

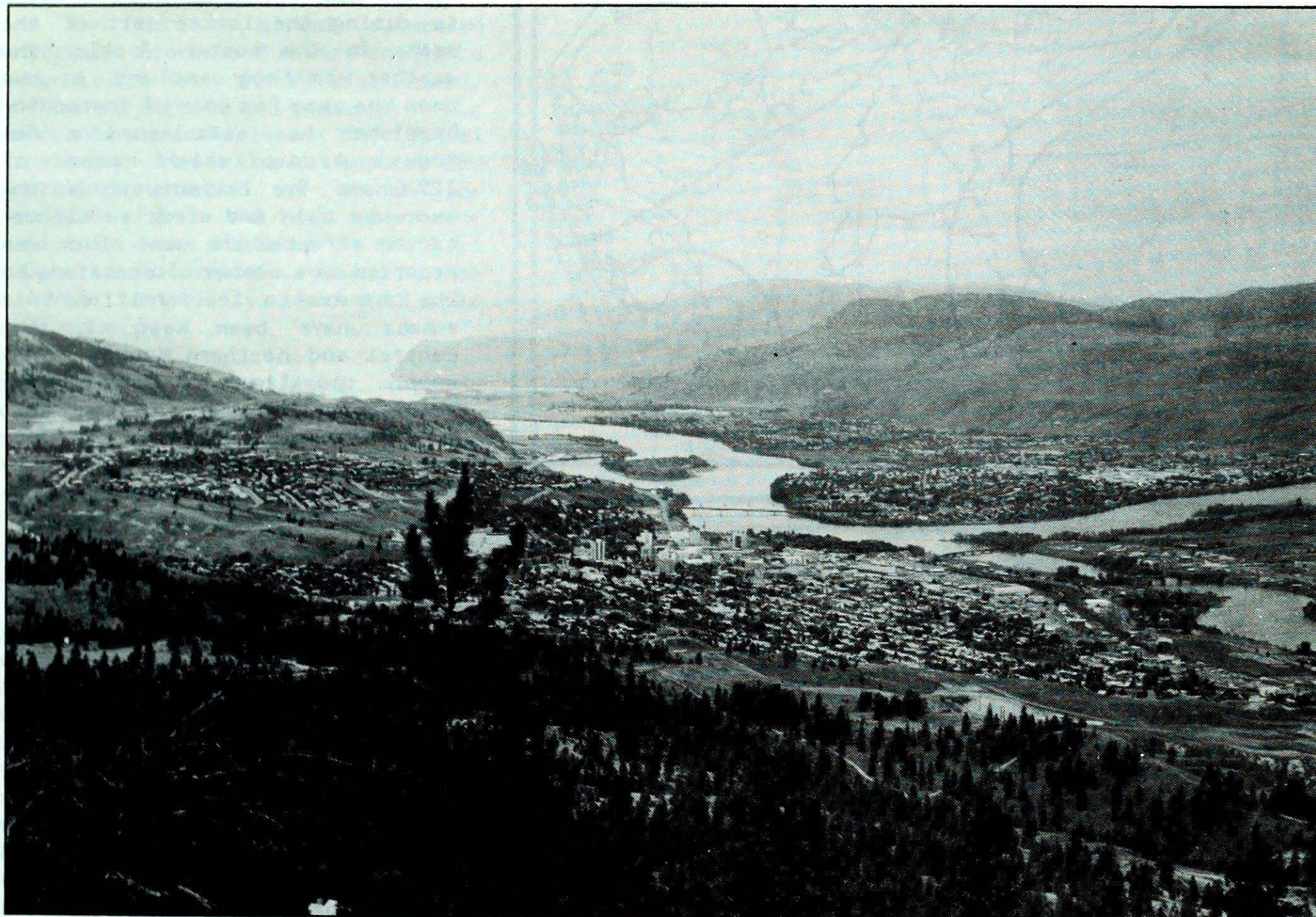
Climatic Perspectives



A weekly review of Canadian climate

Aug. 26 to Sept. 1, 1986

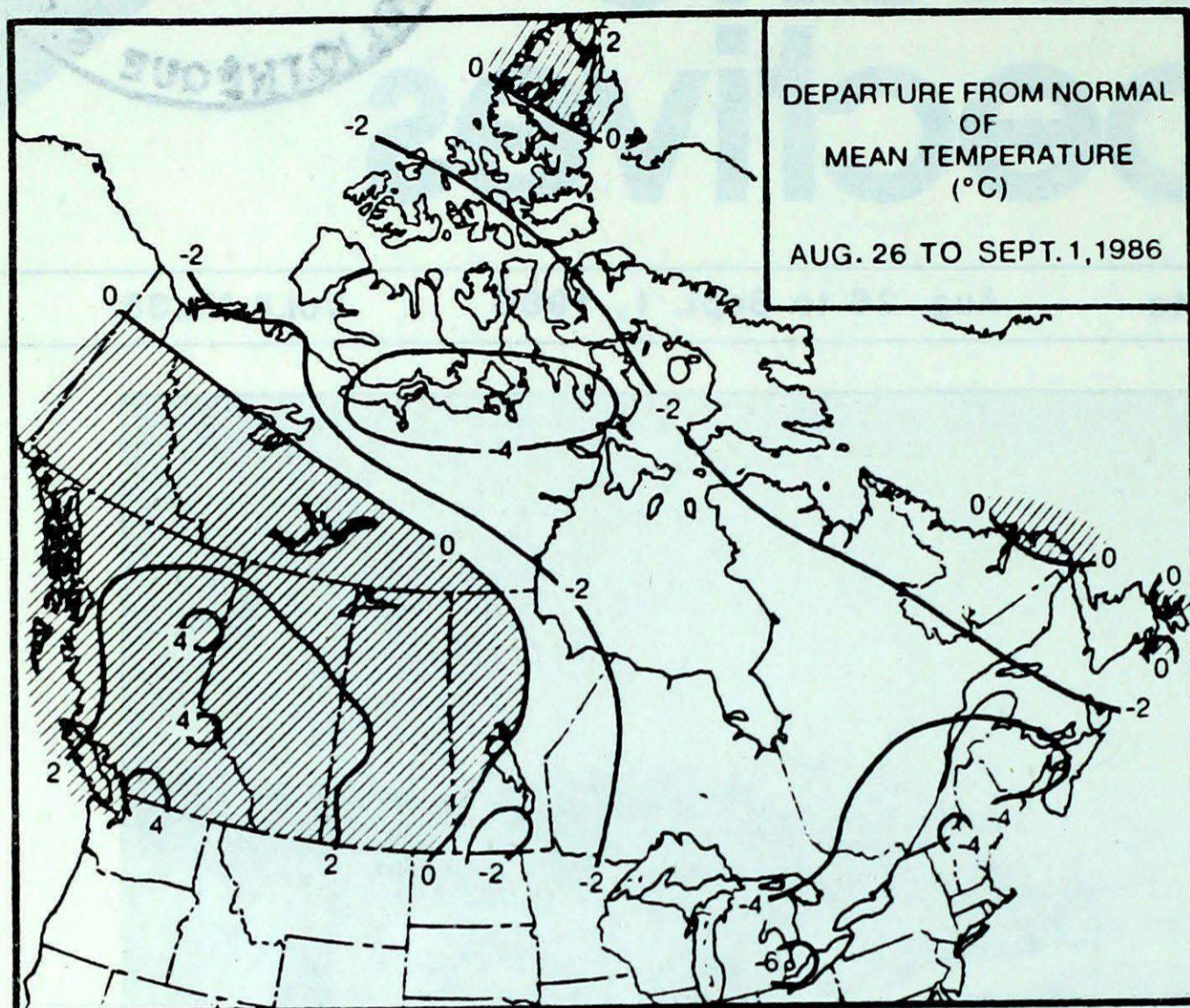
Vol.8 No.35



Kamloops, located in the southern interior of B.C. is situated in a wide picturesque valley at the confluence of the north and south Thompson River. The weather office and airport, Fulton Field, are located on a flat plain north of the Thompson River near the western outskirts of the city. Photograph is looking west from Rose Hill. More information on page 3. Photo courtesy Kamloops Museum and Archives.

- ***Torrential rains again hit Southern Ontario***
- ***Record dry August at Vancouver and Victoria***
- ***Frost in Central and Eastern Canada***

TEMPERATURE



WEEKLY TEMPERATURE EXTREME (C)

	MAXIMUM		MINIMUM	
BRITISH COLUMBIA	LYTTON	38	DEASE LAKE	-2
YUKON TERRITORY	WATSON LAKE	25	SHELDON	-10
NORTHWEST TERRITORIES	HAY RIVER	29	MOULD BAY	-10
ALBERTA	MEDICINE HAT	34	HIGH LEVEL	-1
SASKATCHEWAN	MOOSE JAW	35	LA RONGE	-2
MANITOBA	DAUPHIN	33	THOMPSON	-3
ONTARIO	TORONTO INT'L	26	ARMSTRONG	-2
QUEBEC	BAGOTVILLE	24	GASPE	-2
	ROBERVAL			
NEW BRUNSWICK	CHATHAM	25	CHARLO	0
NOVA SCOTIA	SHELBURNE	22	GREENWOOD	2
	SYDNEY			
PRINCE EDWARD ISLAND	SUMMERSIDE	21	SUMMERSIDE	6
NEWFOUNDLAND	GOOSE	26	WABUSH LAKE	1

ACROSS THE NATION

WARMEST MEAN TEMPERATURE	23	LYTTON	BC
COOLEST MEAN TEMPERATURE	-4	MOULD BAY	NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

Autumn colours have begun showing at higher elevations of the Yukon, bringing to an end the forest fire season. Temperatures in the Mackenzie District climbed to the record high twenties. Showers moved in during the latter part of the week. In the eastern Arctic, the weather was foggy and wet, as has been the case for most of the month. Frobisher has established a new August precipitation record of 129.6 mm. The latter part of the week was cold and windy as disturbances affected the east. Snow was reported on a number of occasions in the high Arctic. Ice conditions this summer have been heavy in the central and northern Arctic. Re-supply operations to Eureka have been cancelled. The cruise ship World Discoverer is in Resolute awaiting ice breaker assistance before attempting the passage westward. New ice is already forming.

British Columbia

Very warm and sunny weather conditions gradually gave way to a more unsettled regime. Over the weekend, shower activity was more pronounced in the southern interior valleys, effectively lowering the forest fire hazard. Harvesting is in progress in the Peace River District. Fruits are ripening well in the southern fruit growing areas. Both Victoria and Vancouver have not had any measurable precipitation for 48 days, making this the driest August ever recorded.

Prairies

A large pool of Arctic air progressed slowly eastwards. Temperatures in the east remained on the cool side through the first half of the week, and frost was reported in some areas of Saskatchewan and Manitoba. A southerly back flow pumped a much warmer airmass into Alberta, and eventually eastwards. Many daily maximum temperature records were broken during the middle of the period, with readings climbing into the thirties. Sunshine was plentiful during the week; rain-showers were scattered and light.

Ontario

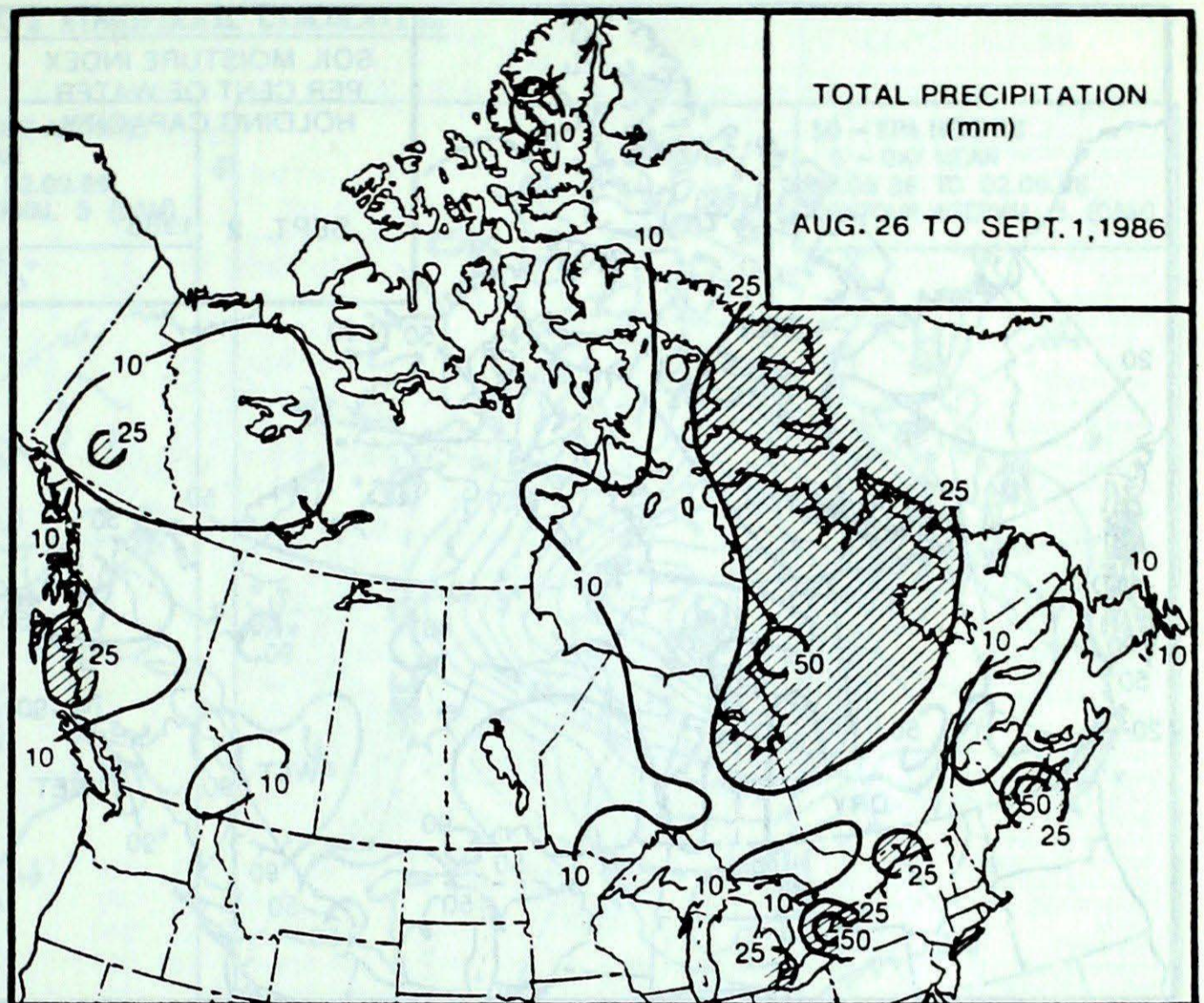
Torrential rains once again hit southern Ontario during the night of August 26-27. The thunderstorms developed along a sharp cold front, the leading edge of an Arctic air-mass which eventually encompassed the province. The storms dumped 40 to 80 millimetres of rain in just a few hours on already saturated terrain. Creeks and rivers unable to handle the heavy runoff over flowed, flooding streets and highways in the Toronto area. Following the frontal passage, temperatures across the province dropped to record low values. Frost and even some snow flurries were reported in northern Ontario. Waterspouts, caused by low level instability, occurred over Georgian Bay.

Québec

An Arctic airmass covered southern Quebec during the middle of the week, giving cool but predominantly sunny weather. Ground frost occurred in the farming districts of the south, although little damage was reported. The mercury dipped to -2°C in the Eastern Townships and at Gaspé. Twenty daily minimum temperature records were broken this week. Rainfalls were relatively light in the south. In the north, disturbances produced precipitation nearly every day. Totals varied between 15 and 40 millimetres. Kujjuarapik received 50 mm of rain on August 27.

Atlantic Provinces

In the Maritimes, the week was generally sunny and cool, as a modified Arctic airmass affected the region. Frost was reported in some areas of New Brunswick. At Harcourt, the mercury dipped to -2°C on the 29th. Heaviest precipitation occurred on the 27th, and in New Brunswick rainfalls ranged up to 50 mm. In Newfoundland, unsettled weather during the week gave way to a pleasant Labour Day weekend. Strong winds and rain buffeted the Island on the 28th. A low pressure system affected Labrador early in the week, giving cloudy, rainy weather. Sunshine returned after mid-week, with day time temperatures climbing into the mid-twenties.

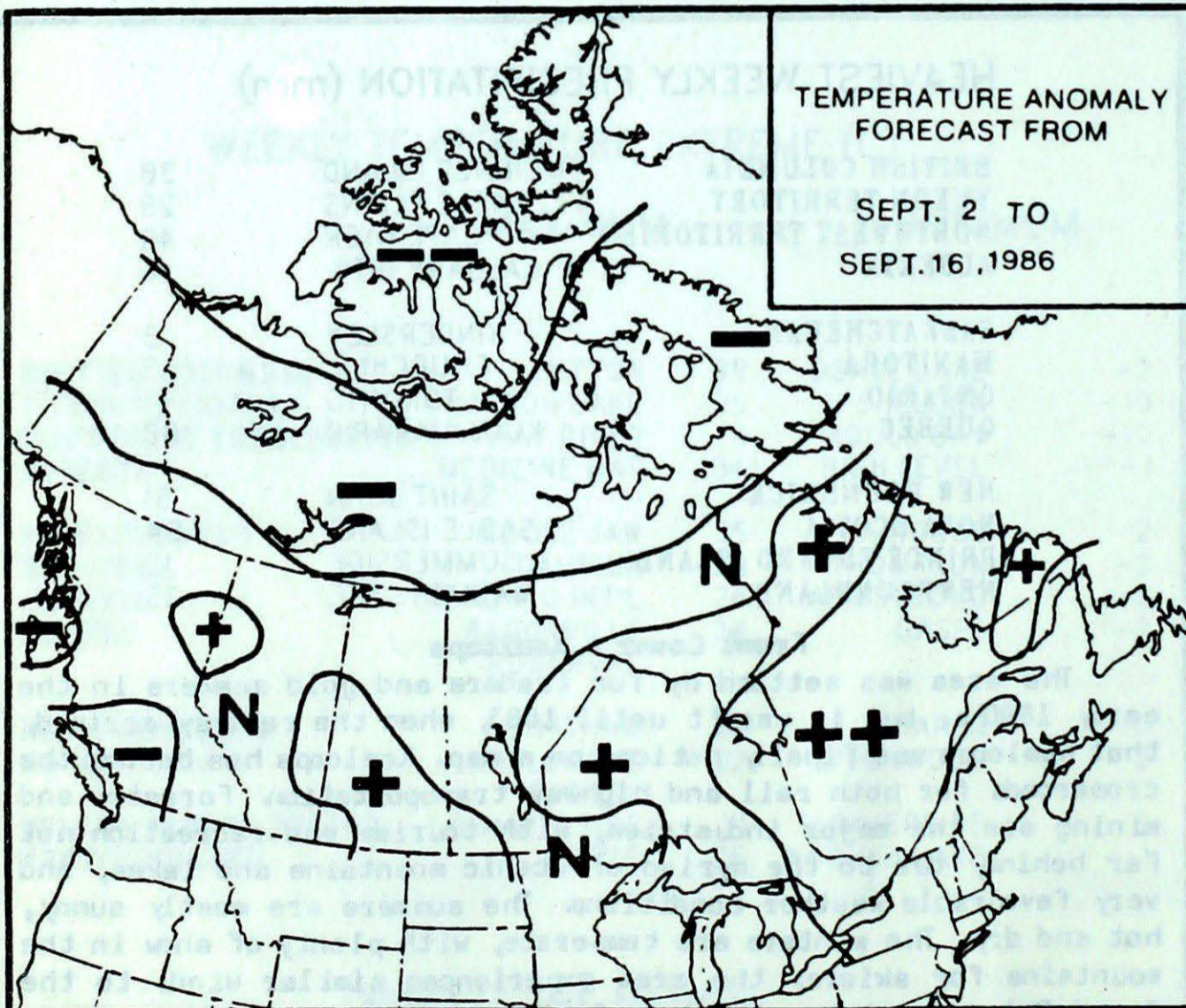
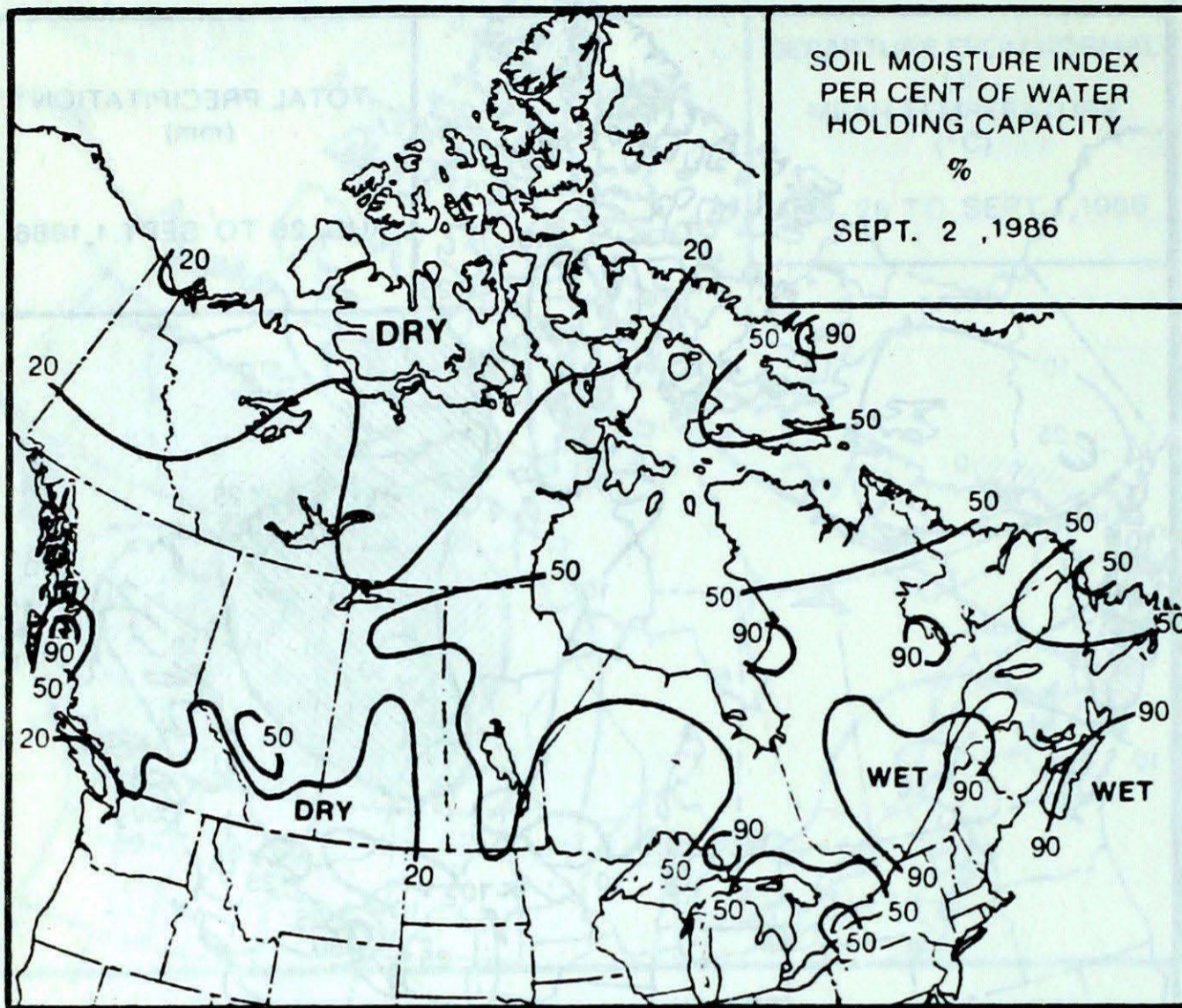


HEAVIEST WEEKLY PRECIPITATION (mm)

BRITISH COLUMBIA	MCINNES ISLAND	38
YUKON TERRITORY	EAGLE PLAINS	28
NORTHWEST TERRITORIES	CAPE DYER	49
ALBERTA	CALGARY INT'L	16
SASKATCHEWAN	KINDERSLEY	3
MANITOBA	CHURCHILL	3
ONTARIO	TORONTO	61
QUEBEC	KUUJUARAPIK	88
NEW BRUNSWICK	SAINT JOHN	51
NOVA SCOTIA	SABLE ISLAND	84
PRINCE EDWARD ISLAND	SUMMERSIDE	13
NEWFOUNDLAND	WABUSH LAKE	35

Front Cover - Kamloops

The area was settled by fur traders and gold seekers in the early 1800's, but it wasn't until 1883, when the railway arrived, that Kamloops was finally noticed on a map. Kamloops has become the crossroads for both rail and highway transportation. Forestry and mining are the major industries, with tourism and recreation not far behind, due to the myriad of scenic mountains and lakes, and very favourable weather conditions. The summers are mostly sunny, hot and dry. The winters are temperate, with plenty of snow in the mountains for skiers; the area experiences similar winds to the famed Chinooks of the Rockies. In the summer, the weather office staff of four, provide support to forest fire protection services. Special recreation forecasts are broadcast to the more than 100,000 people vacationing in the popular Shuswap Lakes. In the winter, special forecasts support B.C. highway maintenance and avalanche programs. Weather services to the local community are provided through a dedicated local cable TV weather channel, which serves a population of some 65,000.



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.

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

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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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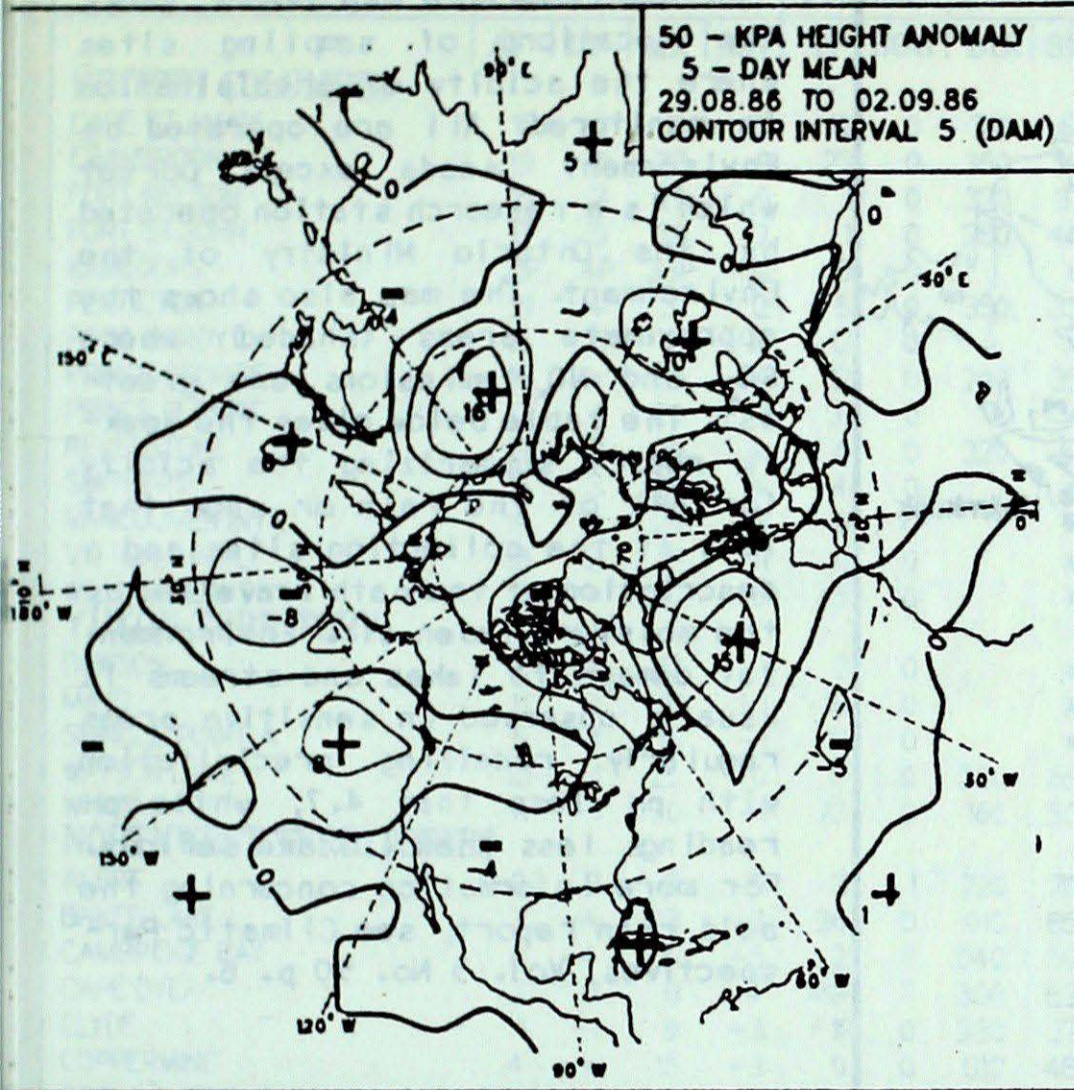
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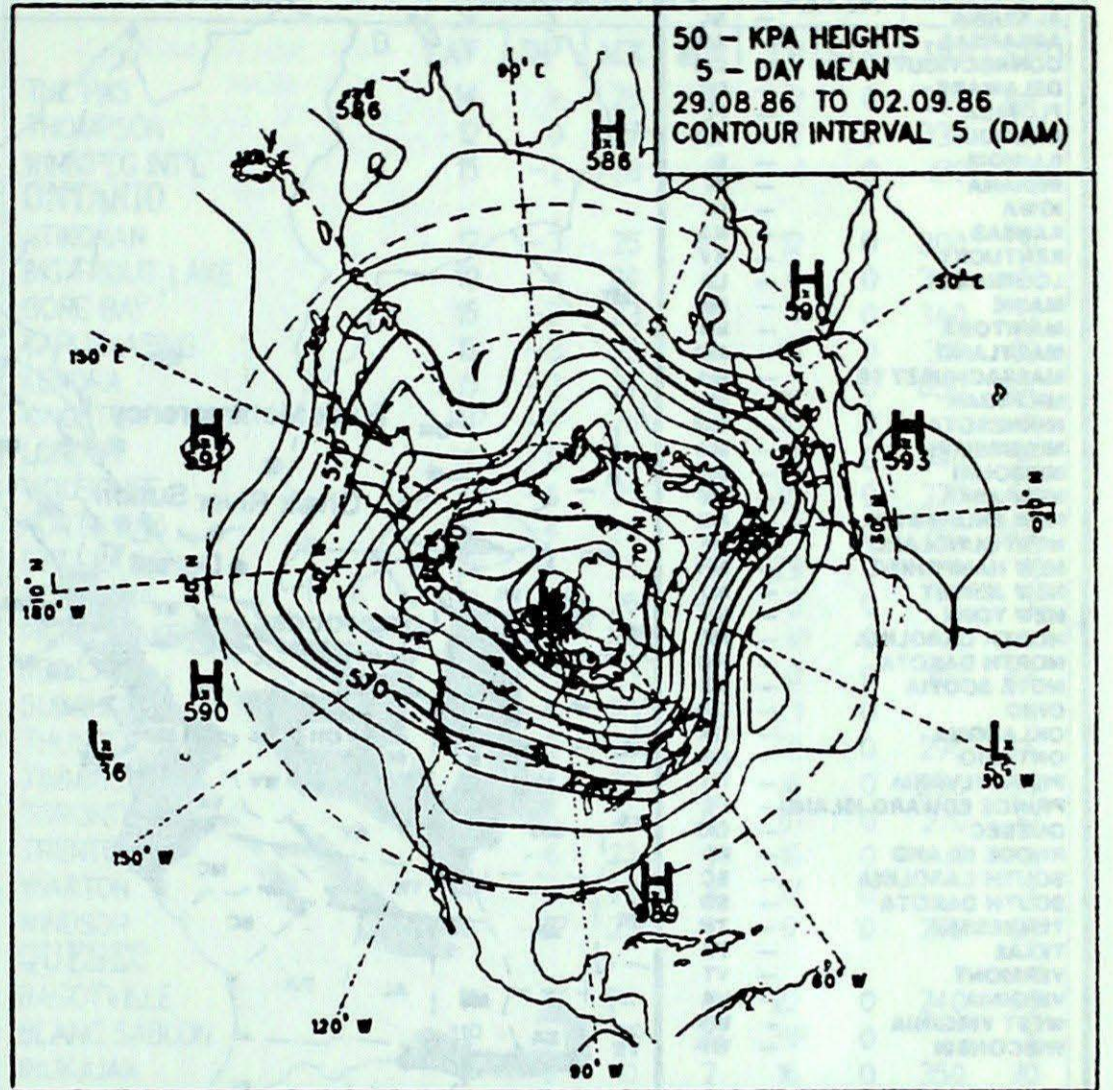
Weekly issue including	
monthly supplement:	\$35.00
Monthly issue only:	\$10.00

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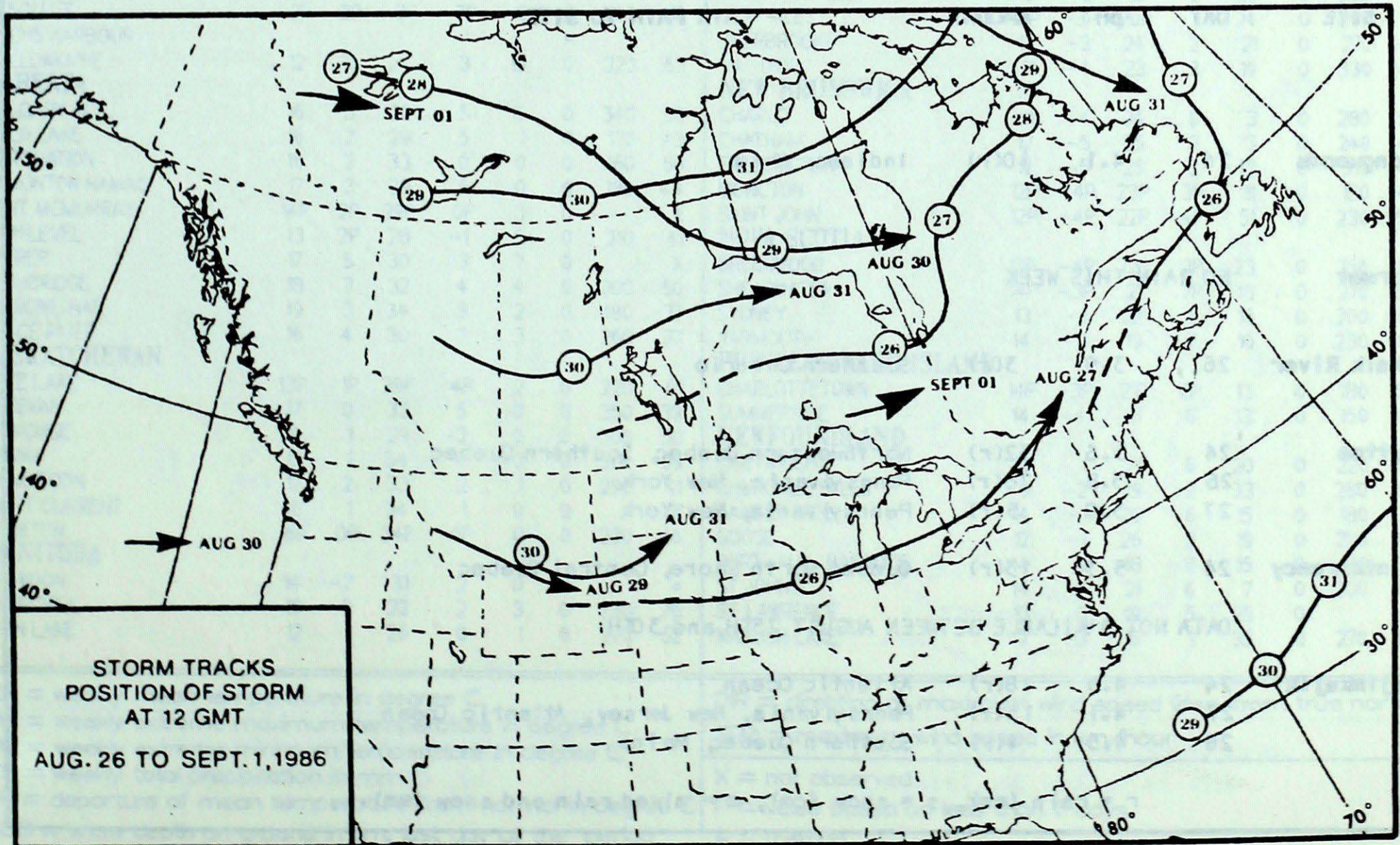
50 KPa ATMOSPHERIC CIRCULATION



MEAN 50 KPa HEIGHT ANOMALY (dam)
August 29 to September 2, 1986



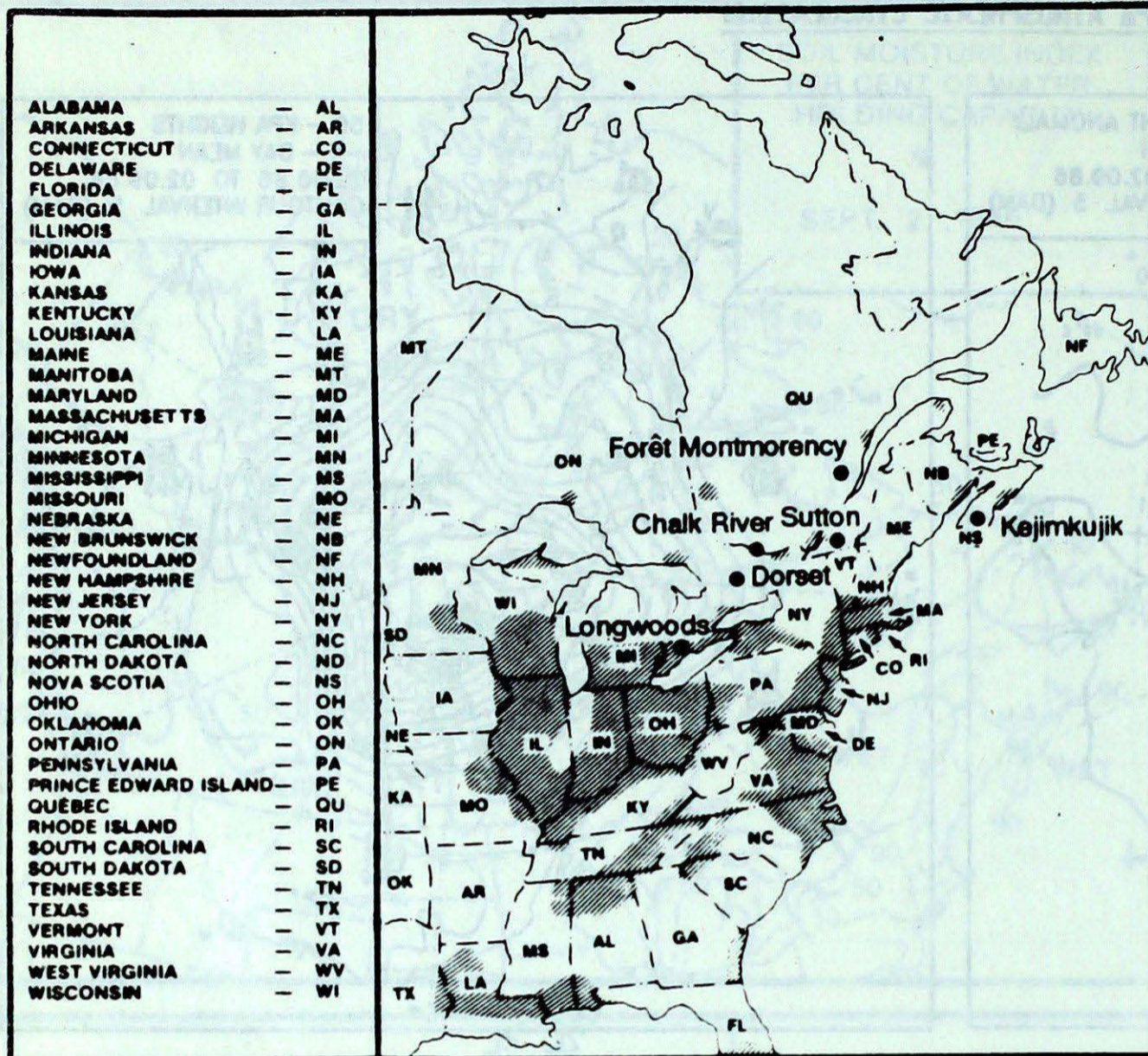
MEAN 50 KPa HEIGHTS (dam)
August 29 to September 2, 1986



STORM TRACKS
POSITION OF STORM
AT 12 GMT
AUG. 26 TO SEPT. 1, 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 SO₂ 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.

AUGUST 24 TO AUGUST 30, 1986

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
Longwoods	26	4.1	10(r)	Indiana, Ohio
Dorset	NO RAIN THIS WEEK			
Chalk River	26	3.9	3(r)	Southern Ontario
Sutton	24	5.6	32(r)	Northwestern Quebec, Southern Quebec
	26	3.8	26(r)	Pennsylvania, New York
	27	3.9	5(r)	Pennsylvania, New York
Montmorency	24	5.3	13(r)	Quebec North Shore, Central Quebec
DATA NOT AVAILABLE BETWEEN AUGUST 25TH and 30TH				
Kejimikujik	24	4.5	18(r)	Atlantic Ocean
	27	4.1	15(r)	Pennsylvania, New Jersey, Atlantic Ocean
	28	4.5	4(r)	Southern Quebec, Maine

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

TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT SEPTEMBER 2, 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
BRITISH COLUMBIA									THE PAS	14	*	28	4	2	0	260	44
CAPE ST. JAMES	15	1	19	12	16	0	310	61	THOMPSON	12	0	27	-3	2	0	330	43
CRANBROOK	19	4	33	9	23	0	360	59	WINNIPEG INT'L	15	-2	28	3	1	0	180	43
FORT NELSON	15	3	29	5	1	0	320	37	ONTARIO								
FORT ST. JOHN	17	5	29	7	1	0	260	46	ATIKOKAN	12	-3	25	-1	12	0	300	31
KAMLOOPS	21P	4P	33P	13P	8	0		*	BIG TROUT LAKE	10	*	24	2	4	0	340	61
PENTICTON	21	4	31	12	5	0	350	33	GORE BAY	15	-3	23	8	4	0	340	37
PORT HARDY	15	1	21	8	12	0		*	KAPUSKASING	12	-3	23	2	13	0	310	69
PRINCE GEORGE	16	*	29	4	12	0	290	35	KENORA	15	-2	24	5	2	0	030	44
PRINCE RUPERT	13	1	20	7	31	0		*	KINGSTON	14P	-5P	21P	6P	10	0		X
REVELSTOKE	19	3	29	10	6	0	320	41	LONDON	14	-6	25	3	12	0	340	50
SMITHERS	15	3	28	4	4	0		*	MOOSONEE	10	-4	25	-1	35	0	220	50
VANCOUVER INT'L	19	3	26	14	0	0		*	NORTH BAY	13	-4	23	2	1	0	240	44
VICTORIA INT'L	18	3	31	11	0	0		*	OTTAWA INT'L	15	-4	25	3	29	0		X
WILLIAMS LAKE	18	*	30	6	5	0		X	PETAWAWA	12	-5	26	-1	3	0		X
YUKON TERRITORY									PICKLE LAKE	15P	0P	24P	3P	1P	0		*
DAWSON	12	*	22	-1	2	0		*	RED LAKE	14	-1	25	4	0	0	250	44
MAYO	11	1	21	-1	10	0		X	SUDBURY	13	-4	25	1	1	0		X
SHINGLE POINT A	5	-1	15	-1	19	0		*	THUNDER BAY	13	-2	25	2	21	0	290	44
WATSON LAKE	12	1	25	0	17	0	330	65	TIMMINS	11	-4	23	1	16	0	230	56
WHITEHORSE	11	1	20	-1	23	0	160	50	TORONTO INT'L	14	-5	26	4	61	0	270	61
NORTHWEST TERRITORIES									TRENTON	14	-6	23	5	16	0		X
ALERT	0	2	8	-5	3	1	220	70	WIARTON	14	-5	23	3	17	0		X
BAKER LAKE	3	-4	13	-3	36	0	010	85	WINDSOR	16	-7P	25	7	17	0	240	63
CAMBRIDGE BAY	0	-4	4	-5	2	0	040	59	QUEBEC								
CAPE DYER	2	0	8	-4	49P	7	300	83	BAGOTVILLE	11	-4	24	1	22	0	240	50
CLYDE	1	-1	9	-3	1P	0	330	37	BLANC SABLON	11P	*	17P	2P	21P	0		X
COPPERMINE	4	*	15	-3	9	0	010	48	INUKJUAK	6	-2	10	2	16	0	350	70
CORAL HARBOUR	3P	-3P	9P	-3P	9	0		X	KUUVJUAQ	7P	-2P	14P	2P	29	0	290	61
EUREKA	-1	-2	4	-9	11	6	330	76	KUUVJUARAPIK	7	-3	21	3	88	0	330	78
FORT SMITH	13	1	29	-2	3	0		X	MANIWAKI	12	-5	23	0	3	0	290	33
FROBISHER BAY	5	-1	10	-1	30	0	320	85	MONT JOLI	13P	-2P	23P	4P	5	0	240	70
HALL BEACH	1P	-2P	6P	-3P	5	0	340	52	MONTREAL INT'L	15	-5	24	3	29	0	290	43
INUVIK	7	-1	17	0	9	0		X	NATASHQUAN	11	-1	19	2	9	0	260	59
MOULD BAY	-4	-3	0	-10	2	0		X	QUEBEC	13	-4	24	4	12	0	280	56
NORMAN WELLS	11	1	23	1	11	0		X	SCHIEFFERVILLE	8	-2	15	2	33	0	230	50
RESOLUTE	-2P	-3P	3P	-7P	6	0	040	67	SEPT-ILES	10P	-3P	20P	1	24	0	290	57
SACHS HARBOUR								*	SHERBROOKE	12	-3	24	2	21	0	270	43
YELLOWKNIFE	12	0	24	3	15	0	320	63	VAL D'OF	11	-4	23	3	19	0	330	48
ALBERTA									NEW BRUNSWICK								
CALGARY INT'L	16	3	30	5	16	0	340	50	CHARLO	11	-4	24	0	3	0	280	50
COLD LAKE	16	2	29	5	1	0	170	43	CHATHAM	12	-5	25	2	3	0	240	48
CORONATION	16	2	33	0	0	0	160	50	FREDERICTON	12	-5	25	2	13	0	310	48
EDMONTON NAMAQ	17	3	29	5	0	0	180	44	MONCTON	12P	-4P	23P	3P	11	0	150	63
FORT MCMURRAY	14P	2P	29P	0P	3	0		X	SAINT JOHN	12P	-4P	22P	4P	51	0	230	54
HIGH LEVEL	13	2P	28	-1	5	0	310	41	NOVA SCOTIA								
JASPER	17	5	30	3	7	0		X	GREENWOOD	13P	-4P	22P	2P	23	0	250	67
LETHBRIDGE	18	3	32	4	4	0	200	50	SHEARWATER	14P	-3P	21	7P	18	0	270	54
MEDICINE HAT	19	3	34	8	2	0	180	37	SYDNEY	13	-3	22	4	16	0	200	65
PEACE RIVER	16	4	30	3	3	0	260	37	YARMOUTH	14	-3	19	7	10	0	230	67
SASKATCHEWAN									PRINCE EDWARD ISLAND								
CREE LAKE	13P	1P	29P	4P	2	0	220	61	CHARLOTTETOWN	14P	-3P	21P	6P	13	0	180	56
ESTEVAN	17	0	32	5	0	0	350	39	SUMMERSIDE	14	-4	21	6	13	0	150	80
LA RONGE	14	1	29	-2	0	0	300	50	NEWFOUNDLAND								
REGINA	17	1	34	4	0	0	300	39	CARTWRIGHT	12	1	21	6	20	0	220	52
SASKATOON	17	2	33	2	1	0	290	41	CHURCHILL FALLS	9	-2	19	2	33	0	280	57
SWIFT CURRENT	16	1	34	1	0	0		X	GANDER INT'L	14	-1	20	6	15	0	180	37
YORKTON	16P	0P	34P	0P	0	0	230	46	GOOSE	12	-1	26	3	19	0	220	63
MANITOBA									PORT-AUX-BASQUES	14	0	18	8	15	0	170	93
BRANDON	14	-2	31	2	0	0		*	ST JOHN'S	14	0	21	6	7	0	200	65
CHURCHILL	10	0	22	2	3	0	330	76	ST LAWRENCE	13	0	19	5	25	0		X
LYNN LAKE	12	1	26	0	1	0	270	52	WABUSH LAKE	7	-3	16	1	35	0	270	65

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

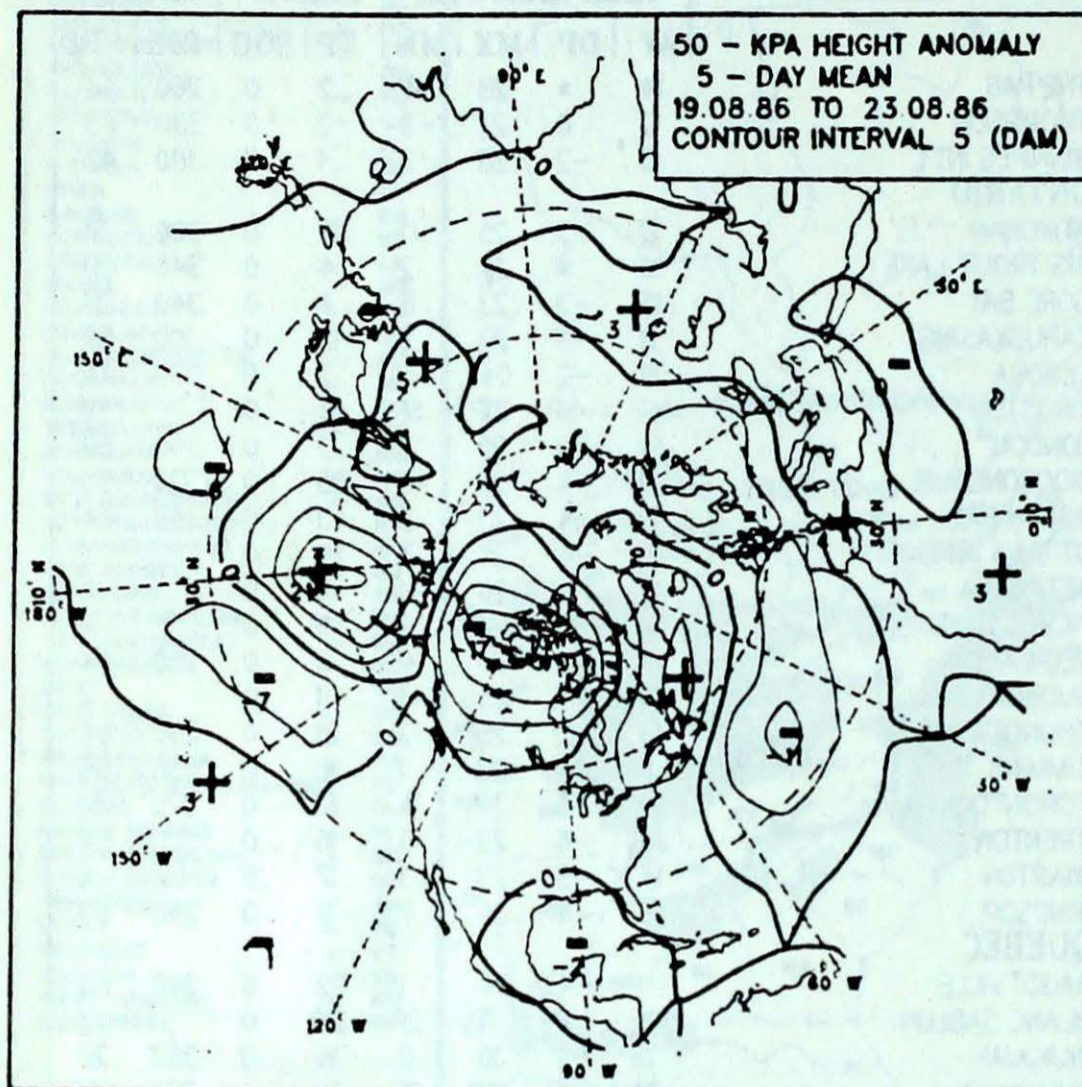
X = not observed

P = value based on less than 7 days

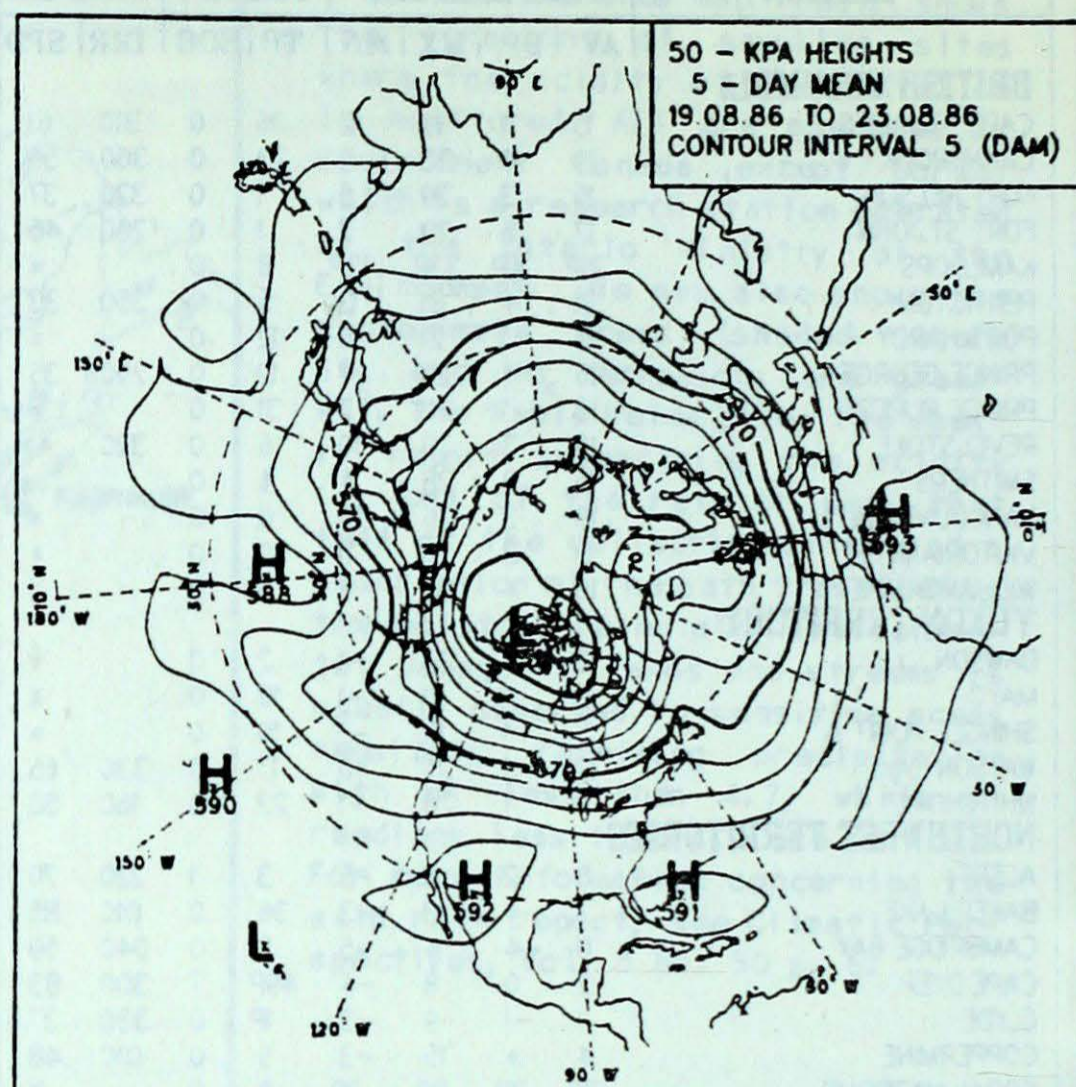
* = missing

CIRCULATION

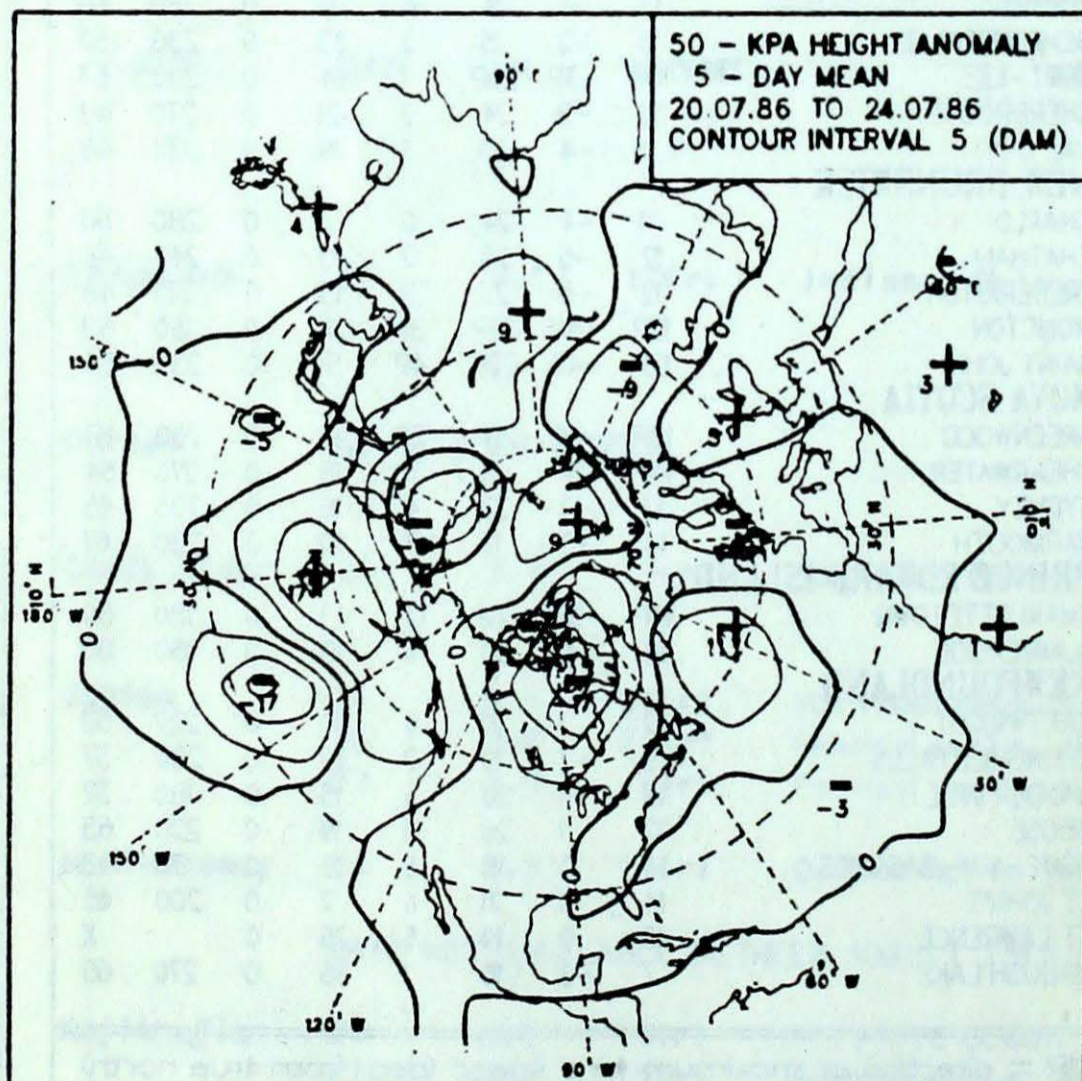
50 KPa ATMOSPHERIC CIRCULATION



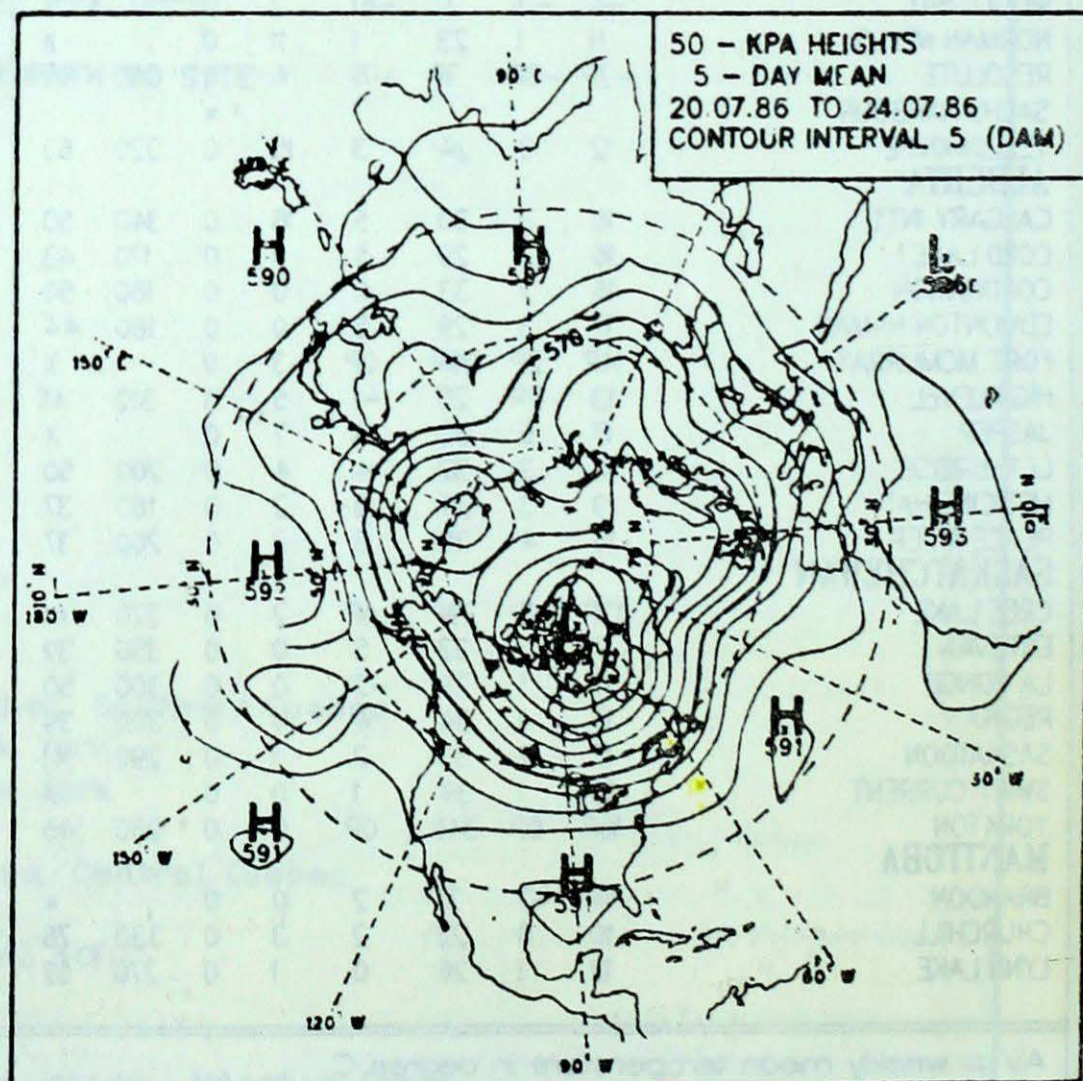
MEAN 50 KPa HEIGHT ANOMALY (dam)
August 19 to August 23, 1986



MEAN 50 KPa HEIGHTS (dam)
August 19 to August 23, 1986



MEAN 50 KPa HEIGHT ANOMALY (dam)
July 20 to July 24, 1986

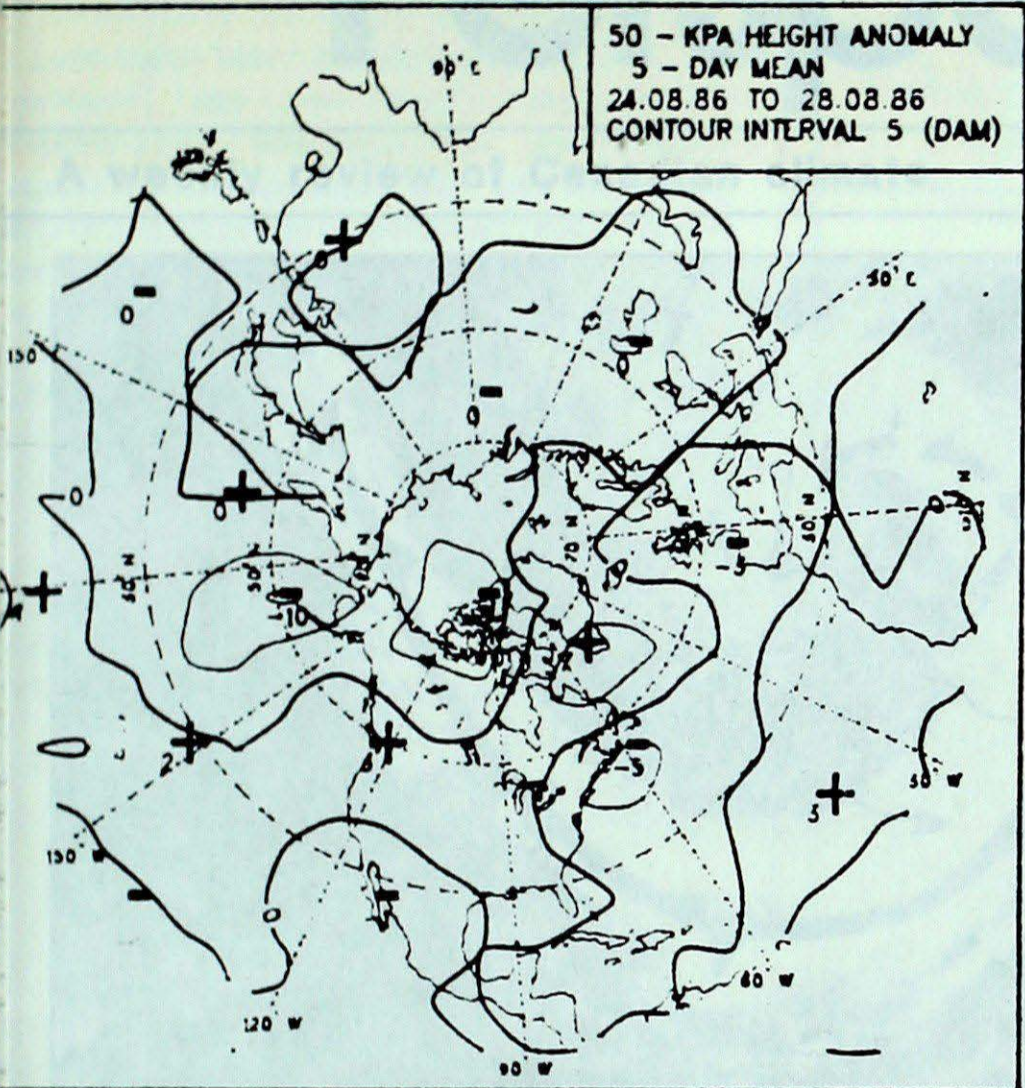


MEAN 50 KPa HEIGHTS (dam)
July 20 to July 24, 1986

CIRCULATION

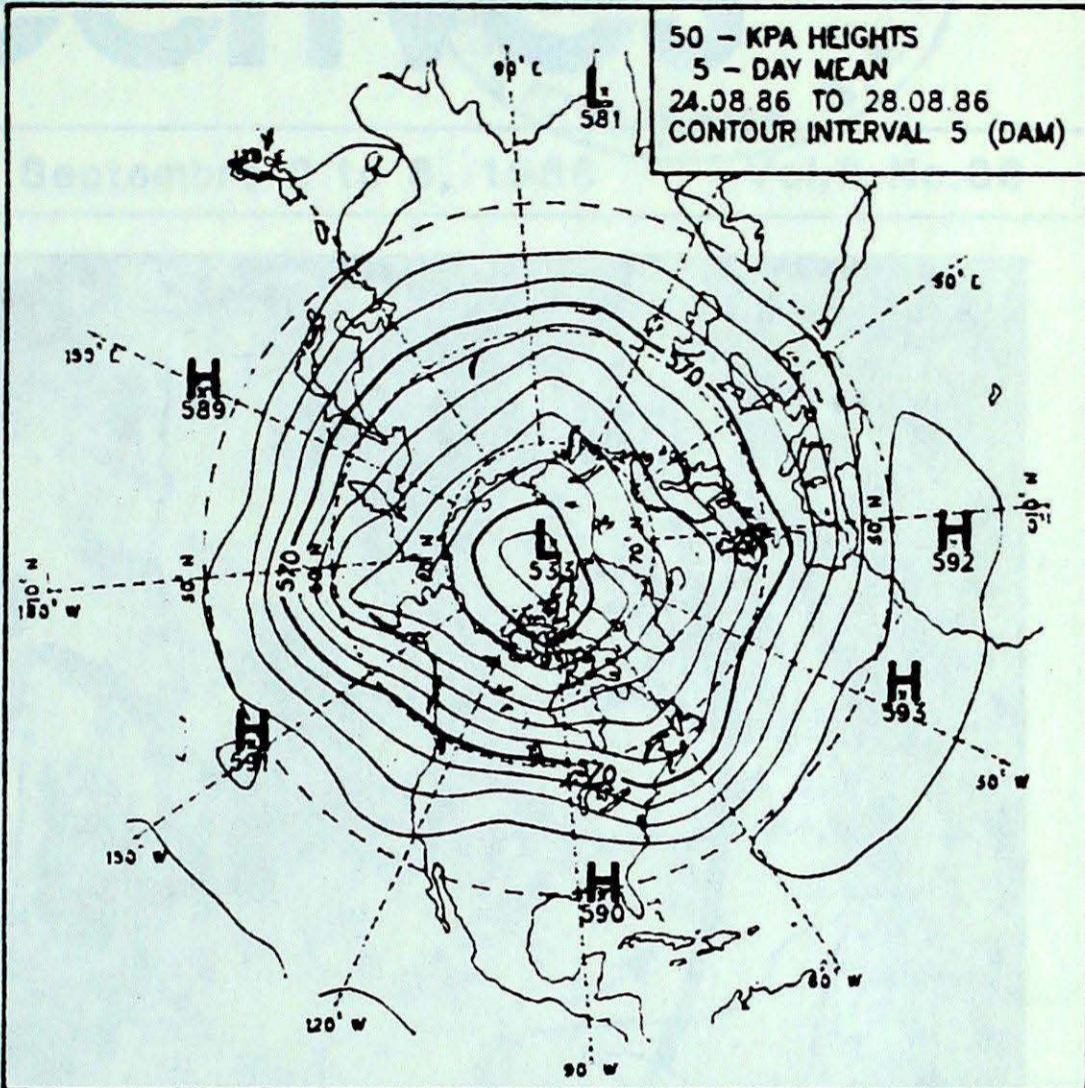
50 KPa ATMOSPHERIC CIRCULATION

50 - KPa HEIGHT ANOMALY
 5 - DAY MEAN
 24.08.86 TO 28.08.86
 CONTOUR INTERVAL 5 (DAM)

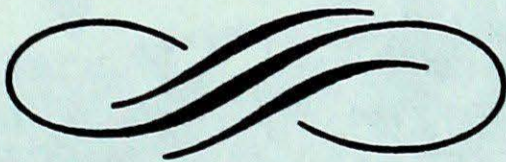


MEAN 50 KPa HEIGHT ANOMALY (dam)
 August 24 to August 28, 1986

50 - KPa HEIGHTS
 5 - DAY MEAN
 24.08.86 TO 28.08.86
 CONTOUR INTERVAL 5 (DAM)



MEAN 50 KPa HEIGHTS (dam)
 August 24 to August 28, 1986



A wave of tropical depression affected the western half of the country as evident by the 1000 hPa pressure on September 1, 1986. For more information see page 3.

- Second longest dry spell continues in Vancouver and Victoria
- Arctic ice proves too much for cruise ship
- Frosty autumn-like weather comes early to Eastern Canada