July 26 to August 1st, 1988

A weekly review of Canadian climate

Vol. 10 No. 31



Environment

Environnement

Atmospheric Environment Service

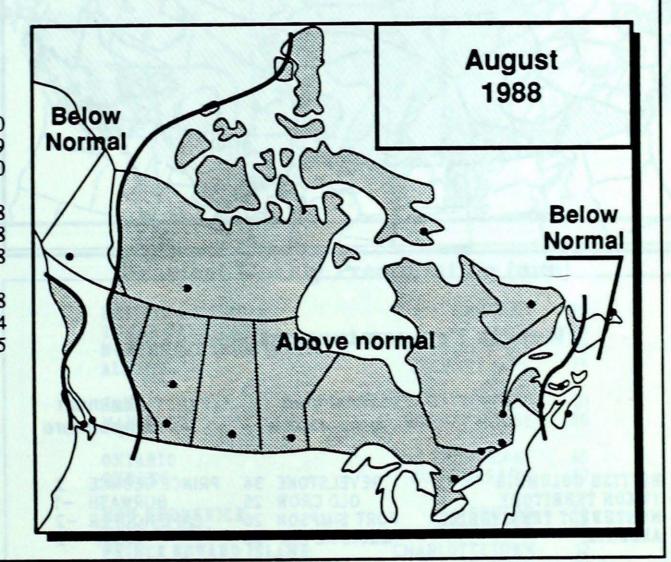
de l'environnement atmosphérique

Normal temperatures for the month of August, °C

Whitehorse	13	Toronto	20
Yellowknife	14	Ottawa	19
Iqaluit	7	Montreal	20
Vancouver	17	Quebec	18
Victoria	16	Fredericton	18
Calgary	15	Halifax	18
Edmonton	16	Charlottetown	18
Regina	18	Goose Bay	14
Winnipeg	18	St. John's	15

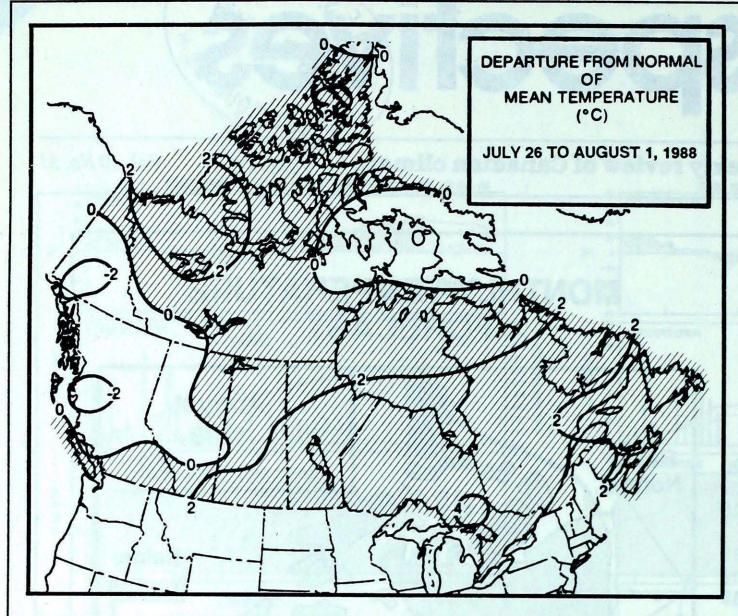
Canadä

MONTHLY TEMPERATURE FORECAST



Official monthly temperature forecasts are available on the 1st and 16th day of each month at all A.E.S. weather centres and offices in a map version transmitted on the national facsimile network, and a text version on the national telecommunications network.

- Hot with isolated severe thunderstorms across most of southern Canada
 - Record downpour at Calgary



Weekly Temperature extreme ('C)

	Maximum temperature		Minimo tempera	The Superior Section 1995
BRITISH COLUMBIA	REVELSTOKE	36	PRINCE GEORGE	2
YUKON TERRITORY	OLD CROW	25	BURWASH	-1
NORTHWEST TERRITORIES	FORT SIMPSON	26	CAPE HOOPER	-2
ALBERTA	MEDICINE HAT	35	BANFF	2
SASKATCHEWAN MANITOBA ONTARIO QUEBEC	ESTEVAN GRETNA PETAWAWA BAGOTVILLE	39 37 36 34	HUDSON BAY THOMPSON MOOSONEE SHERBROOKE	5 3 5 2
NEW BRUNSWICK NOVA SCOTIA PRINCE EDWARD ISLAND NEWFOUNDLAND	CHATHAM	32	CHARLO	10
	GREENWOOD	30	WESTERN HEAD	11
	CHARLOTTETOWN	28	CHARLOTTETOWN	14
	GOOSE	34	CARTWRIGHT	5

Across the nation

WARNEST MEAN TEMPERATURE	26	WINDSOR	ONT
COOLEST MEAN TEMPERATURE	3	CLYDE	NWT

Across the country...

Yukon and Northwest Territories

Cloudy, cool and wet conditions prevailed over the southern and central Yukon. The most precipitation for the week was recorded at Mayo and Beaver Creek, each receiving 34 mm. As an aside, Whitehorse received 109.6 mm of precipitation during the month of July, 42% of the yearly average and 323% of the normal for July. A record low minimum of 2.4°C was recorded at Whitehorse on the 30th. On the 26th, hail accompanied thunderstorm activity at Yellow-knife.

Temperatures were near normal in the eastern Arctic while the western Arctic experienced above normal temperatures.

British Columbia

Warm, dry conditions with varying amounts of sunshine prevailed over most of the province this week, especially in the southern interior and coastal regions. No precipitation occurred south of the Thompson River Valley this week with spotty rains to the north. The Victoria area has been dry for the last 6 weeks and forest fire hazards are now high to extreme.

Prairie Provinces

There was no significant change in the overall drought situation in southern Alberta this week, particularly in the Medicine Hat area. However, on Monday Aug. 1st, a rainstorm in Calgary produced a daily record 65 mm and washed out Heritage Day celebrations. Also on Monday, Lethbridge experienced some drought relief when 24 mm of rain fell on the city, more rain than what was recorded for the entire month of July. Record daily maximums were recorded on the 26th for Rocky Mountain House with 31°C and Cold Lake tied the record maximum of

Manitoba and Saskatchewan also experienced generally hot and dry conditions for the week. Precipitation amounts in the range of 15 to 20 mm were recorded at some of the central and

northern stations. An exception to this was a heavy downpour on the 31st at Winnipeg which dumped 33.8 mm. Severe weather into the weekend in southern Manitoba produced wind gusts to 90 km/h accompanied by 1 cm diameter hail 8 to 10 cm deep at Rosa, Manitoba on the 28th. East Braintree, Manitoba recorded 95 km/h winds on the 29th, felling trees and causing some structural damage. On the 30th, Russell, Manitoba saw 8 mm diameter hail with a possible tornado sighting.

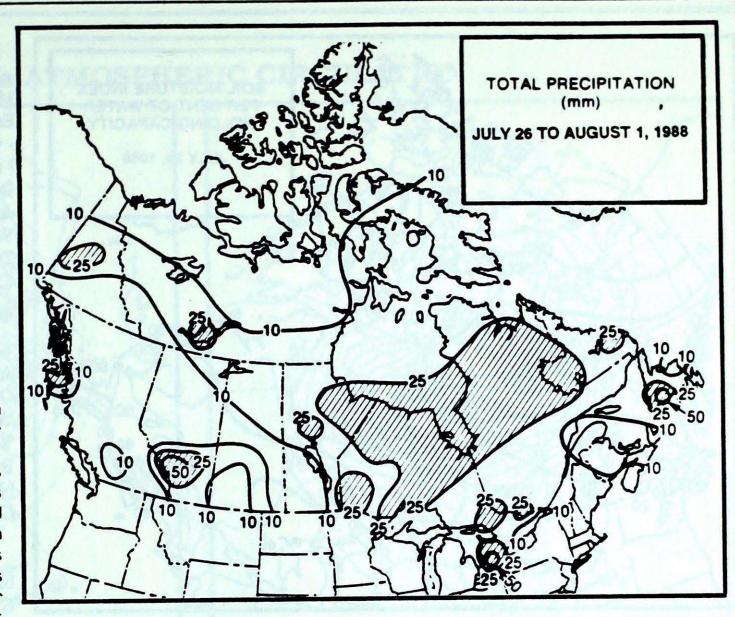
Ontario

Drought conditions in southern and central Ontario have abated for the time being. Monthly rainfall totals climbed to near normal this week as showers and thundershowers dumped amounts up to 90 mm around the province. In northwestern Ontario, on the 29th, strong winds thunderstorms uprooted trees killing a 5-year old boy in Luther Village while 80 km/h winds at Atikokan overturned aircraft. On the 30th, the Kitchener area was deluged with 88 mm of rain in afternoon thunderstorms, while a small tornado near Norwich, 15 km southeast of Woodstock, caused property and livestock losses.

There was also welcome rain relief in the northern and north-western parts of the province, particularly in the Thunder Bay area where forest fires have raged on.

Quebec

Generally sunny, warm and humid weather prevailed over the province last week with little precipitation. Local thunderstorms did, however, push weeekly totals above 30 mm at several locations across the province. On the 26th, a local thunderstorm east of Nicolet produced winds gusting as high as 80-100 km/h which tore off tree limbs and uprooted some trees. On the 30th, similar thunderstorm wind damage was reported at Rosemère and at Saint-Eustache, to the north of Montreal and at Saint-Gabriel-de-Brandon, north of Joliette. On the evening of the 30th, a thunderstorm caused \$20,000 damage in the Magog region, southwest of Sherbrooke.



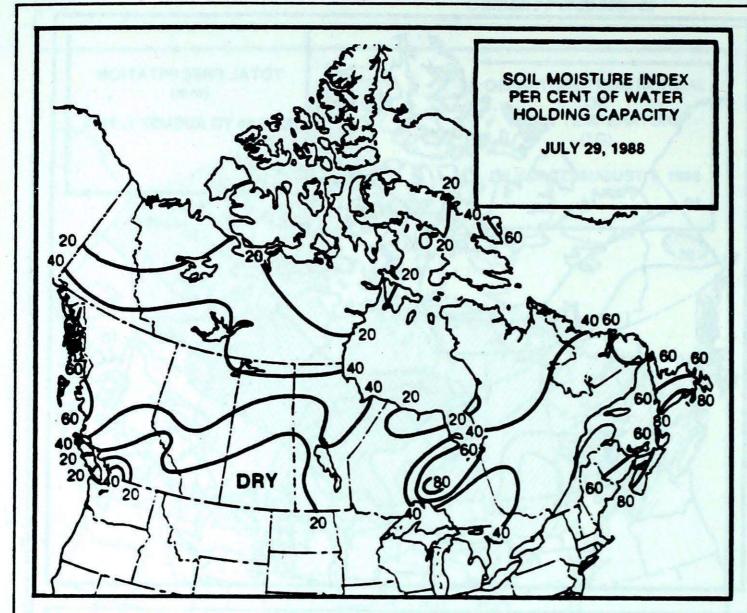
Heaviest Weekly Precipitation (mm)

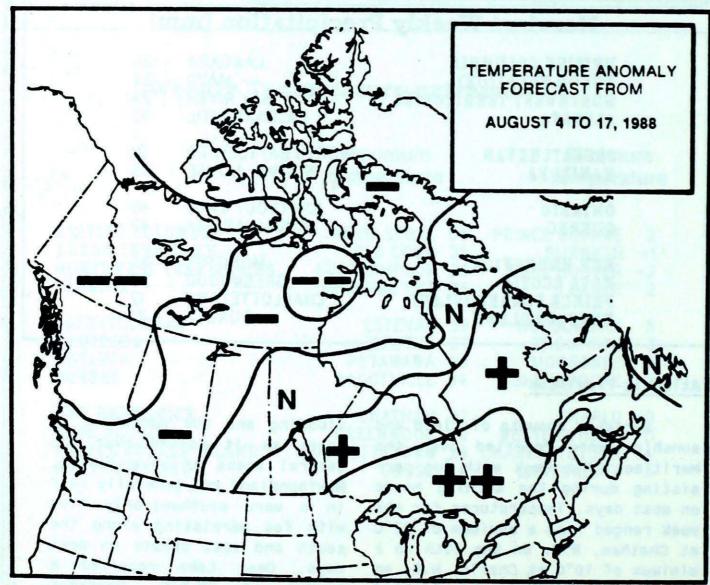
BRITISH COLUMBIA YUKON TERRITORY NORTHWEST TERRITORIES ALBERTA	LANGARA MAYO HAY RIVER CALGARY INT'L	30 34 28 75
SASKATCHEWAN WANITUBA	NORTH BATTLEFORD NORWAY HOUSE	21 35
ONTARIO	BIG TROUT LAKE	45
QUEBEC	KUUJJUARAPIK	42
NEW BRUNSWICK	MONCTON	39
NOVA SCOTIA	GREENWOOD	23
PRINCE EDWARD ISLAND	CHARLOTTETOWN	12
NEWFOUNDLAND	BURGEO	71

Atlantic Provinces

Variable amounts of cloud and sunshine were reported over the Maritimes this week with fog persisting during the morning hours on most days. Temperatures for the week ranged from a maximum of 32°C at Chatham, N.B. on the 30th to a minimum of 10°C at Charlo, N.B. on Aug. 1st. The week was highlighted by thunderstorms on Friday, the 29th, accompanied by heavy rain and hail. On Sunday, the 31st, a severe thunderstorm with heavy rain, hail and strong winds caused

flooding and the uprooting of trees as it passed over the central areas of Nova Scotia. Newfoundland was generally fair in a warm southwesterly flow with fog persisting along the south and west coasts on most days. Deer Lake reported a maxmum of 29.8°C. Labrador experienced a mixture of sun, cloud and occasional showers or thunderstorms on most days. On Saturday, the 30th, Goose Bay reported a maximum of 33.5°C.





- + + 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.

CLIMATIC PERPECTIVES VOLUME 10

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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.

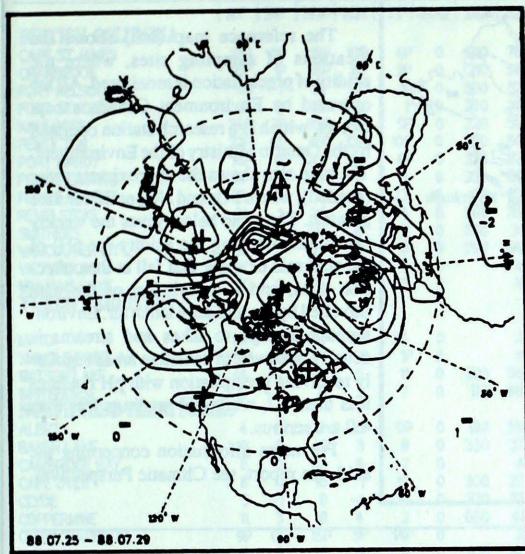
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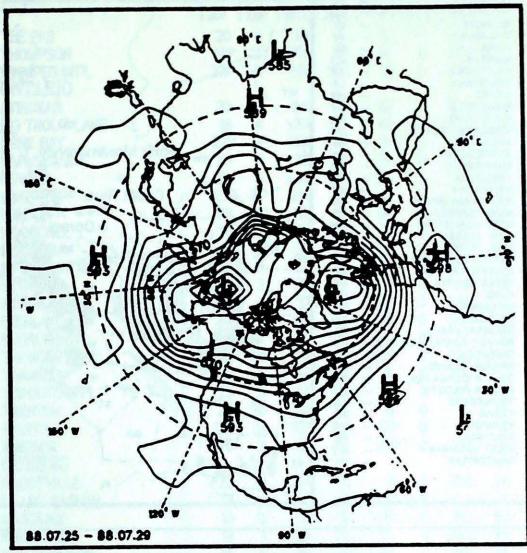
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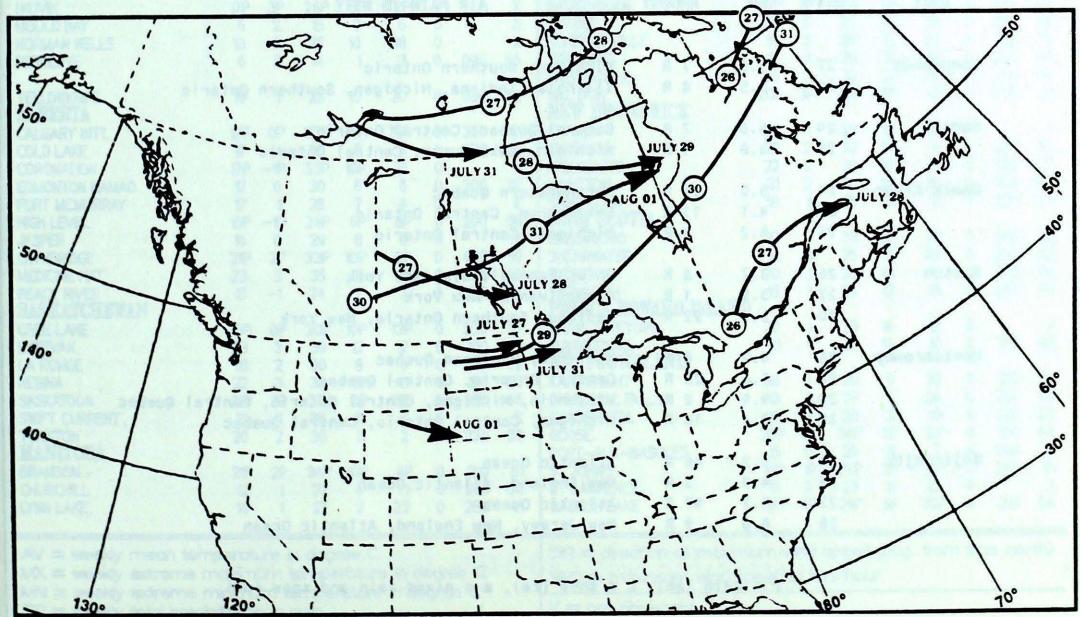
50 kPa ATMOSPHERIC CIRCULATION



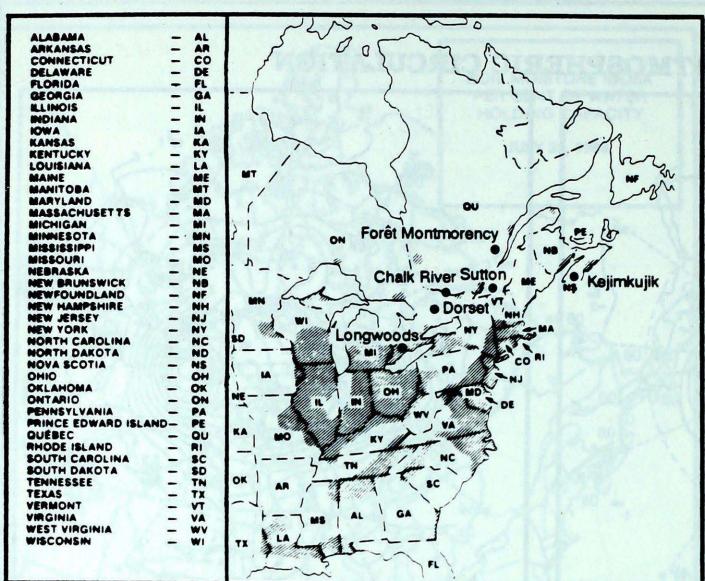
Mean geopotential height anomaly 50 kPa level (5 decameter intervals)



Mean geopotential height 50 kPa level (5 decameter intervals)



Storm track - Position of storm at 12 GMT during the period: July 26 to August 1st, 1988



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,

JULY 24 TO JULY 30, 1988

SITE	DAY	pH	AMOUNT	AIR PATH TO SITE
				The Committee of the Co
Longwoods	27	3.8	7 R	Michigan, Southern Ontario
	30	5.5	8 R	Illinois, Indiana, Michigan, Southern Ontario
Dorset	24	4.6	7 R	Central Quebec, Central Ontario
	25	4.0	1 R	Michigan, Lake Huron, Central Ontario
Chalk River	24	5.0	26 R	Northwestern Quebec
	24	4.1	11 R	Lake Huron, Central Ontario
	26	4.2	2 R	Michigan, Central Ontario
Sutton	26	3.7	8 R	Ohio, Pennsylvania, New York
	27	3.9	1 R	Pennsylvania, New York
	30	3.7	22 R	Indiana, Southern Ontario, New York
Montgorency	26	4.2	6 R	New York, Southern Quebec
4	28	5.6	23 R	Central Ontario, Central Quebec
	29	4.4	2 R	Wisconsin, Michigan, Central Ontario, Central Quebec
	30	3.4	16 R	Michigan, Central Ontario, Central Quebec
Kejimkujik	24	5.2	46 R	Atlantic Ocean
	26	4.0	3 R	New England, Atlantic Ocean
	27	4.7	47 R	Atlantic Ocean
	28	4.0	9 R	New Jersey, New England, Atlantic Ocean
	2000			

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

TEMPERATURE, PRECIPITATION AND MAXIMUM WIND DATA FOR THE WEEK ENDING 0600 GMT AUGUST 2,1988

STATION	TE	MPE	ERATURE PRECIP.		CIP.	WIND MX		STATION	TE	TEMPERATURE				PRECIP.		WIND MX	
	AV	DP	MX	MN	TP	SOG	DIR	SPD		AV	DP	MX	MN	TP S	SOG	DIR	
RITISH COLUMBIA								in t	THE PAS	20	*	30	8	19	0	060	83
APE ST.JAMES	13P	OP	18P	10P	4P	0	310	78	THOMPSON	18P	30	29P	3P	10	0	320	57
RANBROOK	21P	P	35P	6P	9P	0	210	56	WINNIPEG INT'L	239	44	36P	10P	35	0	360	57
ORT NELSON	16	-1	26	6	8	0	300	52	ONTARIO	-	2						
ORT ST.JOHN	15	0	22	8	1	0	250	76	ATTKOKAN	20	4	34	9	22	0	270	67
AMLOOPS	24P	29	35P	HP	5P	0	220	59	BIG TROUT LAKE	18	*	30	9	45	0	300	74
ENTICTON	22P	OP	36P	13P	10P	0	280	50	GORE BAY	23P		35P	16P	99	0	200	52
ORT HARDY	16P	P	20P	10P	4P	0	320	43	KAPUSKASING	20	3	32	11	24	0	290	4
RINCE GEORGE	14	-2	24	2	3	0	350	35	KENORA	23	4	33	14	34	0	310	5
RINCE RUPERT	13	-1	16	6	23	0	170	50	KINGSTON	23P		29P	17P	*	0		1
EVELSTOKE	21	1	36	11	4	0	360	35	LONDON	23	3P	32	15	56	0	220	5
MITHERS	13	-3	24	4	2	0	330	31	MOOSONEE	18	2	32	5	21	0	310	4
ANCOUVER INT'L	19	1	27	13	0	0	290	56	NORTH BAY	21	3	32	13	27	0	240	3
CTORIA INT'L	17	0	28	8	0	0		*	OTTAWA INT'L	24	3	33	16	37	0		
LLIAMS LAKE	17	0	24	8	3	0		X	PETAWAWA	22	3	36	12	10	0		
UKON TERRITORY									PICKLE LAKE	20	4	32	12	23	0	300	5
02011 121221									RED LAKE	20	3	31	11	18	0	340	5
YO	14P	-P	229	5P	34	0		X	SUDBURY	23	4	35	14	0	0		
INGLE POINT A	149	3P	25P	4P	P	Ö		*	THUNDER BAY	21P	3P	35P		25P	0	290	•
TSON LAKE	14	-1	25	5	11	Ö	290	56	TIMMENS	21	4	34	10	6	0	310	-
	12	-3	21	2	7	ŏ	170	46	TORONTO INT'L	23	3	35	15	36	Ō	300	
TEHORSE ORTHWEST TERRITORI		-3	21	2	,	U	1/0	70	TRENTON	23	3P	34	15	8	Ö	330	
	IBO .	^	**		OP	0	180	56	WIARTON	229		32P		10P	Õ		
ERT	4	0	14	-1		0			WINDSOR	26	3	35	17	20P	0	310	
KER LAKE	10	0	18	3	8	0	330	37		20	3	33	"	201	•	3.0	
MBRIDGE BAY	8	0	13	4	2	0	000	*	QUEBEC	20	2	24	44	0	0	250	
PE DYER	6	0	16	1	16	0	300	37	BAGOTVILLE	22	3	34	11	9	0	250	
DE .	3	-1	8	-1	15	0	320	37	BLANC SABLON	13	*	20	,	6	0	240	
PPERMINE	11	3	18	4	2	0	080	41	INUKJUAK	10	0	15	5	18	0	210	
RAL HARBOUR	99	OP	15P	5P	14P	0		X	KUUUUAQ	13	1	25	6	37	0	330	
REKA	8	2	15	3	0	0	300	57	KUUJUARAPIK	14	3	32	6	42	0	160	
rt smith	16	1	24	4	18	0		X	NANIWAKI	219		32P		7P	0	190	
OBISHER BAY	9	1	19	4	12	0	200	33	MONT JOLI	21	3	34	12	2	0	220	- 9
LL BEACH	5P	-19	10P	2P	22P	0	170	33	MONTREAL INT'L	24	3	34	15	8	0	230	
JVIK	17P	3P	26P	8P	2P	0		X	NATASHQUAN	17P	29	25P		4P	0	180	4
OULD BAY	6	2	15	0	6	0		X	QUEBEC	23	3	33	13	16	0	260	
RMAN WELLS	18	2	26	10	18	0		X	SCHEFFERVILLE	16	3	26	6	28	0	200	
SOLUTE	6	2	14	1	3	0	090	56	SEPT-ILES	17	1	26	11	17	0	300	
SOLDIE	ŭ	-				•	030	30	SHERBROOKE	20	2	32	2	32	0	240	
LOMOREE	16	•	23	10	20	0	050	52	VAL D'OR	20F				0P	0	340	
LOWNIFE LBERTA	Ю		25	N	20	0	030	J.	NEW BRUNSWICK		٠.			-			
	90	40	220	60	760	0	350	61	CHARLO	20	1	28	10	3	0		
LGARY INT'L	179	OP	33P	6P	75P	0		50	CHATHAM	22		32	13	ĭ	O	220	
LD LAKE	17	1	30	8	5	0	270			22		30	16	3	0	200	
RONATION	17P	-P	33P	10P	31	0	000	*	FREDERICTON	21		30	13	39	0	300	
MONTON NAMAO	17	0	30	8	6	0	300	37	MONCTON			25	11	17	0	220	
RT MCMURRAY	17	1	28	7	4	0		X	SAINT JOHN	18	,	D	- 11	17	U	220	
SH LEVEL	15P	-10	24P	6P	89	0	290	59	NOVA SCOTIA		•	00	45	22	^	200	
SPER	16	0	29	8	6	0		X	GREENWOOD	22		30	15	23	0	280	
THBRIDGE	219	29	33P	10P	29	0	020	59	SHEARWATER	19		25	15	18P	0	290	
DICINE HAT	23	3	35	12	0	0	060	56	SYDNEY	20		28	13	10	0	270	
ACE RIVER	15	-1	24	7	7	0	270	54	YARMOUTH	18	1	24	12	18	0	280	
SKATCHEWAN									PRINCE EDWARD ISL	AND							
EE LAKE	15P	OP	20P	10P	13P	0	330	57	CHARLOTTETOWN	20	1	28	14	12	0		
TEVAN	23	3	39	12	12	0	150	89	SUMMERSIDE	21	1	27	14	10	0	210	
RONGE	18	2	30	8	6	Ö	290	52	NEWFOUNDLAND								
GINA	22	3	38	12	11	0	160	56	CARTWRIGHT	16	3	29	5	32	0	210	
SKATOCN	219	11 40 4000	37P	89	10P	100	350	46	CHURCHILL FALLS	18		29		26	C	250	
		34				100	330	X	GANDER INT'L	19		28	8	10	0	220	
MFT CURRENT	21	3	36	11	8	0	220		GOOSE	206			N. T. (182)		0	190	
ORKTON A NITTO DA	20	2	36	1	2	0	330	50		15		25	11	7	*	090	
ANTTOBA	100000						~		PORT-AUX-BASQUES					21P	ō	240	
RANDON	219	29		10P	4		310	81	ST JOHN'S	189				22	0	240	
NURCHILL .	12	1	27	4	1	0	260	50	ST LAWRENCE	15		23			2.7	240	
ONN LAKE	16	1	27	7	23	0	280	41	WABUSH LAKE	171	4P	29F	6P	39P	0	210	1

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 P = value based on less than 7 days

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

* = missing

DR at direction of measurem with colors and a second to proceed the second to the seco AV Present macro temperature in degree C of party being principly in CE (a). To say the result of the principle of the contract of the bowteons for at X DE SOCIAL DE CONTRACTO DE CONTRACTOR DE CONT Market and the formal of the last of the property of the last of t