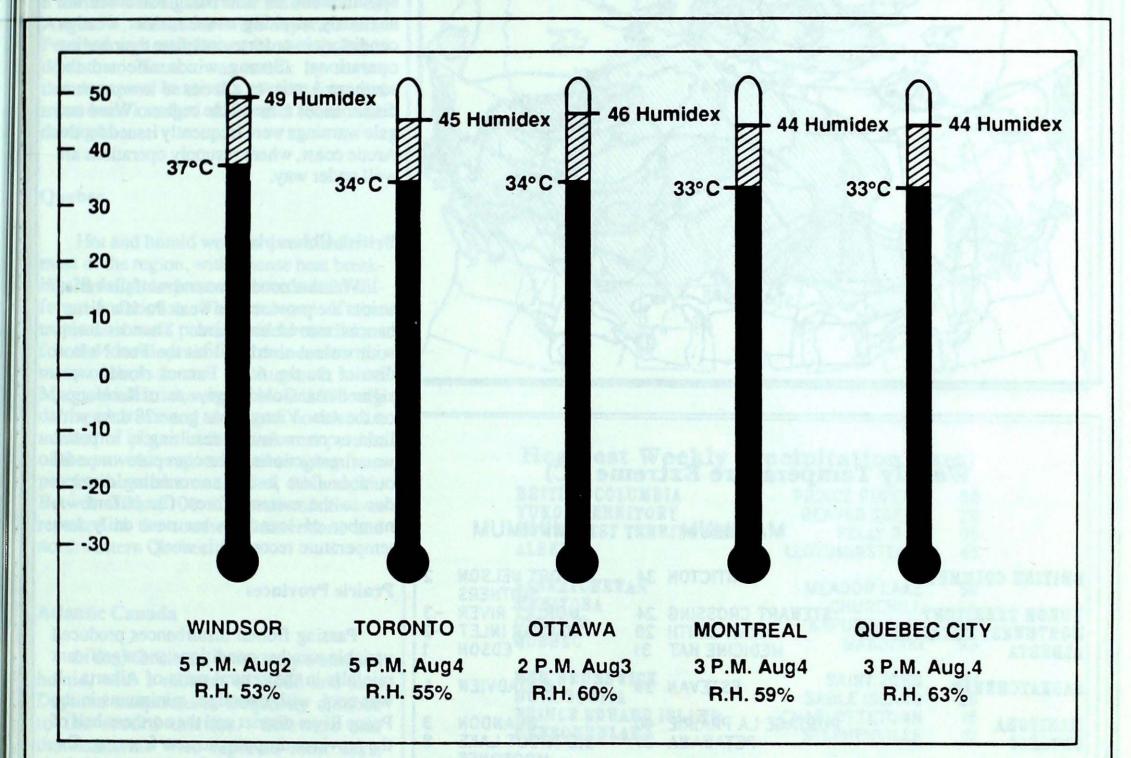
Climatic Environment Environnement Canada Canada Perspectives of 1988

August 2 to 8, 1988

A weekly review of the Canadian climate

Vol. 10 No. 32



Last week's high relative humidity (R.H.) values in excess of 50 percent, combined with temperatures in the mid-thirties throughout southern Ontario and Quebec, drove up the human discomfort index (humidex) into the mid-forties. The date and time of maximum humidex values are shown. See page 3 for more details.

• Hot humid weather spawns numerous severe thunderstorms over most of Eastern Canada

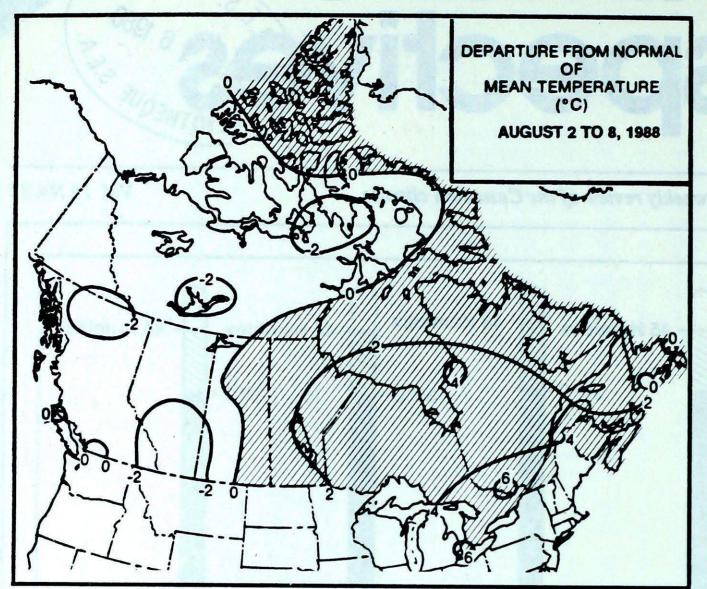
Cool and unsettled in the West



page 2

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August 2 to 8, 1988



Weekly Temperature Extreme ('C)

	MAXIMUM	MINIMUM		
BRITISH COLUMBIA	PENTICTON	34	FORT NELSON SMITHERS	2
YUKON TERRITORY NORTHWEST TERRITORIES ALBERTA	STEWART CROSSING FORT SMITH MEDICINE HAT	24 28 31	MORLEY RIVER MACKAR INLET EDSON	-321
SASKATCHEVAN	ESTEVAN	39	BROADVIEW	4
MANITOBA ONTARIO	PORTAGE LA PRAIRIE PETAWAWA	40 37	BRANDON BIG TROUT LAKE	3
QUEBEC	MONTREAL INT'L	33	LA GRANDE RIVIERE	4
NEW BRUNSWICK NOVA SCOTIA PRINCE EDWARD ISLAND NEWFOUNDLAND	FREDERICTON GREENWOOD SUMMERSIDE GOOSE	32 29	CHARLO WESTERN HEAD CHARLOTTETOWN DEER LAKE	11 9 16 2

Across the country ...

Yukon and the Northwest Territories

With few exceptions, it was dull and wet in the Yukon. Temperatures were near or slightly below normal. The cool, cloudy and wet weather this summer has been a disappointment for tourists. Ranchers are anxiously awaiting sunnier, drier weather conditions in order to complete their haying operations. Strong winds affected the southern Arctic, as a series of low pressure disturbances crossed the region. Wind and gale warnings were frequently issued for the Arctic coast, where resupply operations are well under way.

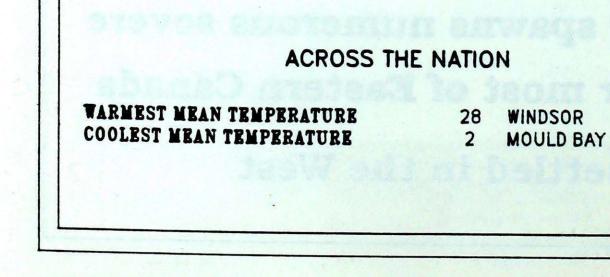
British Columbia

Weather conditions and rainfalls varied across the province, as weak Pacific disturbances moved eastward. Thunderstorms with walnut sized hail hit the Fort Nelson district on the 6th. Funnel clouds were sighted near Gold Ridge, west of Kamloops, on the 4th. Victoria has gone 28 days with little or no moisture, resulting in imposed water restrictions and a clamp-down on all outdoor fires in the surrounding districts due to the extreme forest fire hazard. A number of locations set new daily low temperature records this week.

Prairie Provinces

Passing frontal disturbances produced variable weather conditions and significant rainfalls in the central parts of Alberta. It was cool, with overnight minimums in the Peace River district and the northern half of the province dropping to near freezing. Except in the extreme south, where crops have already wilted because of the lack of rain, this weeks rainfalls were very beneficial.

Saskatchewan and Manitoba started off cool and wet, with grain growing areas receiving substantial amounts of rain during the early and latter parts of the period. On Saturday, southern Manitoba experienced the hottest day of the year. Most locations experienced maximums over 38C, with Portage La Prairie the hottest at 40C, Winnipeg and Brandon at 39C.



Ontario

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NWT

The province suffered through yet another heat wave, as hot sultry air moved Climatic Perspectives

August 2 to 8, 1988

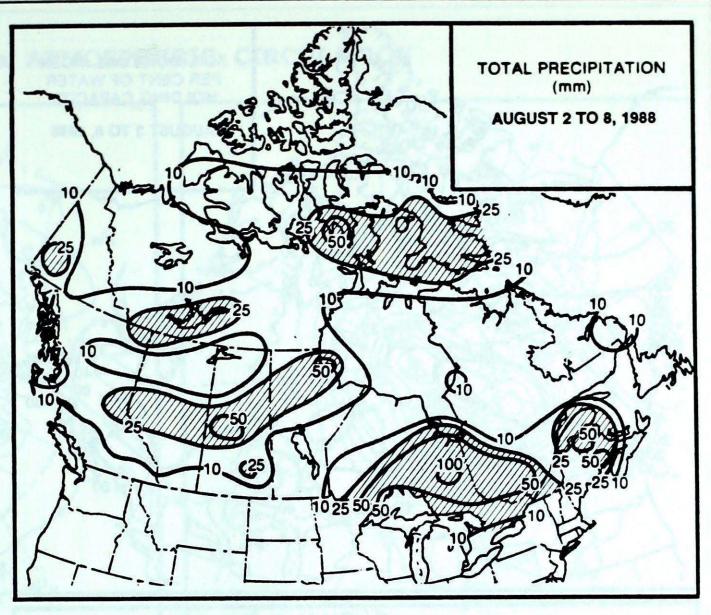
up from the Gulf of Mexico. Daytime temperatures and the humidex soared to the mid-thirties and forties, respectively, August 3 through August 5. The high heat and humidity resulted in the development of many severe afternoon and evening thunderstorms, with frequent lightning, strong gusty winds and hail. On August 2, a tornado was sighted near Petawawa. On August 4, tornadoes were reported near Peterborough and Bancroft. North Bay's downtown district was struck by severe thunderstorms on the 5th. Power lines and trees were knocked down and roofs were damaged.

Quebec

Hot and humid weather prevailed over most of the region, with intense heat breaking 28 daily temperature records at 13 different locations. The presence of this tropical air mass provided ideal conditions for the development of thunderstorms, many of them severe. On August 2, in the Maniwaki district, wind gusts to 100 km/h damaged trees and damaged homes. A number of places in the southwest portion of the province reported hail ranging from pea to walnut size on the 3rd, 4th and 5th. Between 70 and 100 millimetres of rain was reported in the southern Laurentians and northwestern Quebec.

Atlantic Canada

In the Maritimes, it was very warm and humid, with a mixture of cloud and sun. Daytime temperatures frequently climbed to the record thirties. Showers and thunderstorms were reported most days, producing wide ranging precipitation. Several funnel clouds were spotted near Greenwood early in the evening on the 8th. Tropical Storm Alberto fizzled out as it moved through southeastern New Brunswick on the 7th, but not before winds reached nearly 80 km/h at both Saint John and Yarmouth. Labrador and Newfoundland experienced generally fair weather with near seasonable temperatures. Showers and occasional thunderstorms crossed the province during the middle of the week and again towards the weekend. The remnants from tropical storm Alberto approached the western sections of the Island on Monday.



Heaviest Weekly Precipitation (mm)

BRITISH COLUMBIA	PRINCE RUPERT	50	
YUKON TERRITORY	BEAVER CREEK	30	
NORTHWEST TERRITORIES	PELLY BAY	95	
ALBERTA	LLOYDMINSTER A	45	
SASKATCHEWAN	MEADOW LAKE	56	
MANITOBA	CHURCHILL	54	
ONTARIO	KAPUSKASING	120	
QUEBEC	MANIWAKI	99	
NEW BRUNSWICK	SAINT JOHN	51	
NOVA SCOTIA	SABLE ISLAND	25	
PRINCE EDWARD ISLAND	CHARLOTTETOWN	16	
NEWFOUNDLAND	STEPHENVILLE	17	

High Humidex values in Eastern Canada Heat Wave

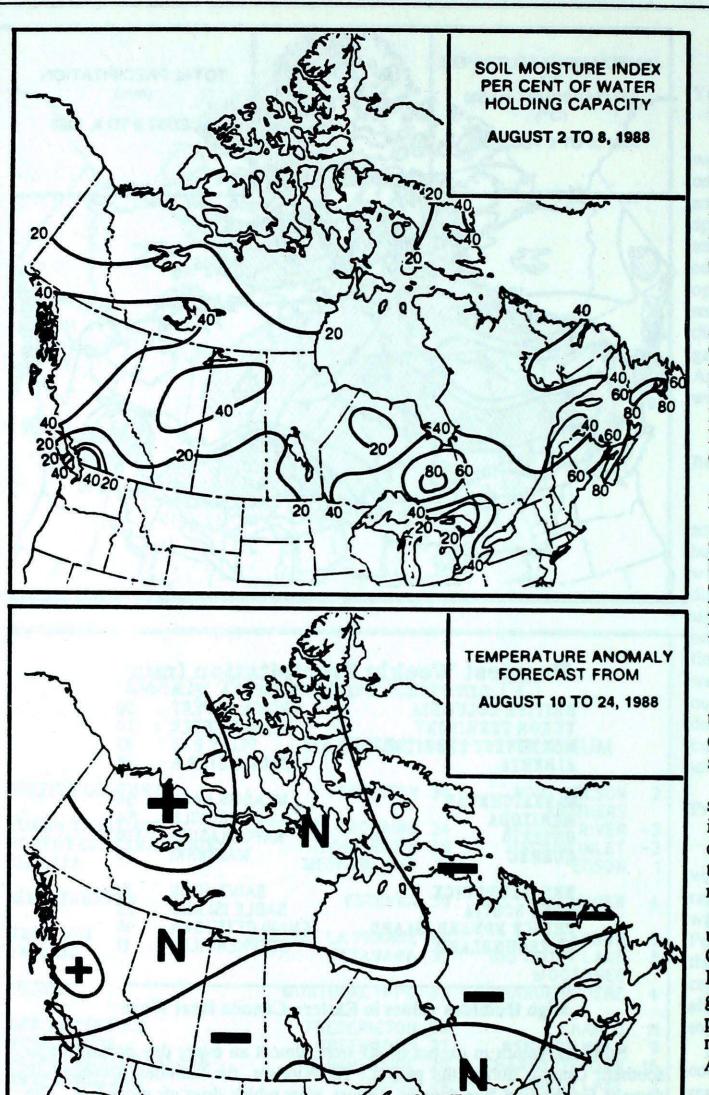
Humidex values in excess of 40 were almost an every day occurrence in southern Ontario during the period. At Windsor, the humidex exceeded 42 degrees for the first five days of August, after which drier air moved in. The highest reading was recorded on August 2, 49 degrees. At Toronto, three consecutive days beginning August 3 saw readings in excess of 41. A high of 45 was reached August 4. In contrast, during the August - September heat wave of 1953 the humidex at Toronto reached an all time high of 48 degrees. Humidex is a measure of discomfort, resulting from the combined effects of high temperature and humidity. Ranges of humidex and associated levels of discomfort are as follows: 20 - 29 comfortable; 30 - 39 varying degrees of discomfort; 40 - 45 almost everyone uncomfortable; over 45 many types of labour must be restricted

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August 2 to 8, 1988



CLIMATIC PERSPECTIVES VOLUME 10

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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. The contents may be reprinted freely with proper credit.

The data in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment Service.

ALT-ELSING

++ much above normal

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

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.

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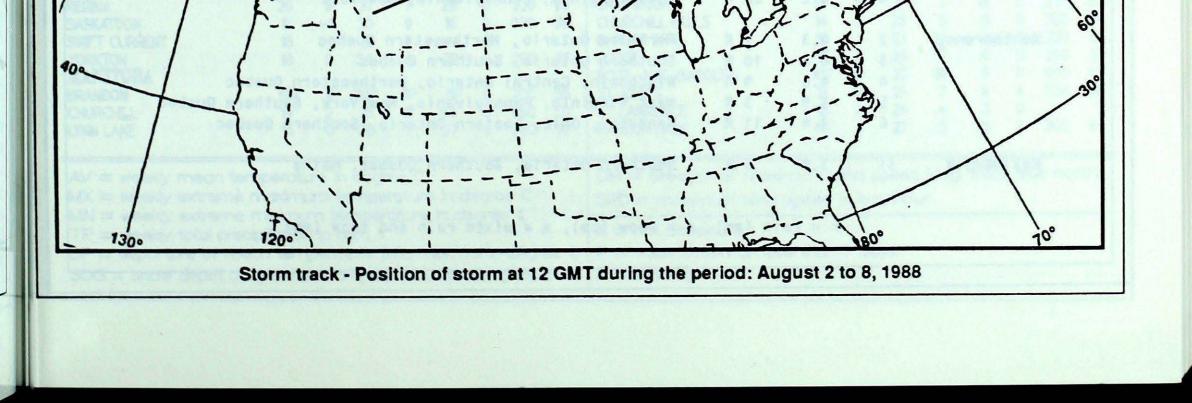
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50 kPa ATMOSPHERIC CIRCULATION 50' C -T 30' W 120 04.08.88 TO 08.08.88 04.08.88 AU 08.08.88 90' Mean geopotential height 50 kPa level (5 decameter intervals) Mean geopotential height anomaly 50 kPa level (5 decameter intervals) Lors 05 (04) AUG 03 / 06 (07)



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AUG 04

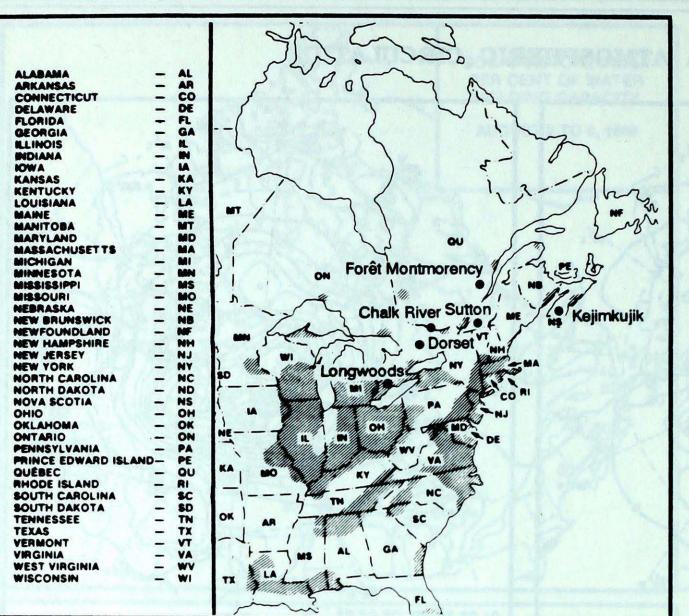
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ACID RAIN REPORT

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 NOx emissions are greatest. The table below gives the weekly report summarizing the acidity (or pH) of the acid 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 readings less than 4.7, while pH readings less than 4.0 are serious.

For more information concerning the acid rain report, see Climatic Perspectives, Volume 5, Number 50, page 6.

JULY 31 TO AUGUST 6, 1988

SITE	DAY pH		ANDUNT	AIR PATH TO SITE					
Longwoods	2	3.9	10 R	Illinois, Indiana, Southern Ontario					
	5	4.4	16 R	Kentucky, Indiana, Southern Ontario					
Dorset	5	3.7	5 R	Kentucky, Ohio, Southern Ontario					
Chalk River	4	4.0	71 R	Ohio, Southern and Central Ontario					
	5	3.7	17 R	Kentucky, Ohio, Southern and Central Ontari					
Sutton	2	4.3	3 R	Southern Ontario, New York					
	3	4.1	13 R	Ohio, Southern Ontario, New York					
	6	4.2	26 R	West Virginia, Pennsylvania, New York					

Monteorency	2	4.3	7 R	Northern Ontario, Northwestern Quebec
	3	4.2	10 R	Southern Ontario, Southern Quebec
	4	4.6	4 R	Wisconsin, Central Ontario, Northwestern Quebec
	5	3.9	3 R	West Virginia, Pennsylvania, New York, Southern Quebec
	6	3.4	11 R	Kentucky, Ohio, Eastern Ontario, Southern Quebec

Kejimkujik 31 3.9 6 R Southern Ontario, Southern Quebec, Maine

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

August 2 to 8, 1988

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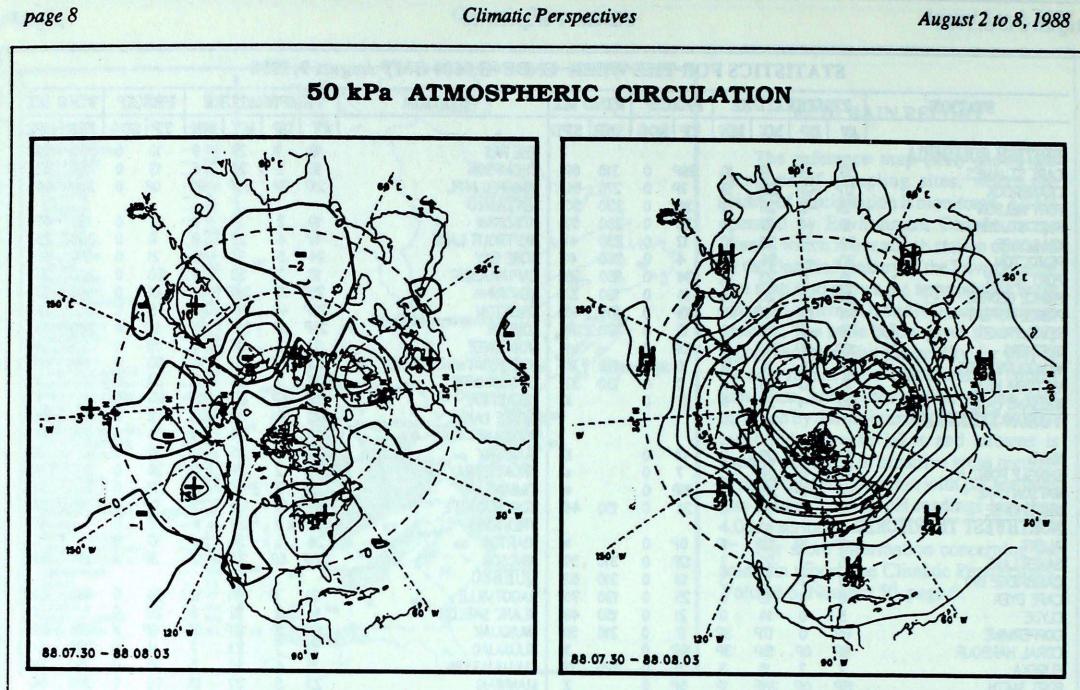
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STATISTICS FOR THE WEEK ENDING 0600 GMT August 9, 1988

STATION	TEMPERATURE			PRECIP. WIND MX			D MX	STATION		TEMPERATURE				PRECIP.		WIND MX	
	AV	DP	XX	MN	TP	SOG	DIR	SPD		AV	DP	MX	MN	TPS	OG	DIR	SP
RITISH COLUMBLA		-							THE PAS	19	1	29	9	10	0	330	59
APE STJAMES	B	-1	19	10	39P	0	310	69	THOMPSON	16	2	28	6	13	0	360	63
		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	320	5P	TP	õ	270	56	WINNIPEG INT'L	21P	28	39P	8P	OP	0	280	44
RANBROOK	17P	-29							ONTARIO	2.0	-	551	0		-	200	
ORT NELSON	15	-2	26	2	36	0	330	50		-	~	-	•	-	•	180	43
ORT STJOHN	Б	-1	27	4	20	0	280	59	ATIKOKAN	19	2	31	9	67	0		
AMLOOPS	20	-1	33	10	12	0	230	41	BIG TROUT LAKE	19	4	28	8	0	0	300	85
ENTICTON	20	-1	34	9	4	0	360	41	GORE BAY	24	5	32	16	21	0	210	46
ORT HARDY	15	0	23	9	34	0	350	28	KAPUSKASING	18	2	30	9	120	0	300	3
RINCE GEORGE	15	-1	28	3	14	0	180	37	KENORA.	21P	3P	34P	12P	OP	0	190	37
	MP	OP	16P	10P	50P	õ	160	46	KINGSTON	25P	4P	29P	17P	8	0)
RINCE RUPERT								39	LONDON	24P	49	35P	13P	9P	*	200	4
EVELSTOKE	18	-19	30	9	13	0	320	and the state of t					8	51	ō	200	
VITHERS	15P	-29	24P	2P	10P	0		*	MOOSONEE	17	2	30			10		
ANCOUVER INT'L	18	0	26	2	0	*	130	31	NORTH BAY	23	0	33	14	50	0	190	9
CTORIA INT'L	16	0	28	9	0	0	130	33	OTTAWA INT'L	26	5	34	17	39	0		
LLIAMS LAKE	16	-1	29	5	27	0		X	PETAWAWA	25P	6P	37P	12P	49P	0		
TIVON TEDDITODY	N	•		-					PICKLE LAKE	20	4	32	10	11	0	190	5
UKON TERRITORY									RED LAKE	20	3	34	9	14	Ō	270	7.
			1199								5					210	
AYO	13	-1	2	2	B	0		X	SUDBURY	24	2	35	13	35	0	-	5
HINGLE POINT A	10	0	24	-2	7	0		*	THUNDER BAY	20	2	29	12	36	0	300	54
ATSON LAKE	HP	-P	22P	6P	15P	0		*	TIMMINS	19	3	30	10	71	0	330	5
HITEHORSE	13	-1	21	6	24	Ō	150	46	TORONTO INT'L	25P	5P	34P	15P	OP	*	190	3
OPTHIEST TEDDITODI		•		v	-	~			TRENTON	25	5	34	16	3	0		
ORTHWEST TERRITORI		-		-		•			WIARTON	24	6	34	14	32	0		
LERT	4P	19	12P	-1P	OP	0		*						3P	4	290	5
AKER LAKE	10	-1	22	3	12P	0	310	59	WINDSOR	28P	6P	37P	20P	SP	*	290	5
AMBRIDGE BAY	6	-2	10	3	13	0	310	63	QUEBEC								
APE DYER	6	0	13	0	25	0	130	76	BAGOTVILLE	21	3	31	2	24	0	330	3
TDE	5	0	14	0	21	0	150	48	BLANC SABLON	14	*	22	8	23	0		
				and the second second		õ	310	59	INUKJUAK	10P	P	18P	6P	8P	*	270	10
OPPERMINE	8P	0	17P	3P	17	0	310				2	23	7	4	Ō	290	Ĩ
ORAL HARBOUR	8P	OP	15P	3P	19 P	0		X	KUUUUAQ	13	2		-				
JREKA	7	2	15	3	0	0	320	37	KUUWUARAPIK	15	4	30	5	15	0	190	7
ORT SMITH	15P	OP	28P	12	5P	0		X	MANIWAKI	23	5	32	13	99	0	290	5
ALUIT	8		15	3	35	*	280	50	MONT JOLI	19	2	29	11	24	0	250	4
	5P	OP	10P	1P	12P	0	120	57	MONTREAL INT'L	25P	5P	33P	18P	31P	0	200	9
ALL BEACH						0	120	To Sha		15	1	24	8	1	0	280	5
JUVIK	11	0	27	2	5	0		X	NATASHQUAN		-			21	0	220	6
IOULD BAY	2P	-1P	8P	-1P	7P	0		X	QUEBEC	23	2	33	15	21	0	and the second sec	
ORMAN WELLS	14	-1	26	5	2P	0		X	SCHEFFERVILLE	14	2	26	6	1	0	340	8
ESOLUTE	6	2	11	0	4	0	030	63	SEPT-ILES	16	1	22	7	10	0	080	3
						in when			SHERBROOKE	24	6	31	16	36	0	300	5
EL LOWER DET	12	-3	24	6	3	0	330	56	VAL D'OR	20P	3P	30P	10P	61P	0	310	6
ELLOWKNIFE	13	-3	24	0	3	U	330	~	NEW BRUNSWICK	201	5.	501					-
LBERTA				-						-	~	-		-	•	200	4
ALGARY INT'L	15	-2	29	6	10	0	320	50	CHARLO	20	3	29	11	47	0	300	
OLD LAKE	15P	-1P	27P	7P	20P	0	040	39	CHATHAM	24	5	33	16	35	0	280	
ORONATION	15P	-2P	28P	4P	16P			*	FREDERICTON	24	5	34	17	23	0	170	3
DMONTON NAMAO	15	-2	26	7	32	*	340	46	MONCTON	22	3	32	15	28	0	210	4
				2	JZ		570	Ť	SAINT JOHN	19	2	29	13	51	0	060	
ORT MCMURRAY	16	-1	27	3	1	0		~		EI	2	23	15	51		000	45
IGH LEVEL	14	-1	25	-1	7	0	280	35	NOVA SCOTIA		-	~			•	45.0	
ASPER	14	-1	26	6	36	0		X	GREENWOOD	24	5	32	16	6	0	150	-
ETHBRIDGE	17	-2	31	5	6	0	260	78	SHEARWATER	21	3	30	14	6	0	180	4
EDICINE HAT	18	-3	31	7	9	0	280	52	SYDNEY	21	3	31	2	7	0	210	4
EACE RIVER	14	-2	26	3		õ	250	56	YARMOUTH	18	1	27	14	6	0	150	
	H	-2	20	3	-	U	250	50	PRINCE EDWARD ISLANI								
ASKATCHEWAN	. Income							-			2	20	4	46	0	160	4
REELAKE	HP	-2P	25P	4 P	P		270	52	CHARLOTTETOWN	22	3	29	16	16	0		
STEVAN	20	OP	39	7	4	0	160	76	SUMMERSIDE	22	3	29	17	15	0	180	5
A RONGE	16	0	30	8	39	0	260	80	NEWFOUNDLAND								
EGINA	20	P	37	7	28	Ō	270	65	CARTWRIGHT	14	1	26	7	14	0	330	8
	17	-1	30	9	16	õ	030	39	CHURCHILL FALLS	14	1	28	5	9	0	320	
ASKATOON	1			9	N	0	030	10 The State of State		18	-	20	10	3	ŏ	220	
WIFT CURRENT	18	1	31	1	1	0		X	GANDER INT'L		1	Contraction of the second s					
ORKTON	18	0	34	4	22	0	200	76	GOOSE	17	1	29	7	6	0	290	
ANITOBA									PORT-AUX-BASQUES	16P	1 P		9 P	5	0	090	4
RANDON	19P	P	39P	3P	5F	0	200	56	ST JOHN'S	17	0	25	7	4	*	030	1
HURCHILL	14	2	25	5	54	õ	050		ST LAWRENCE	16	2	26	*	3	0		
		-							WABUSH LAKE	14	-	27	5	n	0	300	4
YNN LAKE	15	0	28	7	27	0	260	57	WADOON LANE	m		21	5		0	000	
AV = weekly mean terr VIX = weekly extreme r VIN = weekly extreme r	nooim	num 1	temp	eratu	re in	123			DiR = direction of maxim SPD = maximum wind s			Provide State		g. fron	n tr	ue no	rth
NN = weekly extreme r TP = weekly total preci DP = departure of med	pitatic	n in	mm						X = not observed P = value based on less	that	70	avs					



Mean geopotential height anomaly 50 kPa level (5 decameter intervals)

Mean geopotential height 50 kPa level (5 decameter intervals)

