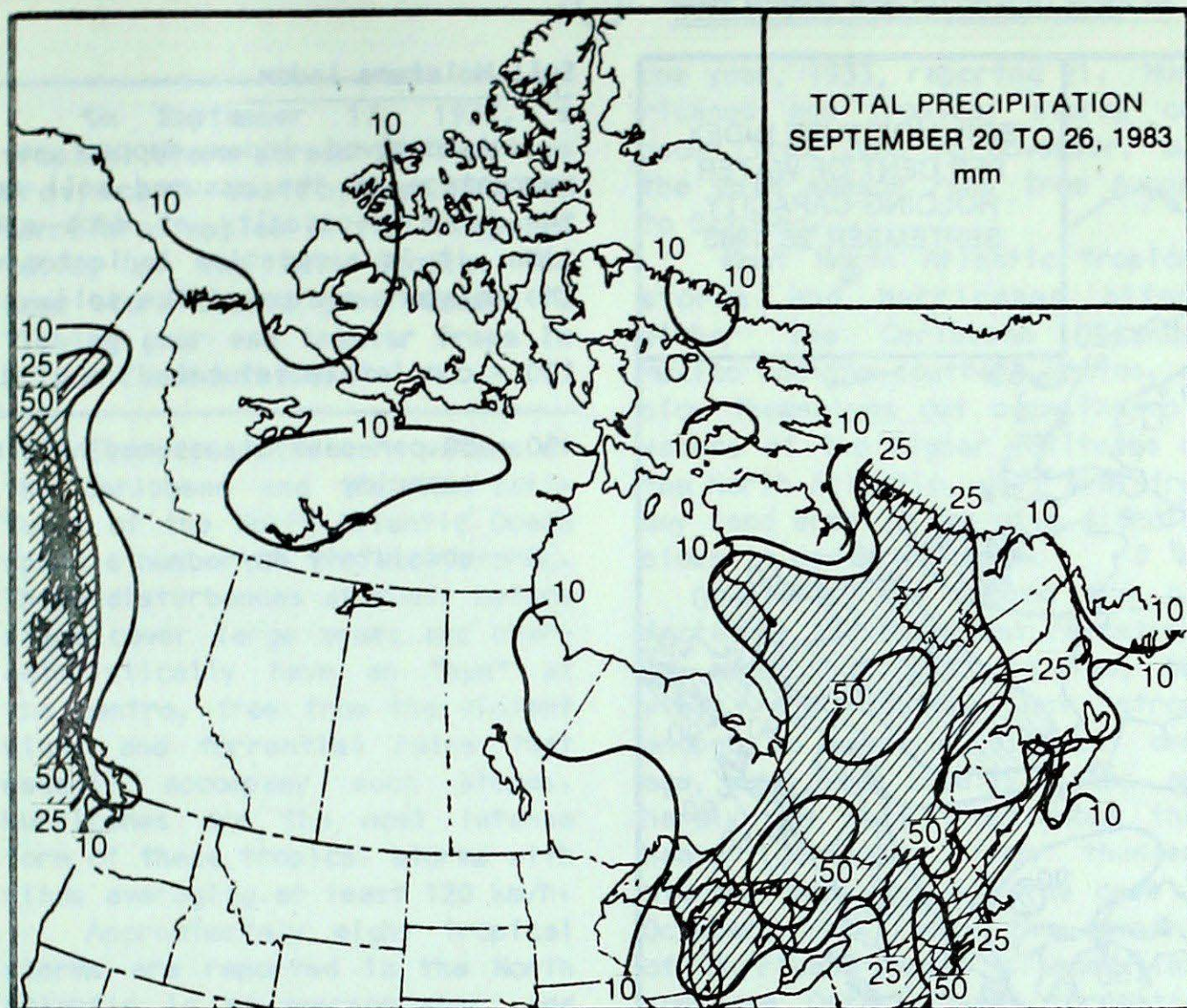
Ideal Autumn weather prevailed. There were record-low temperatures early in the week, but by the weekend temperatures were again nudging the thirty-degree mark, and several new daily maximum temperatures records were established. Most harvesting is complete, except in the Peace River district. A killing frost was reported in all farming communities this week.

WEEKLY TEMPERATURES EXTREMES (°C)

		<u>MAXIMUM</u>		<u>MINIMUM</u>
YUKON TERRITORY	17.2	Watson Lake	-22.4	Old Crow
NORTHWEST TERRITORIES	23.1	Hay River	25.1	Alert
BRITISH COLUMBIA	29.2	Kamloops	-6.6	Fort Nelson
ALBERTA	30.7	Medicine Hat	-7.5	Fort Chipewyan
SASKATCHEWAN	30.5	Moose Jaw	-7.9	Swift Current
MANITOBA	28.9	Dauphin	-5.3	Brandon
ONTARIO	31.0	Ottawa	-4.2	Armstrong Atikokan
QUÉBEC	33.5	Huntingdon	-2.8	Parent
NEW BRUNSWICK	29.6	Fredericton	-0.3	Fredericton
NOVA SCOTIA	30.5	Greenwood	0.1	Shelburne
PRINCE EDWARD ISLAND	27.4	Charlottetown	7.9	Charlottetown
NEWFOUNDLAND	27.9	Deer Lake	-2.6	Churchill Falls

ACROSS THE NATION

Warmest mean temperature	16.0	Sable Island, NS
Coollest mean temperature	-15.3	Alert, NWT



HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	40.5	Dawson
NORTHWEST TERRITORIES	34.4	Killinek
BRITISH COLUMBIA	263.4	Prince Rupert
ALBERTA	6.5	High Level
SASKATCHEWAN	3.9	Collins Bay
MANITOBA	16.0	Churchill
ONTARIO	90.0	Britt
QUEBEC	70.4	Chibougamau
NEW BRUNSWICK	45.2	Saint John
NOVA SCOTIA	18.0	Sydney
PRINCE EDWARD ISLAND	12.6	Summerside
NEWFOUNDLAND	49.0	Wabush Lake

Arctic Ice

Unfavourable wind conditions are still causing bad ice conditions around drill sites, and operations have stopped temporarily. In eastern Arctic, above-normal temperatures have delayed freeze-up. Although some new ice is now forming, Lancaster sound is wide open.

....On this week in 1950....

After a prolonged period of dry weather, thirty or more forest fires in northern Alberta had spread rapidly earlier in the month and were soon out of control. A dense pall of smoke spread across the country darkening skies on September 24, 1950, in eastern Canada. Reports of smoke from these fires were subsequently received from Europe.

Ontario

Temperatures soared well into the twenties on the 20th and 21st, with Ottawa topping off at 31°. The brief warm spell was quickly followed by an outbreak of Arctic air, and overnight temperatures plummeted to -2° to -4° over northeastern Ontario on the 23rd. The outbreak of cool air was accompanied by heavy rain, with much of the province reporting 30 to 60 mm. North Bay received 87 mm. The grape harvest is in full swing over the Niagara Peninsula, with the Grape and wine festival being held Sept. 23rd to Oct. 3rd. This year's apple crop is delayed due to lack of rain earlier in the summer, and quality is poor due to a variety of pests.

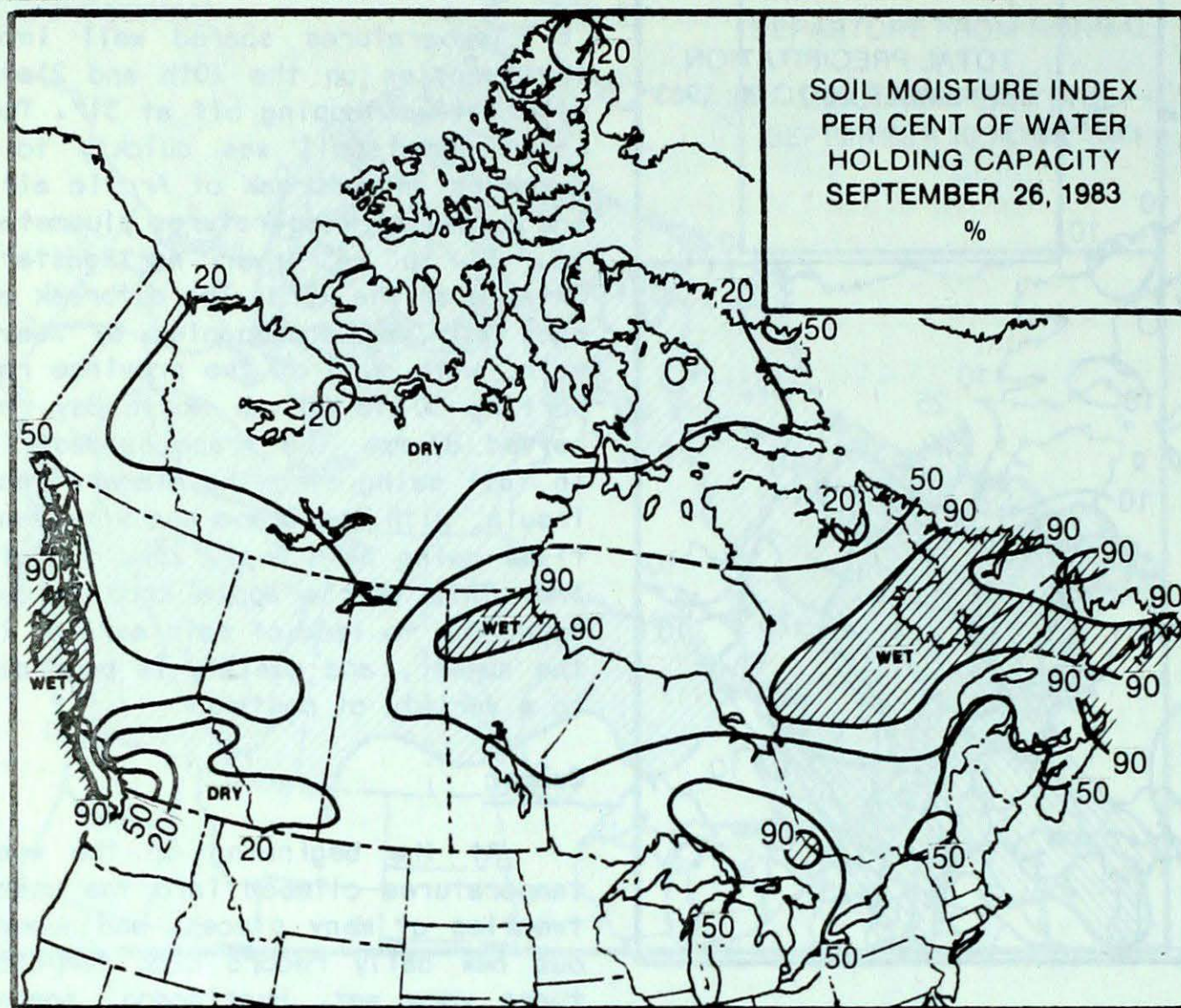
Québec

At the beginning of the week temperatures climbed into the upper twenties at many places, and numerous new daily record high temperatures were set. Huntingdon, soared to 33.5°, while Montréal's 31° was the highest ever recorded so late in the year. A cold front swept across the province on the 21st and 22nd. The arrival of the cold air was accompanied by moderately heavy rains, with a number of localities receiving 40 mm or more. In the Abitibi-Témiscamingue region 60 to 70 per cent of the second hay crop and most grains have been harvested.

Atlantic Provinces

The week began warm and sunny. Temperatures rose well into the twenties at most localities, and a number of new daily record highs were established. Greenwood, N.S., reached 31° on the 21st, while Deer Lake, Nfld., reported 28° on the 22nd. Following the passage of the cold front, temperatures returned to near normal values. Some localities had a light frost on the 24th and 25th. Most communities reported 10 mm to 20 mm of rain with the arrival of the cooler air, but some places in New Brunswick reported more than 30 mm. The generally dry weather was good for harvesting. The late potato crop in New Brunswick is now half completed.

SOIL MOISTURE

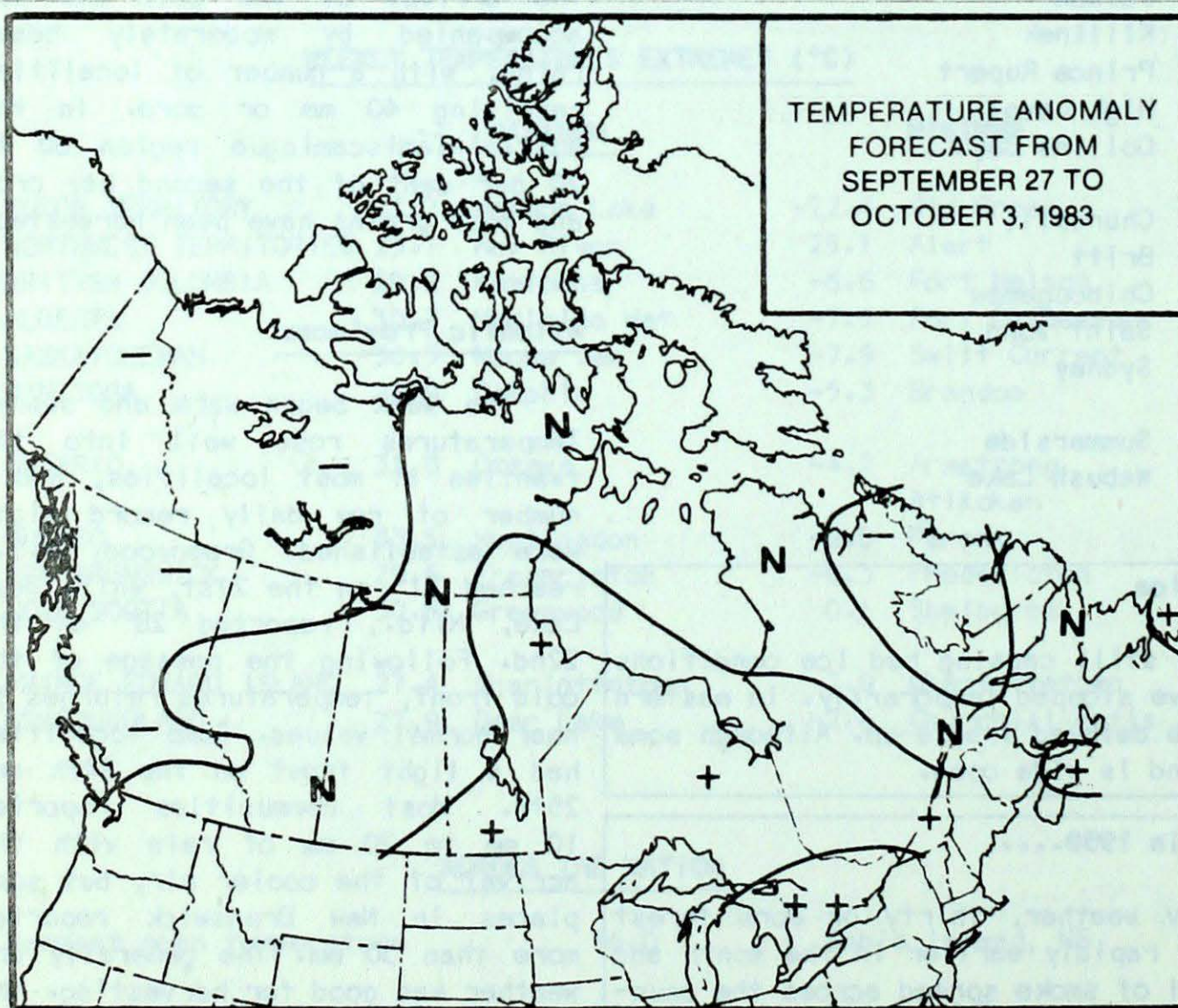
Soil Moisture Index

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 FORECASTTemperature 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

Hurricanes and Tropical Storms

On September 17, 1932, a tropical storm struck the Maritime Provinces, destroying 300,000 barrels of apples in the Annapolis Valley of the Nova Scotia. The same storm caused great damage to fishing gear and lobster traps in Prince Edward Island.

Every year the warm waters of the Caribbean and the low latitudes of the North Atlantic Ocean spawn a number of tropical storms. These disturbances at their mature stage cover large areas and characteristically have an "eye" at the centre, free from the violent winds and torrential rains that usually accompany such storms. Hurricanes are the most intense form of these tropical storms with winds averaging at least 120 km/h.

Approximately eight tropical storms are reported in the North Atlantic in an average year, and half of them are of hurricane intensity. Variation from year to year is great, however. While four hurricanes are normally spotted, during the last century some years had as few as two and

one year, 1933, reported 21. Hurricanes and tropical storms can occur from June to November, but the main season runs from August to October.

Most North Atlantic tropical storms and hurricanes affect either the Caribbean Islands, Mexico and the southern States, or blow themselves out over the cold waters of the higher latitudes of the North Atlantic, well away from any land area. A few give glancing blows to eastern Canada.

Ontario and Québec are affected by these violent rainstorms in about one year in two, but winds are usually not strong enough to cause significant damage, and the squally rains are hardly any more troublesome than heavy downpours from thunderstorms. Such was not the case in October, 1954, when the remnants of Hurricane Hazel slammed into southern Ontario, and torrential rains in the order of 200 mm caused over 80 deaths in the Toronto area.

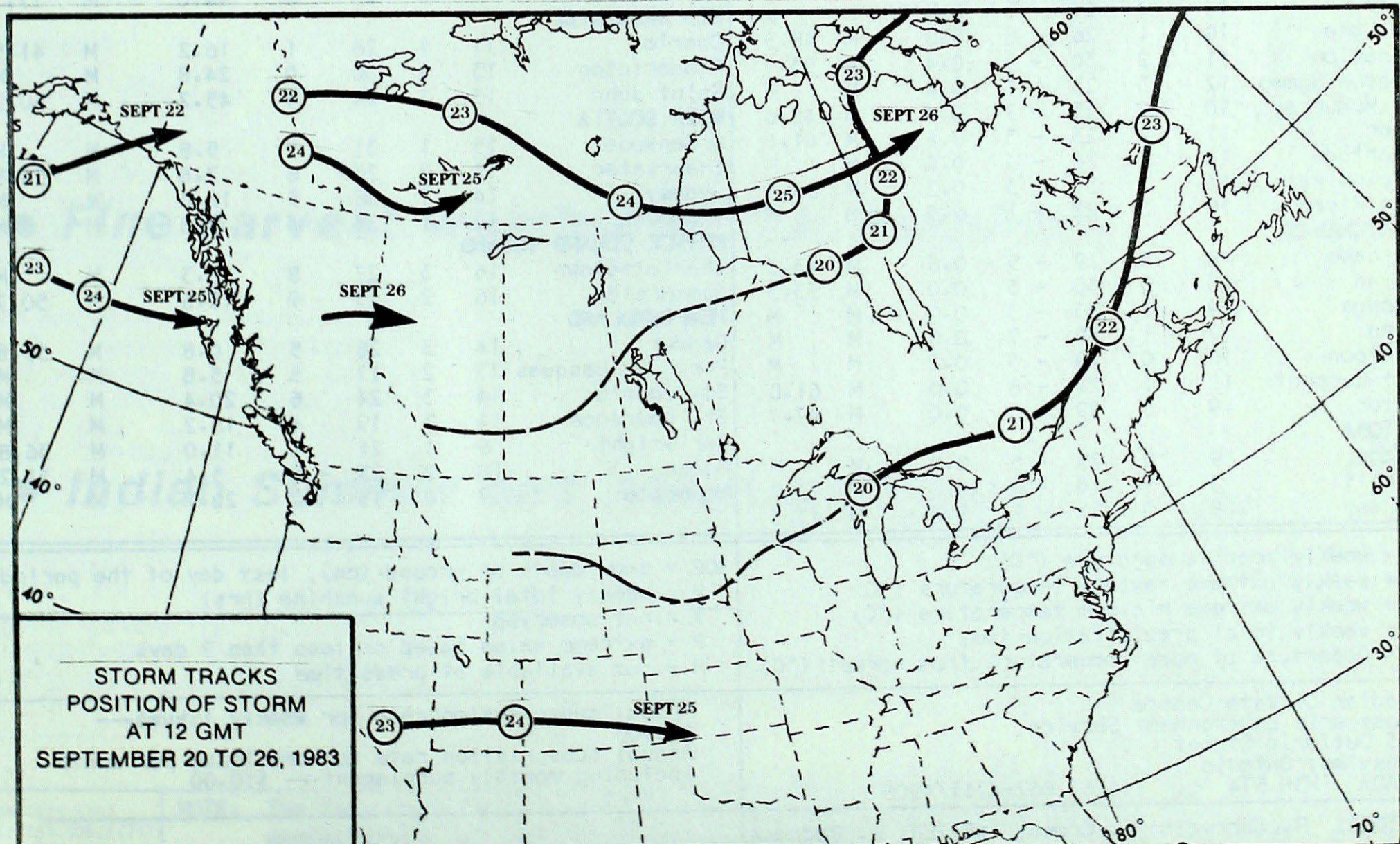
The Atlantic Provinces are closer to the average storm tracks of the tropical storms and hur-

ricanes. While about one of these storms affects the Maritimes or Newfoundland every year, for the most part, the winds are not any stronger than what often occurs with a bad winter storm, and the heavy rains cause only local flooding. Shipping, boating and the fishing industry are much affected by these tropical storms and hurricanes, however.

R. Crowe

On September 20, 1942, a tropical storm passed just south of Nova Scotia while a nearly stationary front lay along the Nova Scotia coast. Heavy rain associated with the tropical storm coupled with the extra frontal lift resulted in torrential rains over Nova Scotia and Prince Edward Island. Halifax received 238.8 mm in one day, the greatest ever reported in Canada outside of British Columbia. The rains lasted four days, the end of which Stellarton, N.S., chalked up an amazing 355.3 mm, and Charlottetown P.E.I., 275.1 mm.

STORM TRACKS



TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT SEPTEMBER 27, 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	7	2	20	-1	4.5	M	29.3
Dawson	1	-3	15	-19	40.5	2.0	M	Winnipeg	10	0	26	-1	M	M	51.0
Mayo A	3	-1	16	-13	9.8	M	M	ONTARIO							
Watson Lake	7	1	17	-4	9.6	0	M	Big Trout Lake	7	1	17	0	13.9	M	M
Whitehorse	5	-2	14	-11	4.2	3.0	M	Earlton	10	0	21	1	M	M	M
NORTHWEST TERRITORIES								Kapusking	8	0	20	0	16.4	M	M
Fort Smith	7	1	21	-8	3.0	M	43.9	Kenora	8	-2	20	-1	8.3	M	M
Inuvik	-4	-5	8	-20	13.8	8.0	9.1	London	12	-2	27	2	36.9	M	40.8
Norman Wells	1	-2	17	-8	6.8	5.0	17.2	Moosonee	8	-1	18	0	14.4	M	M
Yellowknife	3	-1	12	-2	13.6	M	33.5	Muskoka	12	0	28	1	M	M	M
Baker Lake	1	0	6	-4	14.1	0.0	10.8	North Bay	11	1	25	3	86.8	M	28.4
Cape Dyer	-2	2	5	-5	2.4	0.0	M	Ottawa	14	1	31	4	35.4	M	43.4
Clyde	-1	1	4	-5	13.4	8.0	13.1	Pickle Lake	7	0	19	-2	8.0	M	M
Frobisher Bay	1	1	7	-3	8.2	M	M	Red Lake	8	0	23	-2	4.3	M	39.2
Alert	-15	-3	-6	-25	6.2	12.0	19.8	Sudbury	10	-1	21	2	57.2	M	32.4
Eureka	-11	0	-2	-18	0.3	0.0	17.7	Thunder Bay	8	-1	24	-3	1.2	M	48.4
Hall Beach	-2	1	2	-5	0.0	M	M	Timmins	8	-2	19	-2	22.8	M	M
Resolute	-3	4	-1	-6	4.8	1.0	3.7	Toronto	13	1	28	3	17.0	M	M
Cambridge Bay	1	3	4	-2	0.6	0.0	M	Trenton	13	-1	27	3	19.4	M	M
Mould Bay	-4	5	-2	-11	M	13.0	M	Warton	12	-1	28	3	87.0	M	34.2
Sachs Harbour	-4	0	2	-12	17.6	3.0	M	Windsor	13	-3	27	3	17.5	M	M
BRITISH COLUMBIA								QUEBEC							
Cape St. James	12	0	17	7	30.8	M	M	Bagotville	12	2	30	1	35.6	M	M
Cranbrook	11	1	26	-6	0.0	M	64.8	Blanc-Sablon	10	3	18	2	10.2	M	M
Fort Nelson	8	1	24	-7	5.0	1.0	29.6	Inukjuak	6	2	10	1	34.8	M	4.1
Fort St. John	11	2	22	-6	3.4	M	M	Kuujuuaq	7	3	14	2	7.9	M	16.0
Kamloops	14	1	29	-1	0.0	M	42.8	Kuujuarapik	8	2	13	3	32.2	M	10.3
Penticton	14	0	26	-2	0.0	M	55.8	Manawaki	12	0	29	0	28.3	M	32.4
Port Hardy	12	0	19	4	16.8	M	M	Mont-Joli	12	2	29	3	24.7	M	M
Prince George	11	2	21	0	3.0	M	M	Montréal	14	1	31	4	35.0	M	41.7
Prince Rupert	11	0	17	4	263.4	M	11.5	Natashquan	11	2	18	0	20.8	M	M
Revelstoke	11	0	21	-1	1.4	M	40.7	Nitchequon	7	2	12	0	34.6	M	17.2
Smithers	9	0	16	2	7.4	M	16.9	Québec	12	1	30	2	23.4	M	35.4
Vancouver	13	0	23	5	9.2	M	49.6	Schefferville	7	2	13	0	34.2	M	22.9
Victoria	13	-1	23	4	0.4	M	58.5	Sept-Îles	9	0	16	0	28.4	M	33.2
Williams Lake	12	2	24	2	0.8	M	M	Sherbrooke	12	1	29	0	36.4	M	43.0
ALBERTA								Val-d'Or	9	0	23	0	44.0	M	17.7
Calgary	14	4	27	-5	0.6	M	M	NEW BRUNSWICK							
Cold Lake	10	1	26	-6	0.0	M	48.3	Charlo	11	1	28	1	16.2	M	41.5
Coronation	11	2	30	-5	0.4	M	53.7	Fredericton	13	1	30	0	24.8	M	M
Edmonton Namao	12	3	23	-1	0.4	M	M	Saint John	13	1	24	4	45.2	M	50.9
Fort McMurray	10	2	23	-7	0.4	M	45.6	NOVA SCOTIA							
Jasper	11	2	23	-3	0.4	M	41.1	Greenwood	15	1	31	1	5.8	M	M
Lethbridge	14	3	28	-3	0.0	M	M	Shearwater	15	2	25	6	7.8	M	54.9
Medicine Hat	13	2	31	-3	0.2	M	56.3	Sydney	14	1	26	5	18.0	M	M
Peace River	10	2	22	-1	0.3	M	M	Yarmouth	14	1	26	4	6.8	M	M
SASKATCHEWAN								PRINCE EDWARD ISLAND							
Cree Lake	8	X	19	-5	0.6	M	43.3	Charlottetown	16	3	27	8	10.3	M	M
Estevan	10	0	30	-5	0.0	M	53.3	Summerside	16	2	25	9	12.6	M	50.7
La Ronge	9	2	23	-3	0.9	M	M	NEWFOUNDLAND							
Regina	9	-1	30	-7	0.0	M	M	Gander	14	3	26	5	0.8	M	38.8
Saskatoon	10	0	29	-5	0.2	M	M	Port aux Basques	13	2	17	5	5.8	M	M
Swift Current	11	1	29	-8	0.0	M	61.8	St. John's	14	3	24	6	20.4	M	M
Yorkton	9	0	29	-5	0.0	M	47.7	St. Lawrence	14	3	19	4	16.2	M	M
MANITOBA								Cartwright	9	1	21	1	11.0	M	36.8
Brandon	9	0	28	-5	0.0	M	M	Goose	10	2	23	-2	5.4	M	31.2
Churchill	3	-1	10	-2	16.0	M	12.0	Hopedale	7	0	15	1	28.1	M	M
The Pas	9	0	22	-1	1.6	M	43.3								

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

Canadian Climate Centre
Atmospheric Environment Service
4905 Dufferin Street
Downsview, Ontario
CANADA M3H 5T4 (416) 667-4711/4906

Annual subscription rate for weekly issues---
\$35.00
Annual subscription rate for one issue per month
including monthly supplement--- \$10.00

EDITORS: R. Sarrazin; R. Crowe; WRITER: A. Radomski

Subscription enquiries: Supply and Services Canada, Publishing Centre, Ottawa, Ontario, Canada, K1A 0S9