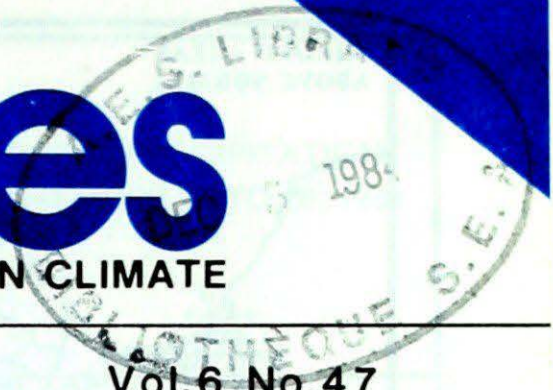


Climatic Perspectives

A WEEKLY REVIEW OF CANADIAN CLIMATE

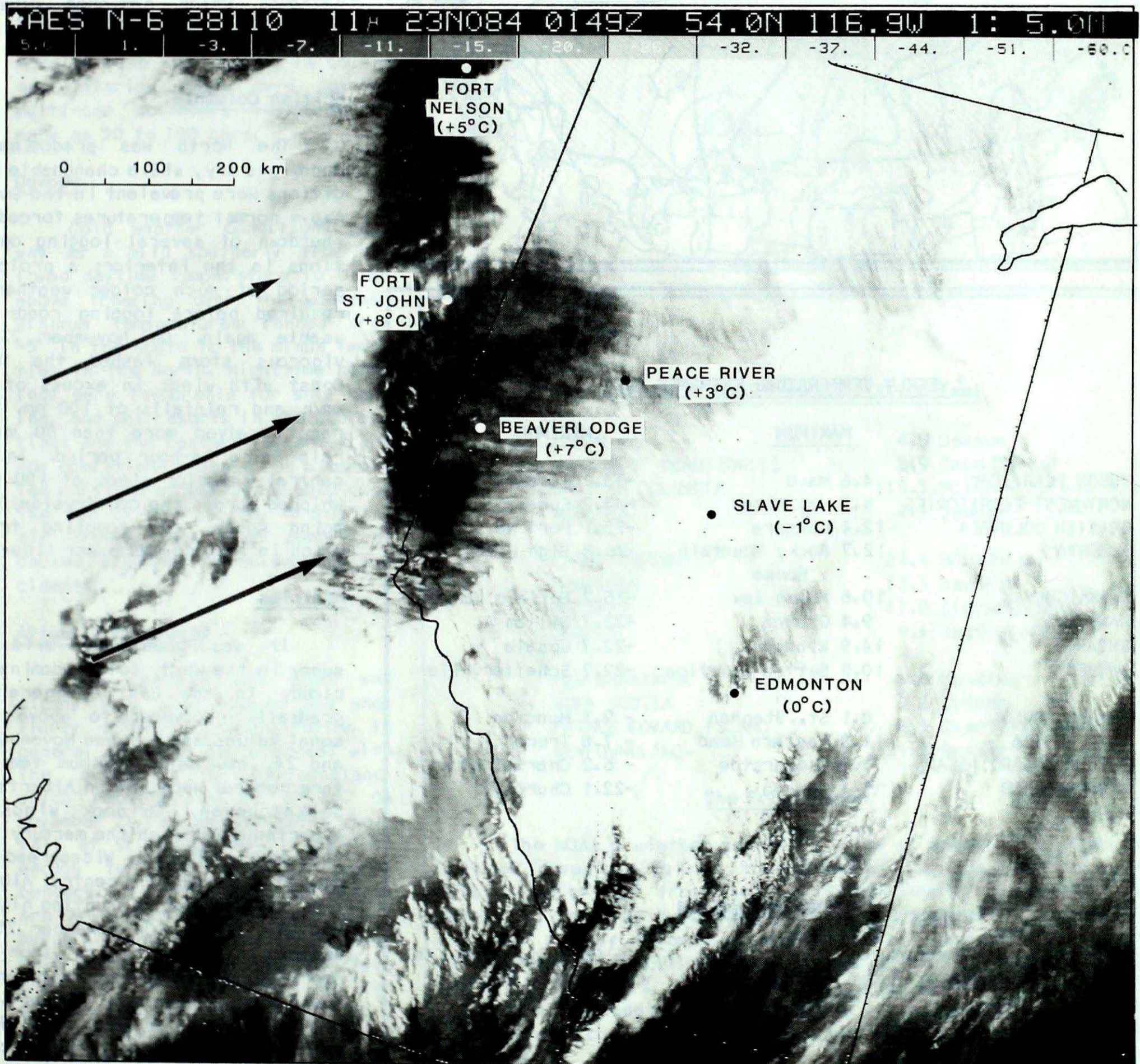
Canadian Climate Centre



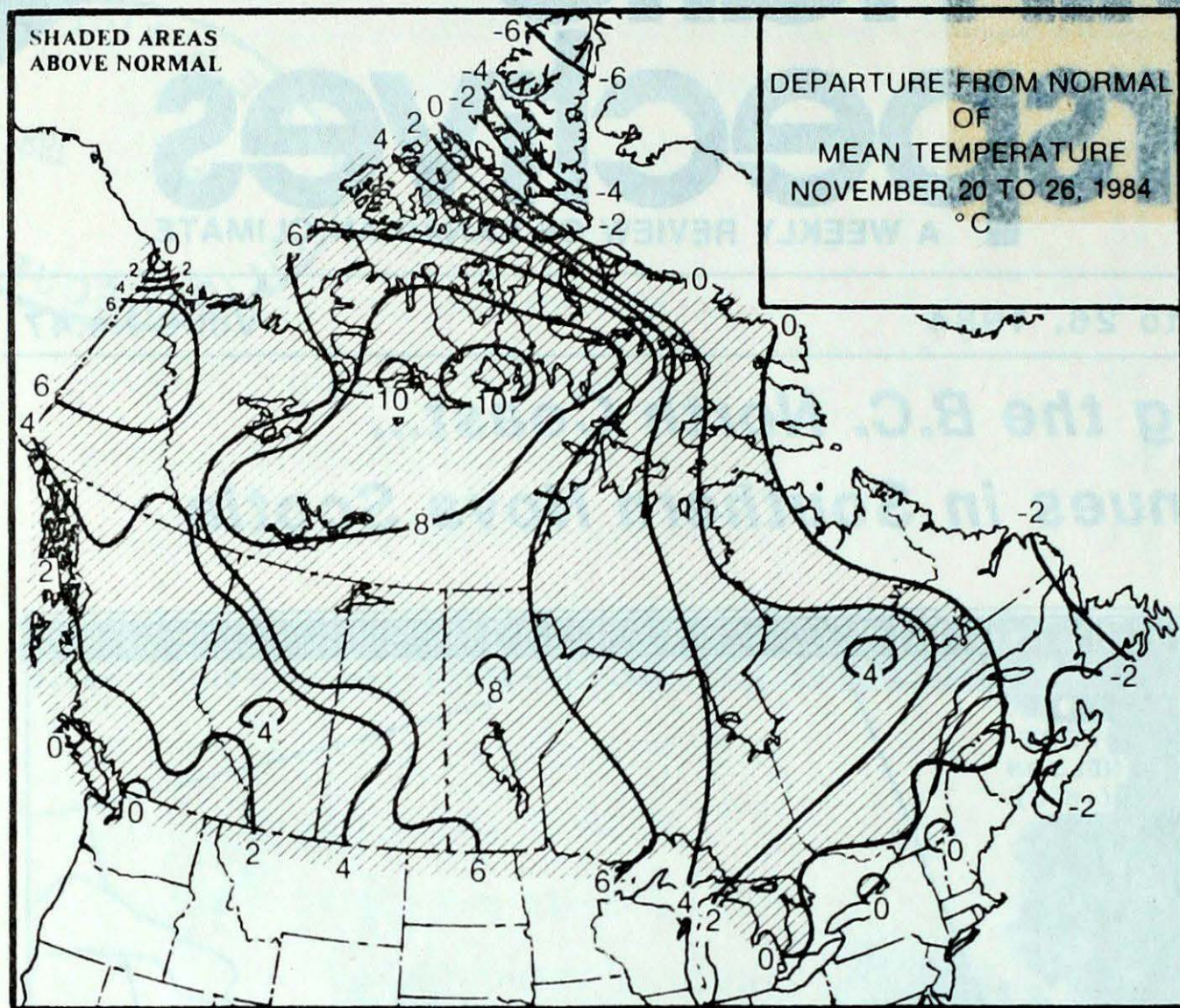
For the period November 20 to 26, 1984

Vol. 6 No. 47

● Heavy rains along the B.C. North Coast... ... Drought continues in Southern Nova Scotia



A NOAA 6 weather satellite shows a chinook over the Peace River country of B.C. and Alberta. See page 3 for more details.



ACROSS THE COUNTRY...

Yukon and Northwest Territories

Above normal temperatures were evident in the Yukon and Mackenzie District, while below normal values prevailed in the eastern Arctic. Temperatures ranged from -43° at Eureka to 4.6° at Mayo. A moist on-shore flow gave significant snowfalls, as much as 15 cm, to most areas of the northwest. The larger, as yet unfrozen lakes, have again produced extensive low cloud in the valleys, which hampered aviation traffic.

British Columbia

The North was predominantly sunny and dry, while changeable conditions were prevalent in the South. Above normal temperatures forced the shutdown of several logging operations in the Interior; a prolonged period of much colder weather is required before logging roads are usable again. On November 22, a vigorous storm lashed the North Coast with winds in excess of 120 km/h and rainfalls of 100 mm. Terrace received more than 80 mm of rain in a 24-hour period. In the central Interior winds of 100 km/h whipped across the countryside, damaging roofs, and toppling trees, which in turn downed power lines.

Prairies

It was pleasantly mild and sunny in the West, but predominantly cloudy in the East. Temperatures gradually recovered to above seasonal values and between November 22 and 24, new daily maximum temperature records were set in Alberta and Saskatchewan. Chinook winds in Alberta helped push the mercury into the double digits. Widespread fog developed throughout central Alberta over the weekend, disrupting highway and air travel. On November 25, a weather system tracking from the American mid-west left between 10 and 20 cm of new snow across parts of Saskatchewan and Manitoba. Western Manitoba received up to 30 cm of new snow, while in the Southeast precipitation was mainly rain.

* WEEKLY TEMPERATURE EXTREMES (°C)

	<u>MAXIMUM</u>	<u>MINIMUM</u>
YUKON TERRITORY	4.6 Mayo	-33.2 Komakuk
NORTHWEST TERRITORIES	5.7 Hay River	-43.2 Eureka
BRITISH COLUMBIA	12.4 Langara	-25.1 Fort Nelson
ALBERTA	12.7 Rocky Mountain House	-26.8 High Level
SASKATCHEWAN	10.6 Moose Jaw	-26.2 Buffalo Narrows
MANITOBA	9.4 Gretna	-22.7 Gillam A
ONTARIO	14.9 Windsor	-22.7 Upsala
QUEBEC	10.5 Sutton Junction	-22.7 Schefferville
NEW BRUNSWICK	8.1 St. Stephen	- 9.3 Moncton
NOVA SCOTIA	11.0 Western Head	- 7.8 Truro
PRINCE EDWARD ISLAND	5.9 Summerside	- 6.2 Charlottetown
NEWFOUNDLAND	5.7 Burgeo	-22.1 Churchill

ACROSS THE NATION

Warmest mean temperature	6.7	Cape St. James, BC
Coollest mean temperature	-37.5	Eureka, NWT

Ontario

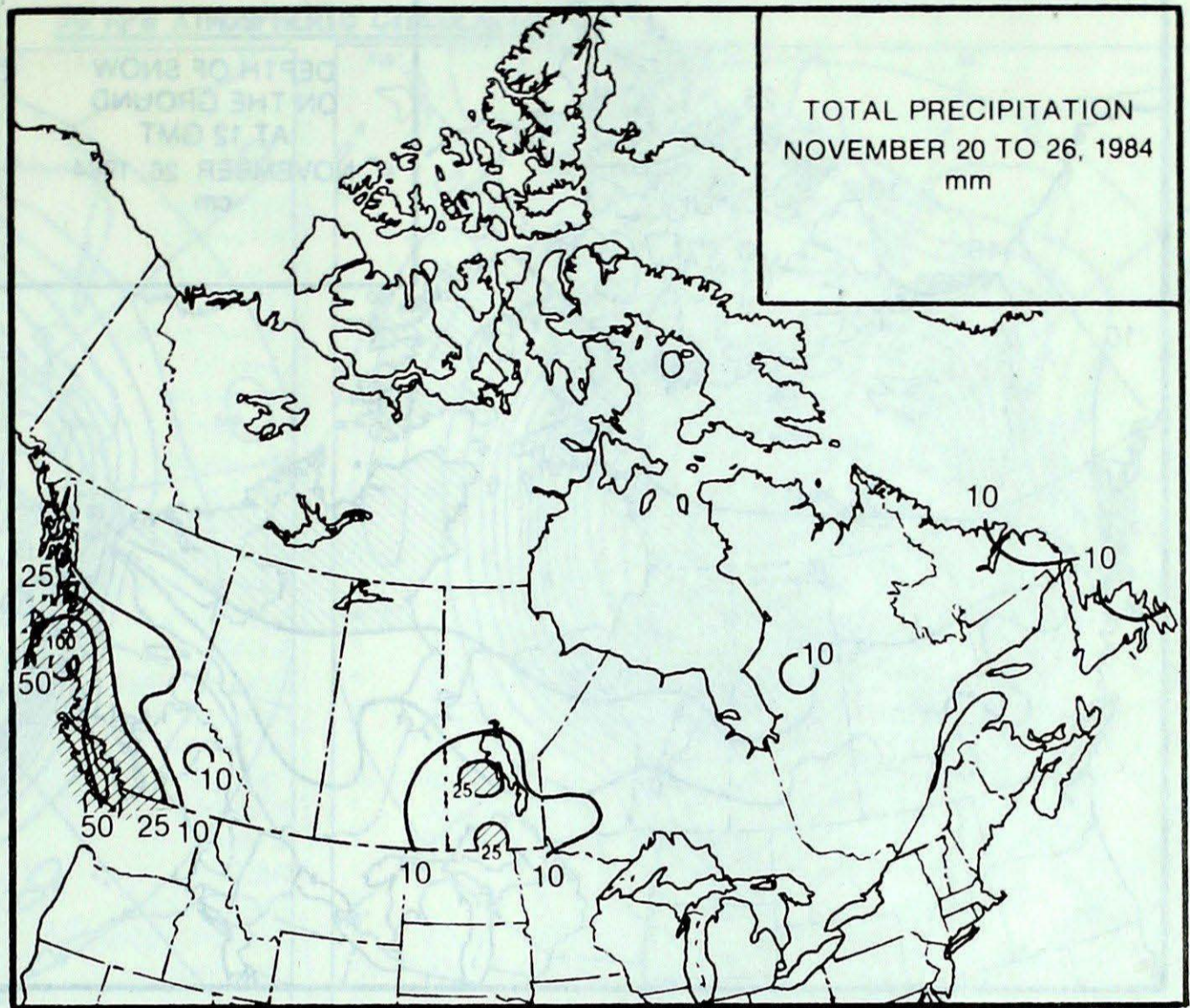
Mild weather conditions gradually infiltrated the Province, allowing maximum temperatures over the weekend under mostly sunny skies to peak near 10° in the South. Snow squall activity earlier in the week resulted in substantial snowfalls of between 10 and 30 cm in the traditional snow belt areas of southern and central Ontario. At least two ski resorts opened for the season several weeks earlier than usual. On November 26, the combination of dense fog and freezing temperatures created treacherous driving conditions during the morning rush hour period in southern Ontario. There were several multi-car accidents involving as many as 50 to 100 cars.

Québec

Cold weather conditions gave way as a mild southerly flow allowed daytime temperature to climb above freezing over the weekend. Minimum temperatures ranged from -5° in the South to the minus twenties in the North. Nighttime readings were favourable for snow making, and ski resorts in the Laurentians and the Eastern Townships are now operational. Dense fog blanketed portions of western Québec near the end of the period, disrupting air travel. Icy road conditions caused a number of automobile accidents.

Atlantic Provinces

The weather was cool and cloudy with some shower and snow flurry activity. Precipitation in general was well below normal with the exception of Newfoundland, which received up to 20 mm. On November 21, a one-centimetre snowfall at St. John, N.B., was just enough to cause numerous fender benders. The drought in southwestern Nova Scotia continues; Shelburne has received only 186.6 mm of rain since August, which is less than half of the normal for the same period. The reservoir which supplies Liverpool's fresh water could be depleted within several weeks if precipitation remains deficient.

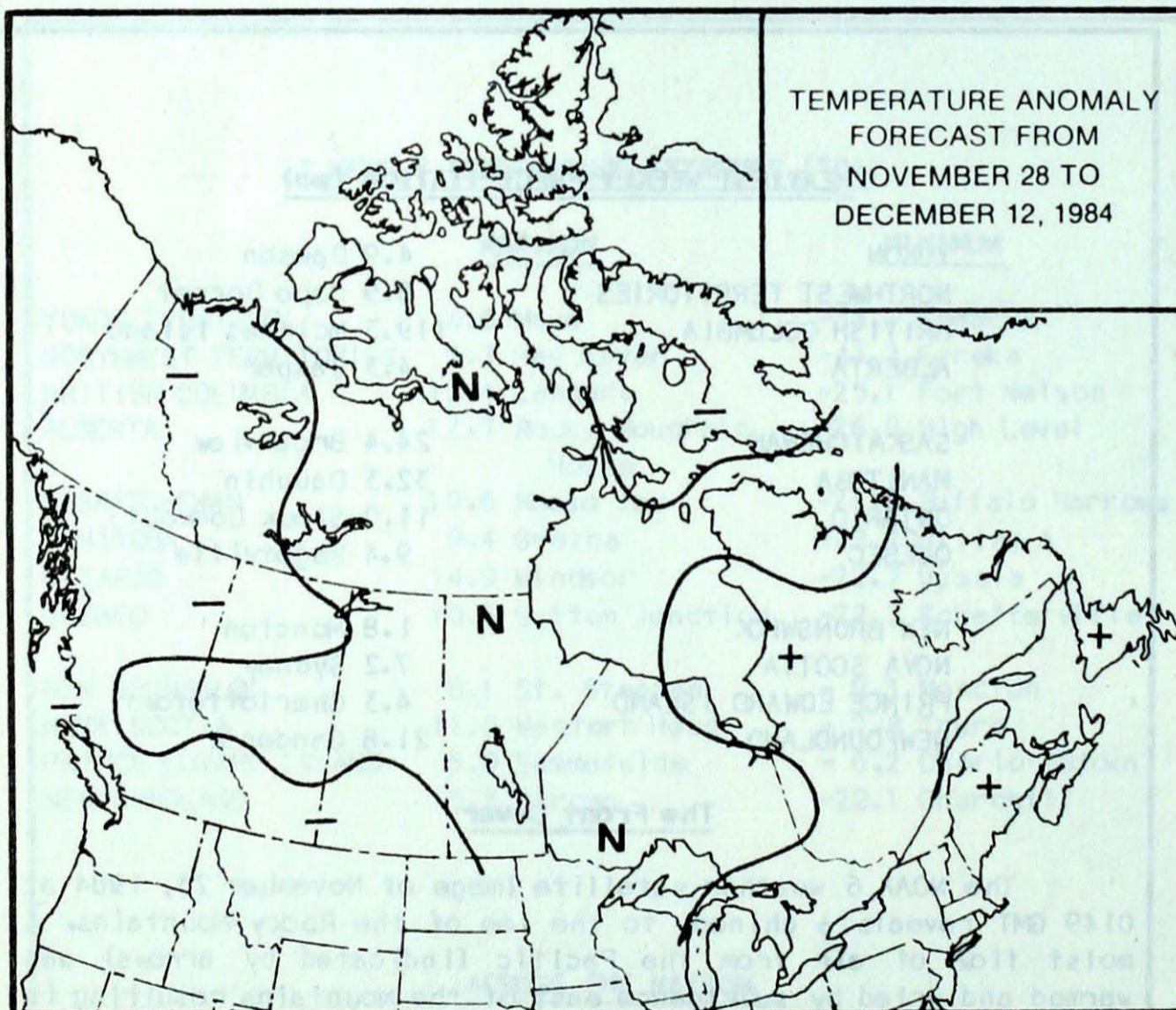
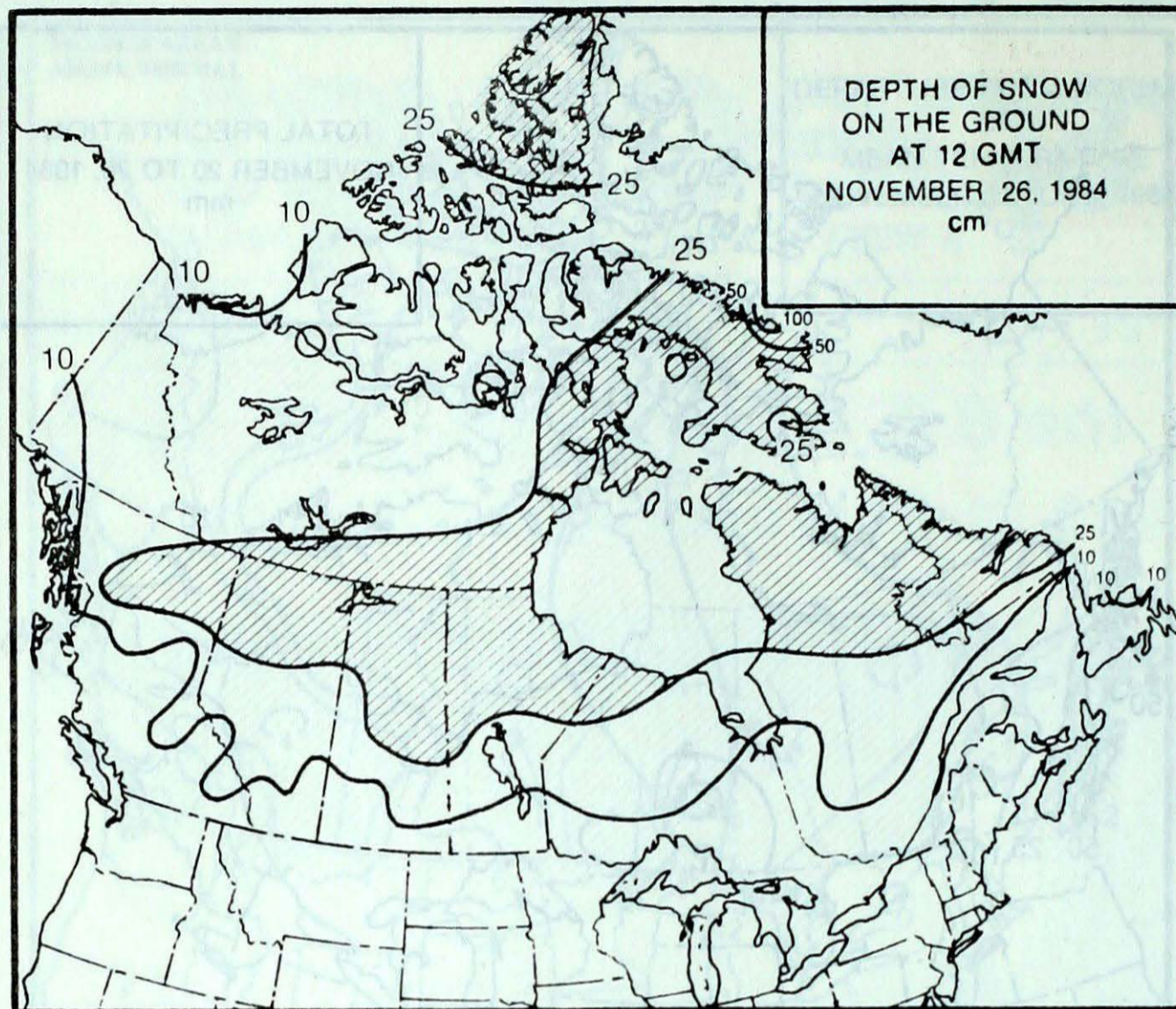


* HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	4.9 Dawson
NORTHWEST TERRITORIES	8.9 Cape Dorset
BRITISH COLUMBIA	119.3 McInnes Island
ALBERTA	4.3 Jasper
SASKATCHEWAN	24.4 Broadview
MANITOBA	32.3 Dauphin
ONTARIO	11.0 Sioux Lookout
QUEBEC	9.4 Bagotville
NEW BRUNSWICK	1.8 Moncton
NOVA SCOTIA	7.2 Sydney
PRINCE EDWARD ISLAND	4.3 Charlottetown
NEWFOUNDLAND	21.8 Gander A

The Front Cover

The NOAA 6 weather satellite image of November 23, 1984 at 0149 GMT reveals a chinook to the lee of the Rocky Mountains. A moist flow of air from the Pacific (indicated by arrows) was warmed and dried by subsidence east of the mountains resulting in a large, roughly triangular area of clear skies with a sharply defined western boundary. Temperatures at various locations are indicated. Chinooks, a common phenomenon contribute towards a slightly warmer and more windy climate in western Alberta and the Peace River country as compared to eastern sections of the Province.



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.

CLIMATIC PERSPECTIVES VOLUME 6

Managing Editor M.J. Newark
 Editor (English) A. Radomski
 Editor (French) A. Cailliet
 Staff Writer M. Skarpathiotakis
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 J. Rautenberg
 Word Processing U. Ellis, N. Khaja
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Regional Correspondents

Atl.: F. Amirault; Que.: J. Miron
 Central: F. Luciw; Ont.: B. Smith
 Western: W. Prusak; Pac.: N. Penny
 Yukon: H. Wahl; Ice: T. Mullane

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It began in 1978 and in 1983 was expanded to include a monthly supplement (formerly known as the Canadian Weather Review). The purpose of the publication is to make topical information available to the public concerning the Canadian climate and its socioeconomic impact.

Unsolicited articles are welcome but should be at maximum about 1500 words in length. They will be subject to editorial change without notice due to publishing time constraints. Black and white photographs can be used, but not colour. The contents may be reprinted freely with proper credit.

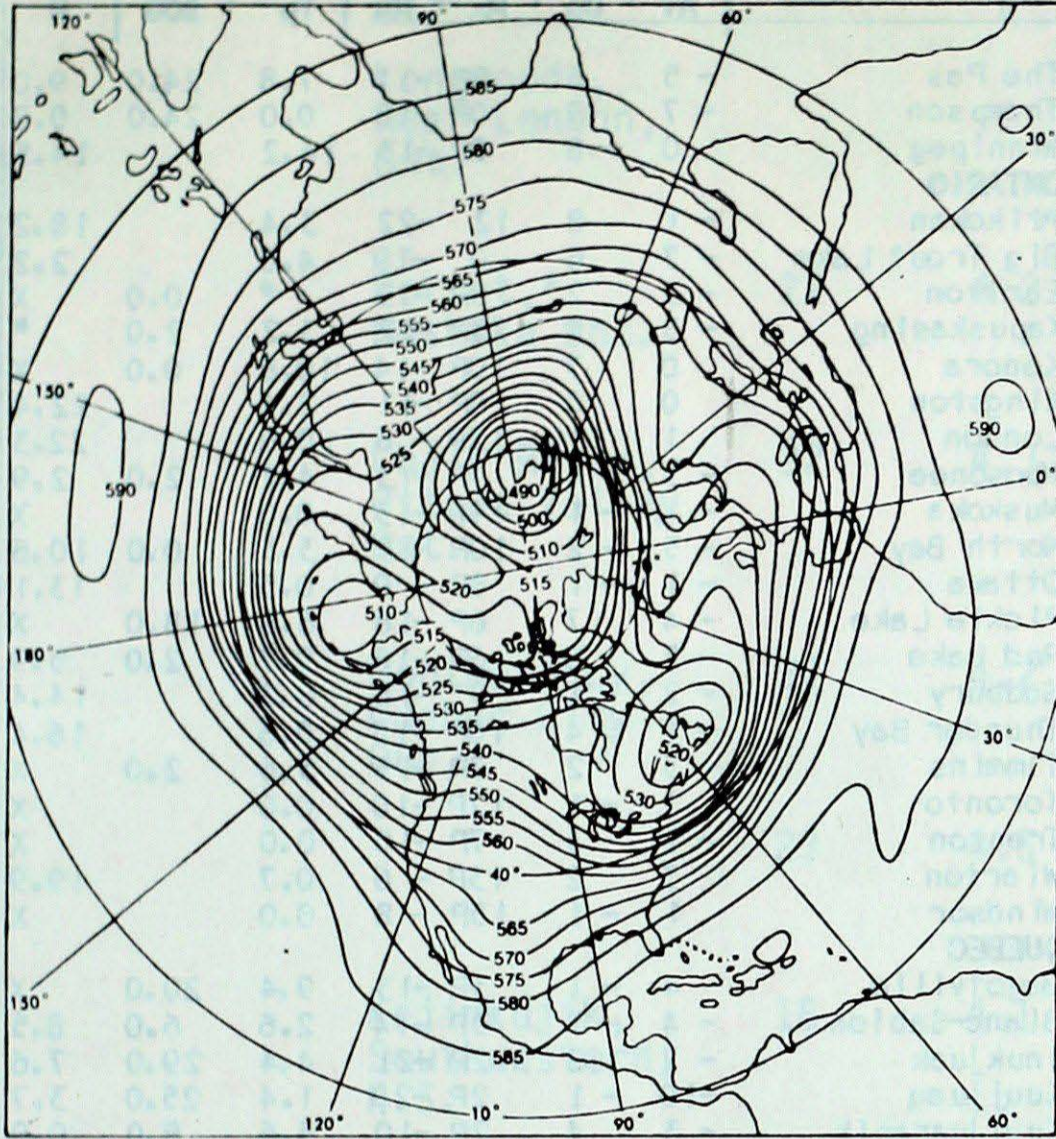
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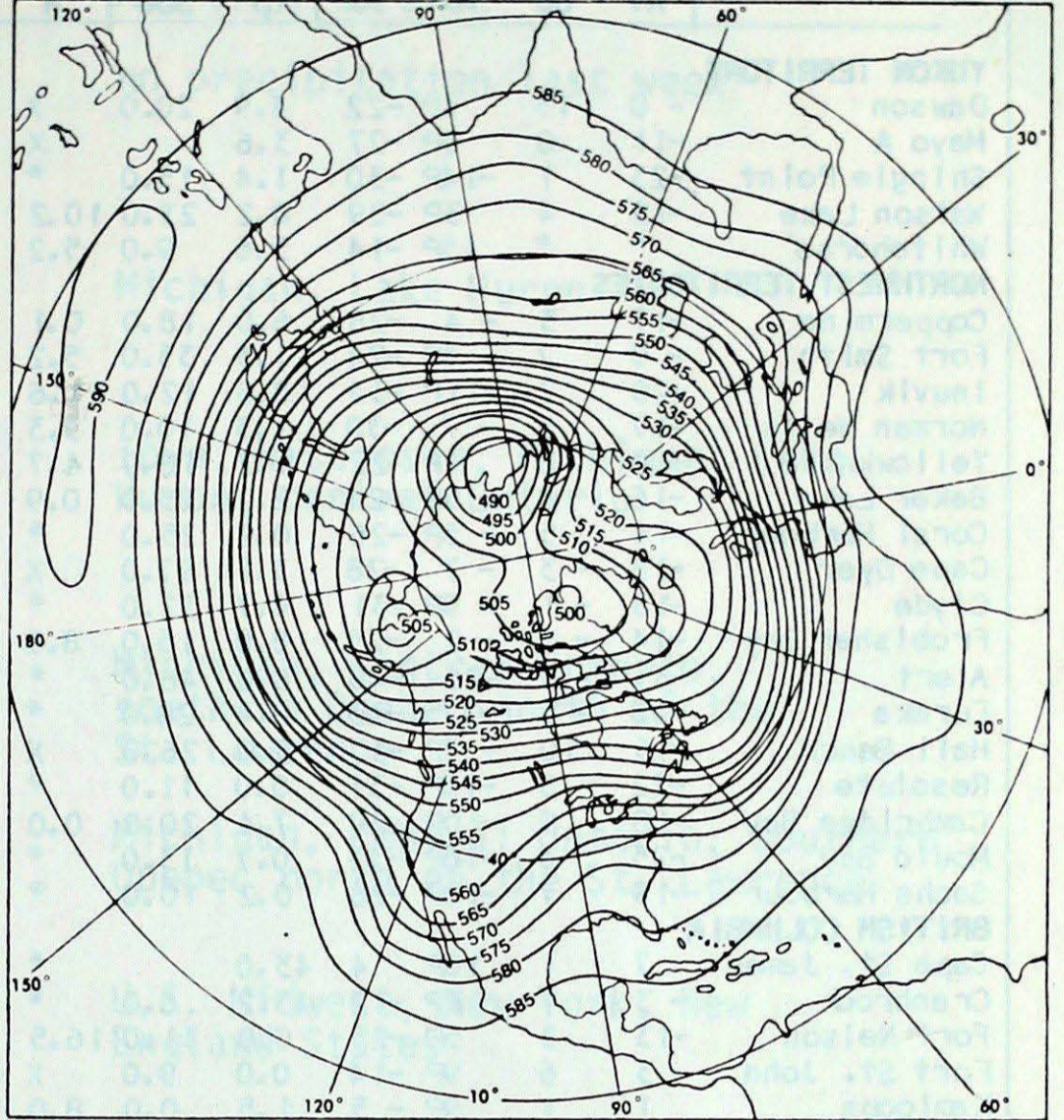
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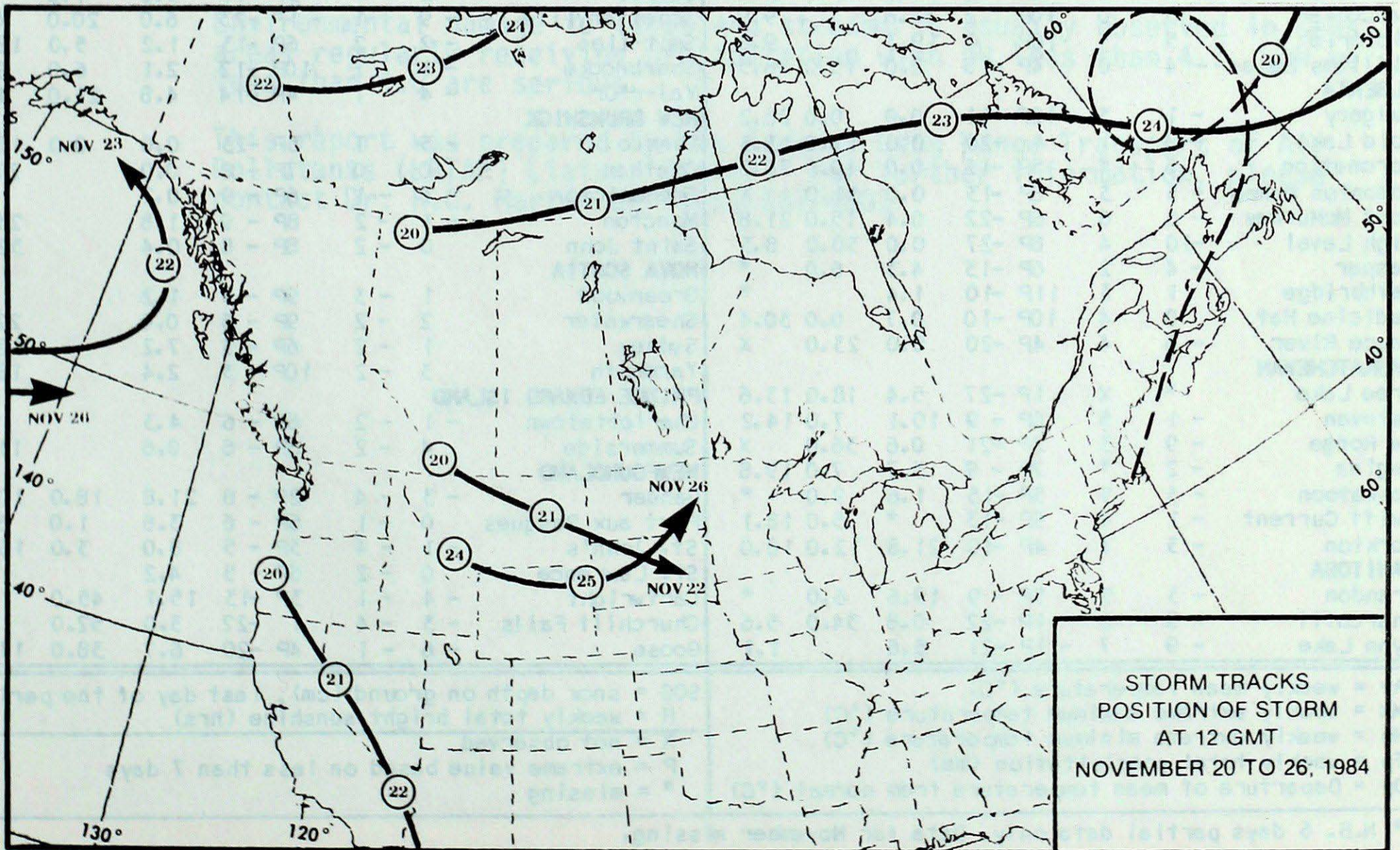
50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHTS (dam)
NOVEMBER 17 to 21, 1984



MEAN 50 KPa HEIGHTS (dam)
NOVEMBER 22 to 26, 1984



STORM TRACKS
POSITION OF STORM
AT 12 GMT
NOVEMBER 20 TO 26, 1984

* TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT NOVEMBER 27, 1984

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	-5	6	5P	-11	7.8	24.0	9.0
Dawson	-8	13	4P	-22	4.9	20.0	X	Thompson	-7	9	0P	-18	0.0	24.0	0.8
Mayo A	-11	8	5P	-27	3.6		X	Winnipeg	0	8	8P	-13	14.2		14.5
Shingle Point	-23	1	-14P	-30	1.4	15.0	*	ONTARIO							
Watson Lake	-13	4	3P	-29	0.2	23.0	10.2	Atikokan	-1	8	12	-22	3.4		18.2
Whitehorse	*	*	15P	-14	3.6	9.0	5.2	Big Trout Lake	-7	6	0	-19	4.8		2.2
NORTHWEST TERRITORIES								Earlton	-3	2	6P	-13	*	0.0	X
Coppermine	-17	5	-4	-28	6.0	18.0	0.1	Kapuskasing	-3	4	7P	-12	3.2	2.0	*
Fort Smith	-9	7	4P	-24	1.3	35.0	5.2	Kenora	0	7	10P	-14	10.8	0.0	X
Inuvik	-20	7	-11P	-33	8.6	12.0	11.6	Kingston	0	0	8P	-11	2.4		22.4
Norman Wells	-17	6	-7	-30	1.3	10.0	3.3	London	1	1	13P	-6	0.0		22.3
Yellowknife	-10	8	1P	-22	1.2	10.0	4.7	Mooseonee	-3	4	7P	-13	4.2	2.0	2.9
Baker Lake	-16	8	-5P	-24	2.2	25.0	0.9	Muskoka	-1	-1	11P	-13	0.0		X
Coral Harbour	-14	5	-5P	-26	0.2	25.0	*	North Bay	-5	-2	10P	-13	3.3	0.0	10.6
Cape Dyer	-18	-3	-7	-28	3.1	97.0	X	Ottawa	-1	-1	8P	-9	0.5		13.1
Clyde	-18	-1	-9P	-31	4.7	32.0	*	Pickle Lake	-4	7	6P	-18	6.6	18.0	X
Frobisher Bay	-14	-1	-2	-25	8.0	16.0	8.8	Red Lake	-2	8	6P	-18	9.7	2.0	5.9
Alert	-33	-7	-26	-40	0.0	46.0	*	Sudbury	-2	1	9	-14	0.2		14.4
Eureka	-38	-5	-27	-43	0.4	28.0	*	Thunder Bay	-1	4	10P	-15	0.6		16.4
Hall Beach	-15	10	-7P	-30	3.0	26.0	X	Timmins	-3	2	7P	-15	3.6	2.0	X
Resolute	-22	5	-15P	-31	0.0	11.0	*	Toronto	1	-1	12P	-10	0.0		X
Cambridge Bay	-18	9	-10P	-29	7.4	20.0	0.0	Trenton	-1	-3	7P	-10	0.0		X
Mould Bay	-25	3	-16P	-33	0.7	13.0	*	Warton	3	2	13P	-6	0.7		19.9
Sachs Harbour	-19	7	-10P	-28	0.2	10.0	*	Windsor	1	-1	15P	-8	0.0		X
BRITISH COLUMBIA								QUEBEC							
Cape St. James	7	1	10P	4	43.0		*	Bagotville	-4	-1	3P	-13	9.4	20.0	X
Cranbrook	-3	1	3P	-13	13.2	6.0	*	Blanc-Sablon	-4	-1	3P	-14	2.6	6.0	8.5
Fort Nelson	-13	3	5P	-25	0.0	31.0	16.5	Inukjuak	-7	2	2P	-21	4.4	29.0	7.6
Fort St. John	-3	6	9P	-14	0.0	9.0	X	Kuujuuaq	-10	-1	2P	-20	1.4	25.0	3.7
Kamloops	1	1	9P	-5	1.5	0.0	8.0	Kuujuarapik	-3	4	2P	-10	5.6	8.0	0.0
Penticton	3	1	7P	-4	2.2		7.9	Maniwaki	-3	-1	4	-11	1.0		5.6
Port Hardy	4	-1	9P	-2	86.5		6.7	Mont-Joli	-1	1	3P	-10	1.5	3.0	13.3
Prince George	-2	3	6P	-10	10.8	4.0	4.8	Montréal	0	-1	8	-7	0.4		9.1
Prince Rupert	4	2	10P	-2	65.7		4.1	Natashquan	-4	-1	3P	-11	0.4	0.0	10.0
Revelstoke	1	4	5P	-3	12.9	20.0	0.6	Nitchequon	-6	4	1P	-11	9.4	25.0	0.0
Smithers	-2	3	6P	-8	14.1	5.0	3.4	Québec	-2	-1	3P	-11	3.0	1.0	*
Vancouver	5	0	10P	2	38.6		9.9	Schefferville	-9	1	-1P	-23	6.0	20.0	4.8
Victoria	5	*	10P	0	19.3		9.6	Sept-Îles	-2	2	6P	-13	1.2	5.0	18.6
Williams Lake	-4	0	4P	-15	2.0	15.0	18.5	Sherbrooke	-1	1	10P	-12	2.1	6.0	9.0
ALBERTA								Val-d'Or	-4	1	4P	-14	4.8	21.0	1.3
Calgary	-1	3	12P	-11	0.0	0.0	26.2	NEW BRUNSWICK							
Cold Lake	-8	1	4	-20	0.0	17.0	13.5	Charlo	-3	1	5P	-23	0.0	0.0	16.0
Coronation	6	*	5P	-16	0.0	10.0	30.2	Chatham	0	0	7P	-8	0.0		27.5
Edmonton N. Am.	-5	3	8P	-13	0.0	11.0	X	Fredericton	-1	-1	6P	-9	0.2		*
Fort McMurray	-6	6	6P	-22	0.4	15.0	21.8	Moncton	-1	-2	8P	-9	1.8		23.5
High Level	-10	4	8P	-27	0.0	30.0	8.3	Saint John	0	-2	8P	-8	0.4		32.5
Jasper	-4	2	6P	-13	4.3	6.0	*	NOVA SCOTIA							
Lethbridge	1	3	11P	-10	1.4		*	Greenwood	1	-3	9P	-5	1.2		X
Medicine Hat	0	4	10P	-10	0.7	0.0	30.4	Shearwater	2	-2	9P	-5	0.0		22.8
Peace River	-8	4	4P	-20	0.0	23.0	X	Sydney	1	-2	6P	-3	7.2		12.0
SASKATCHEWAN								Yarmouth	3	-2	10P	-3	2.4		18.6
Cree Lake	*	X	1P	-27	5.4	18.0	13.6	PRINCE EDWARD ISLAND							
Estevan	-1	5	6P	-9	10.1	7.0	14.2	Charlottetown	-1	-2	6P	-6	4.3		*
La Ronge	-9	3	2P	-21	0.6	36.0	X	Summerside	4	-2	6P	-6	0.6		11.4
Regina	-2	*	7P	-9	5.7	7.0	19.8	NEWFOUNDLAND							
Saskatoon	-3	5	5P	-15	1.6	9.0	*	Gander	-3	-4	2P	-8	21.8	18.0	10.1
Swift Current	-1	4	9P	-13	*	5.0	18.1	Port aux Basques	0	-1	6P	-6	3.6	1.0	6.5
Yorkton	-3	7	4P	-10	21.8	12.0	18.0	St. John's	-1	-4	3P	-5	8.0	3.0	16.4
MANITOBA								St. Lawrence	0	-2	6P	-5	4.2		X
Brandon	-3	5	5P	-9	19.6	6.0	*	Cartwright	-4	-1	3P	-13	15.1	45.0	X
Churchill	-9	6	1P	-22	0.8	34.0	5.6	Churchill Falls	-3	-4	1	-22	3.0	52.0	X
Lynn Lake	-9	7	-1P	-21	5.6		1.1	Goose	-6	-1	4P	-20	6.7	38.0	14.0

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

* N.B. 6 days partial data only. Data for November missing.

ACID RAIN REPORT ISSUED BY ENVIRONMENT CANADA
FOR NOV. 18-NOV. 24, 1984

SITE	DAY	pH	AIR PATH TO SITE
Longwoods, near London, Ont.			no precipitation last week
Dorset,* Muskoka Ont.	22	4.2	Michigan, Lake Huron
Chalk River, Ottawa Valley, Ont.	22	4.3	Iowa, Wisconsin, Michigan, Lake Huron, central Ontario
Montmorency, Quebec City Que,	22	4.2	Michigan, central Ontario, southern Quebec north of the St. Lawrence
	23	4.5	Michigan, central Ontario, southern Quebec north of the St. Lawrence
Kejimikujik, Southwestern, N.S.	18	4.1	U.S. Midwest, New York, New England States
	20	4.9	Quebec, New Brunswick

* Data for Dorset supplied by the Ontario Ministry of Environment.

Environmental damage to lakes and streams is usually observed in sens areas regularly receiving precipitation with pH less than 4.7. pH re less than 4.0 are serious.

This report was prepared by the Federal Long Range Transport of Air Pollutants (LRTAP) Liaison Office. For further information, please contact Dr. H.C. Martin at (416) 667-4803