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Climatic Perspectives

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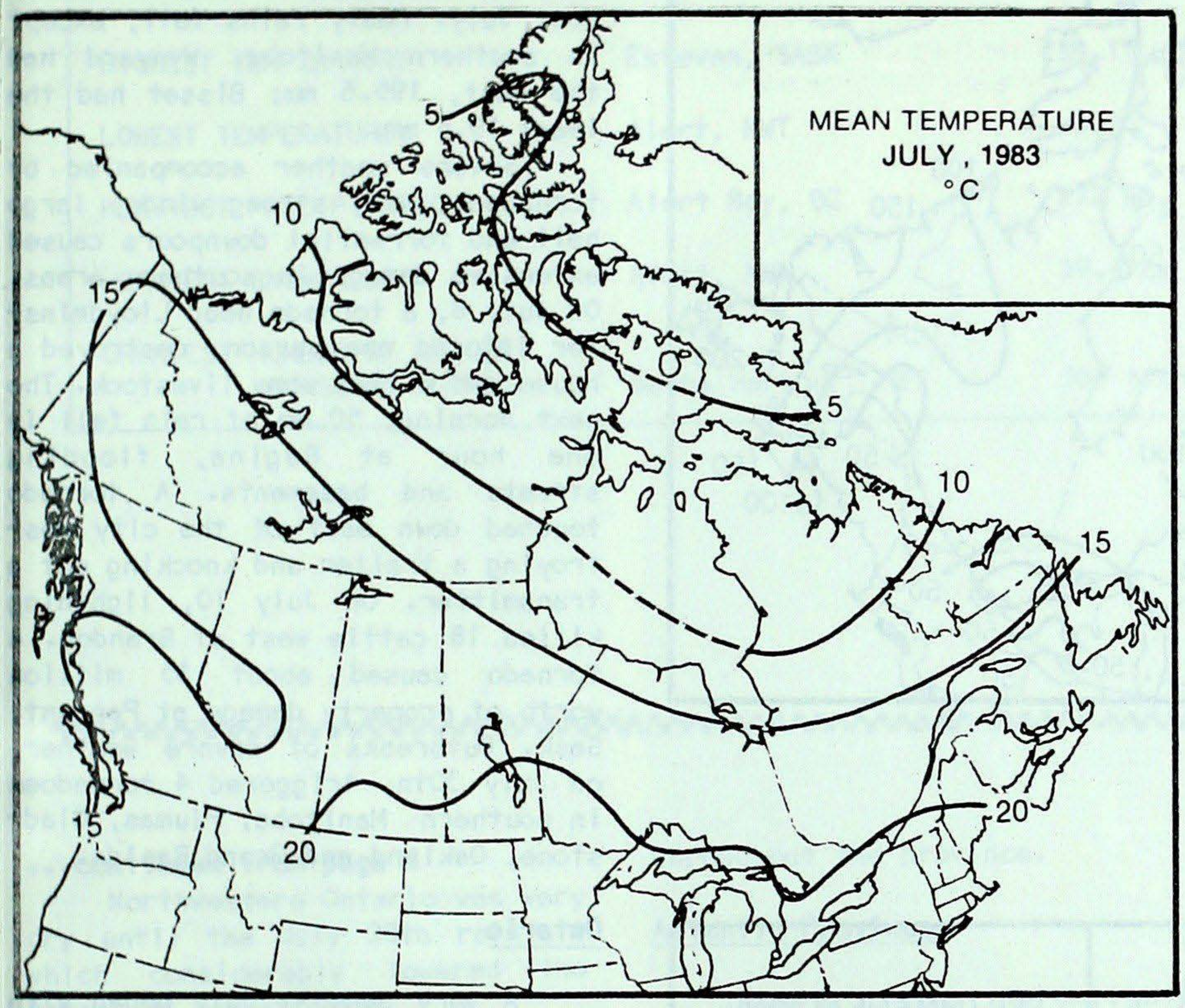
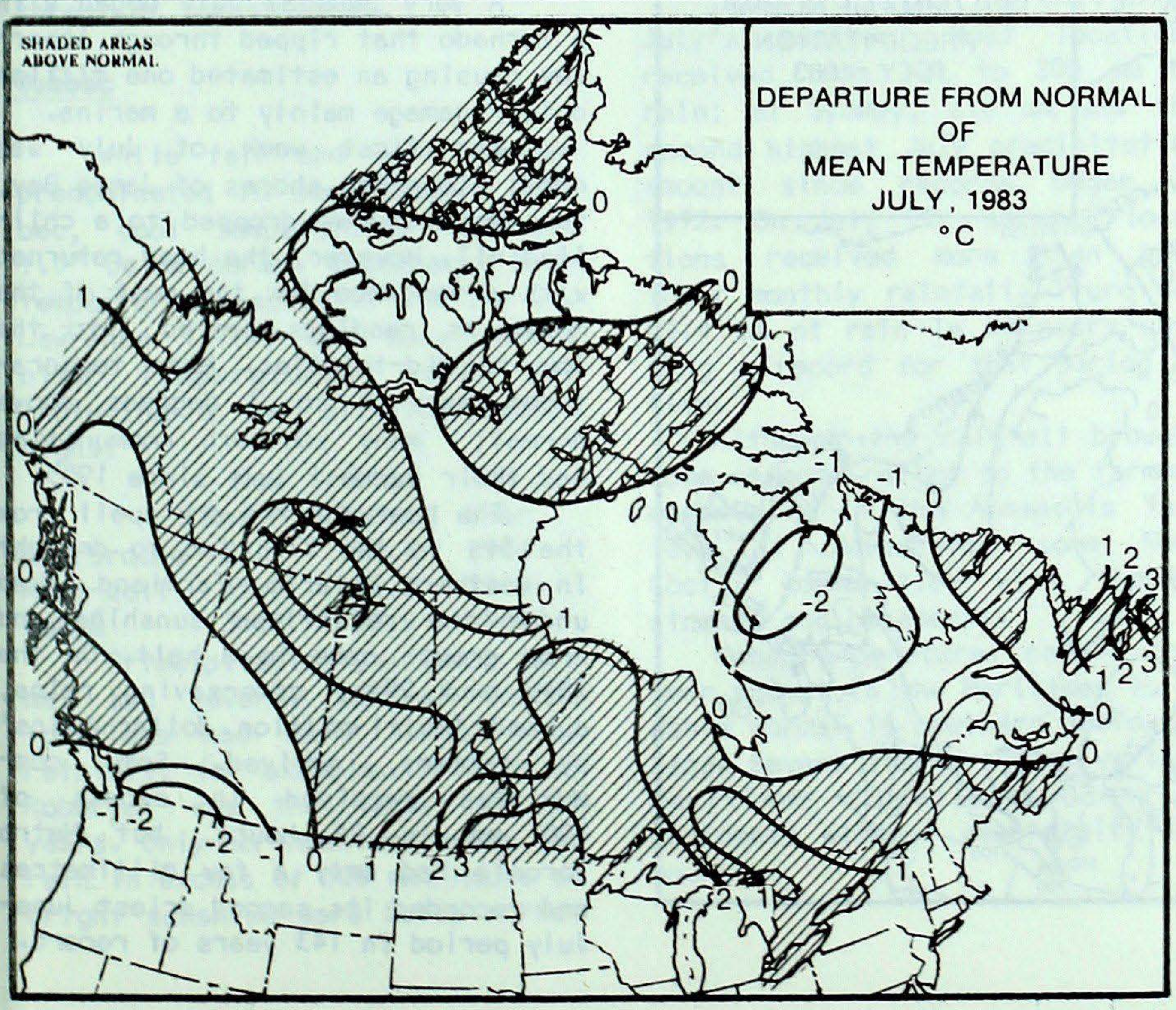




ACROSS THE COUNTRY

Yukon and Northwest Territories

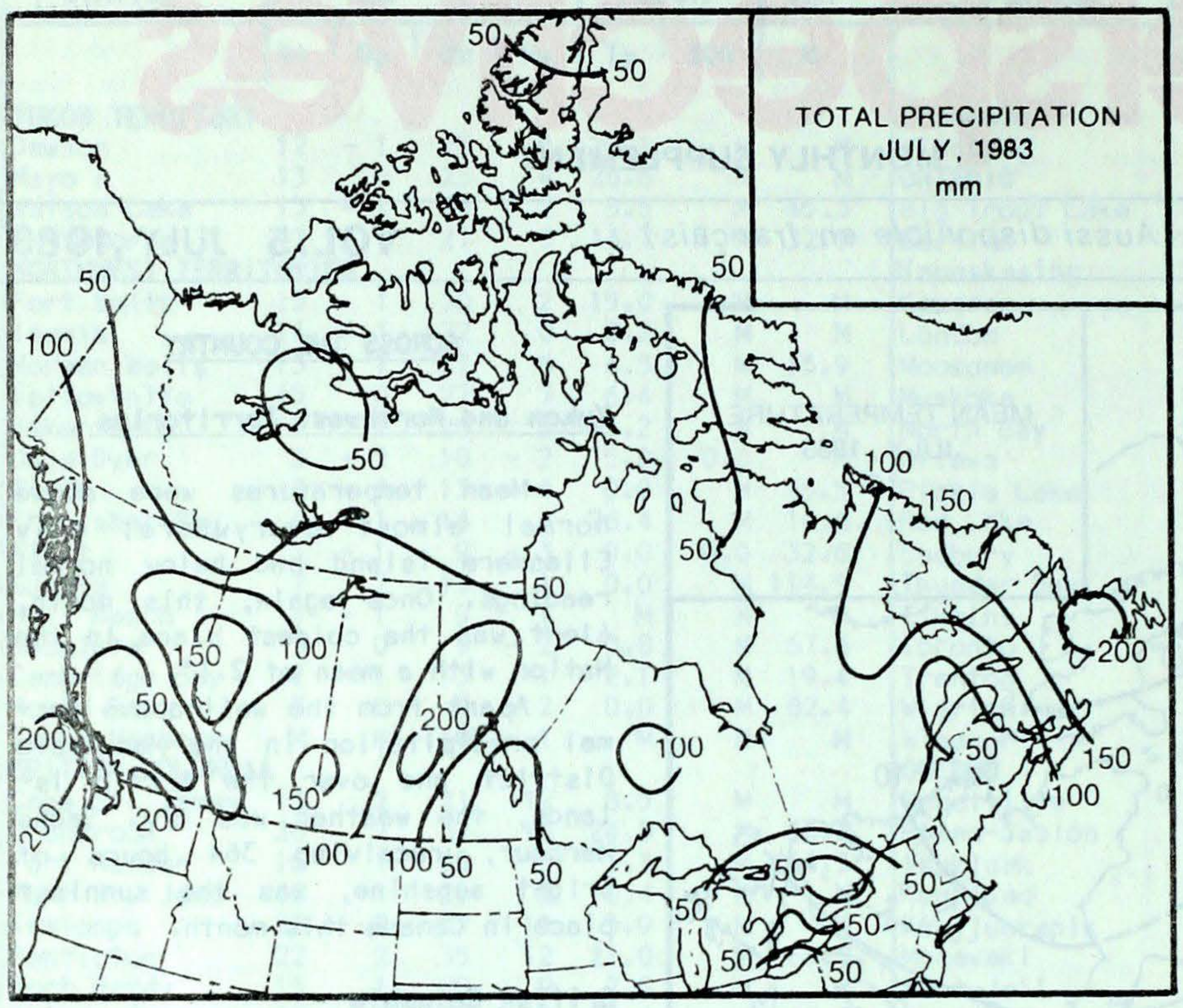
Mean temperatures were above normal almost everywhere; only Ellesmere Island had below normal readings. Once again, this month, Alert was the coldest place in the Nation with a mean of 2.1°.

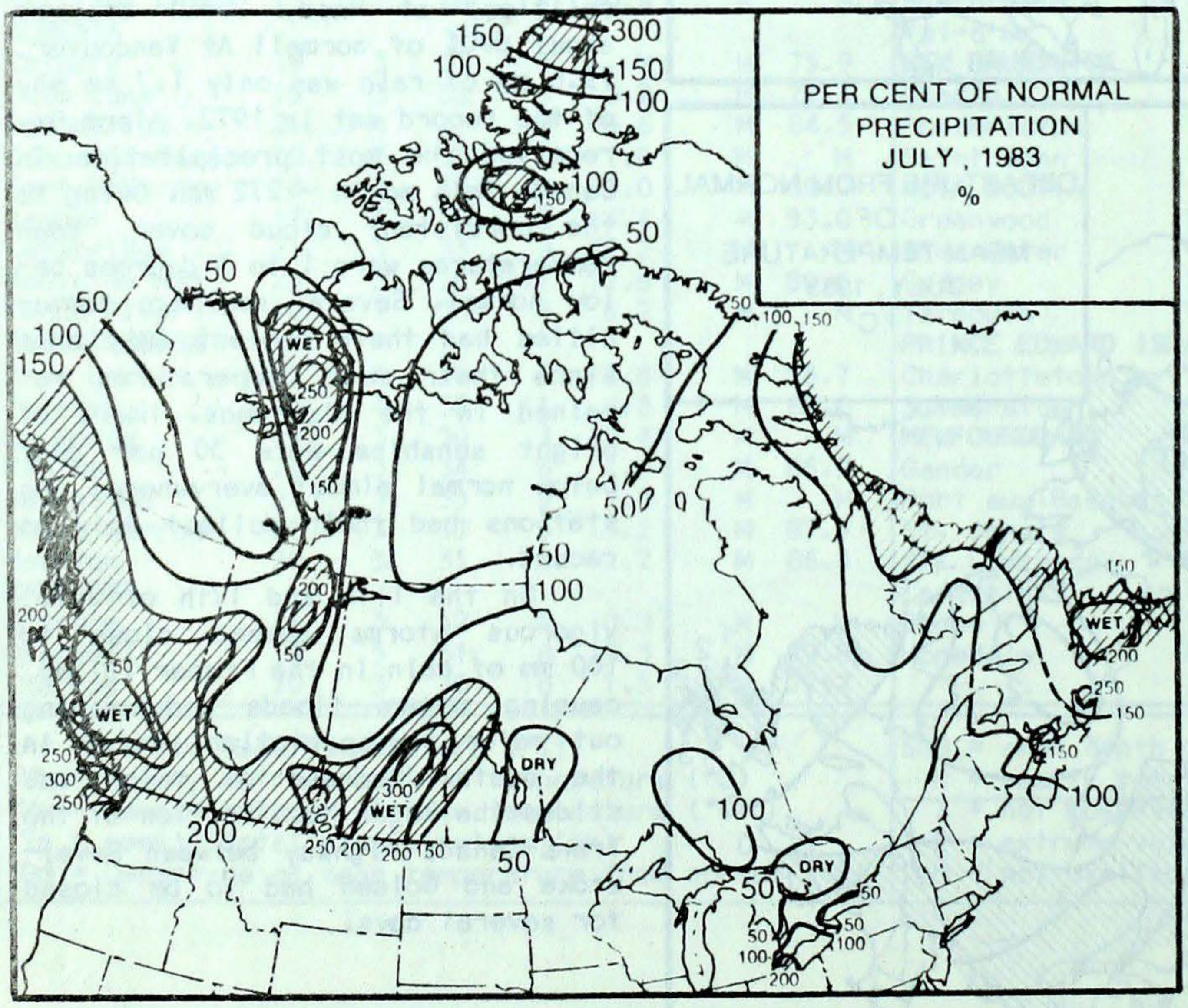
Apart from the well-above normal precipitation in the Mackenzie District and over the Arctic Islands, the weather was dry. Sachs Harbour, receiving 364 hours of bright sunshine, was the sunniest place in Canada this month.

British Columbia

July's cool, dull and damp weather was reminiscent of winter. Storms crossing the West Coast, produced record rainfalls at nine localities; at Hope, 255.1 mm was about 690% of normal! At Vancouver, 79.6 mm of rain was only 1.7 mm shy of the record set in 1972. Alert Bay received the most precipitation in Canada this month - 272 mm. Owing to the persistent cloud cover, mean temperatures were 1 to 3 degrees below normal. Several southern communities had their coolest July ever since their mean temperatures remained in the mid-teens. Hours of bright sunshine were 30 per cent below normal almost everywhere; ten stations had their dullest July on record.

On the 11th and 12th of July, vigorous storms dumped close to 100 mm of rain in the Fraser Valley, causing severe floods and washing out major transportation routes in the south. Because of major mud slides the Roger Pass section of the Trans-Canada Highway between Revelstoke and Golden had to be closed for several days.





Prairie Provinces

The weather was warm across the Prairies. Mean temperatures were 1 to 3 degrees above normal. At Winnipeg, 22.2° proved to be the warmest July temperature since 1957. Only southern Alberta experienced a cool July. Heavy rains fell, except in southern Manitoba. Wynyard had the most, 195.6 mm; Bisset had the least 19.5 mm.

Severe weather accompanied by tornadoes, very strong winds, large hail and torrential downpours caused extensive damage in southern areas. On July 8, a tornado near Lloydminster injured one person, destroyed a house and killed some livestock. The next morning, 50 mm of rain fell in one hour at Regina, flooding streets and basements. A tornado touched down east of the city destroying a trailer and knocking out a transmitter. On July 10, lightning killed 18 cattle west of Brandon. A tornado caused about $5 million worth of property damage at Pennant, Sask. Outbreaks of severe weather, on July 30th, triggered 4 tornadoes in southern Manitoba; Plumas, Gladstone, Oakland and Grand Rapids.

Ontario

A very unusual July began with a tornado that ripped through Atherley causing an estimated one million dollar damage mainly to a marina.

The first week of July was cool; along the shores of James Bay, the temperatures dropped to a chilling -1°. However, the heat returned with a vengance for the rest of the month as readings soared into the low to mid-thirties. Mean temperatures were 1 to 2 degrees above normal; many southern communities had their warmest July since 1955.

The heat and the dry spell from the 5th to the 27th led to drought in southern Ontario. Farmland baked under the relentless sunshine and crop growth came to a halt. On the 28th and 29th, crop-saving rains, dubbed 'Multi-million dollar rains' by farmers, arrived. Some communities received in excess of 100 mm in 24 hours, but Metro Toronto had only a few millimetres and recorded its second driest June-July period in 143 years of record.

CLIMATIC EXTREMES - JULY, 1983

MEAN TEMPERATURE:		
WARMEST	Windsor, ONT	23.7°
COLDEST	Alert, NWT	2.1°
HIGHEST TEMPERATURE:	Estevan, SASK	38.1°
LOWEST TEMPERATURE:	Alert, NWT	-3.2°
HEAVIEST PRECIPITATION:	Alert Bay, BC	272 mm
HEAVIEST SNOWFALL:	Alert, NWT	39.4 cm
GREATEST NUMBER OF BRIGHT SUNSHINE HOURS:	Sachs Harbour, NWT	364 hrs

...continued from page 2

Northwestern Ontario was very dry until the July 28th rainfall which considerably lowered the threat of forest fires.

Québec

While fair and warm weather predominated in southwestern Québec, cool temperatures averaged 1.5° below normal elsewhere. Mean tempertures reached 20° in the St. Lawrence Valley and many record high temperatures were set including a few all-time record highs:

	New Record	Old Record	Year
Sherbrooke	33.7	33.4	1964
Mont-Joli	35.9	34.5	1949
Gaspé	34.8	33.9	1969

Prtecipitation was below normal and several central Québec locations had their lowest July rainfall; for example, 55.7 mm at Roberval was the lowest in 11 years. Only northeastern areas had rain in excess of 100 mm. Hours of bright sunshine were below normal throughout the province.

Atlantic Provinces

Heavy rains highlighted July's weather. Most locations received from 100 to 200 mm of rain; at Sydney, 218 mm was the second highest July precipitation amount since records began in 1972. On July 22, several locations received more than half their monthly rainfall. Truro had 69.4 mm of rain in 24 hours setting a record for that period of time.

Although the rainfall brought some welcome relief to the farmers especially in the Annapolis Valley, it devastated some Nova Scotia communities with flooded streets and basements.

Mean temperatures ranged from near normal in the Maritimes to 3° above normal in southern Newfoundland. Severe storms struck various Maritimes localities leaving residents without electricity for hours.

CLIMATIC IMPACTS

Agriculture

Crop-saving rains brought a welcome relief to drought-struck southern Ontario. The rains saved vast amounts of crops worth millions of dollars. However, the corn yield was expected to be 25 per cent below normal this year. Garpe growers in the Niagara Peninsula expect to produce high quality grapes. On July 11, heavy rainfalls of 90-150 mm ruined most of the vegetable crops in the Fraser Valley. Peas, beans and corn on more than 400 hectares in the Sumas Prairie region east of Abbotsford were affected.

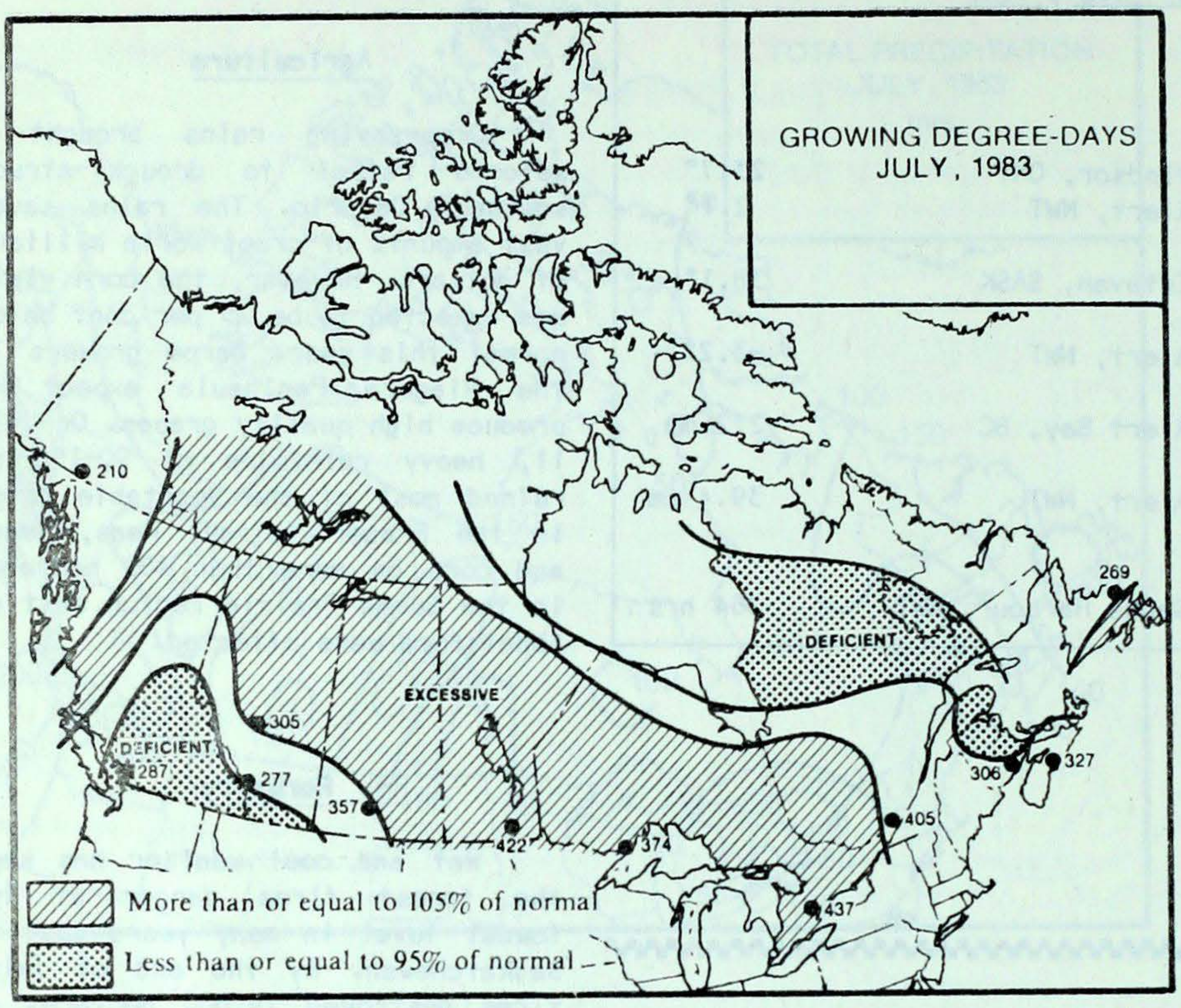
Forestry

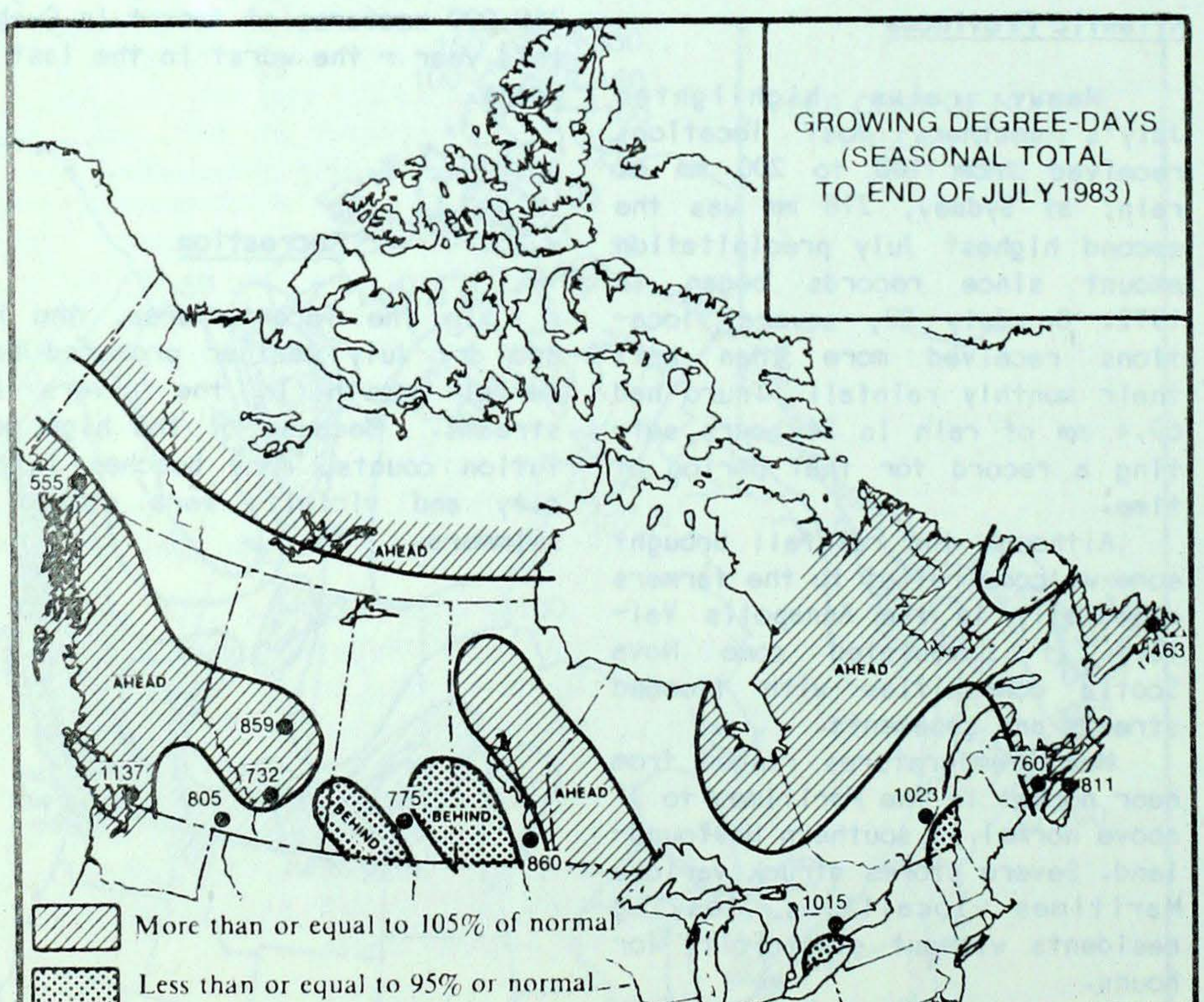
Wet and cool weather has kept the forest fires danger at its lowest level in many years west of Saskatchewan. By the end of July, fires destroyed 74,000 hectares of forest compared to 147,700 hectares last year in British Columbia. In contrast, fires ravaged about 260,000 hectares of forest in Québec this year - the worst in the last 50 years.

Recreation

In the Toronto area, the hot and dry July weather promoted bacterial growth in the rivers and streams. Because of the high pollution counts, many beaches in the city and vicinity were closed to swimmers.

G R O W I N G D E G R E E - D A Y S





	TOTAL TO END OF JULY		
	1983	1982	NORMAL
BRITISH COLUMBIA			
Kamloops	1241	1050	1021
Penticton	1152	1183	1227
Prince George	725	827	700
Vancouver	1152	1042	1083
Victoria	1076	941	991
ALBERTA			
Calgary	749	770	757
Edmonton Mun.	877	939	803
Grande Prairie	748	834	770
Lethbridge	858	914	935
Peace River	713	854	761
SASKATCHEWAN			
Estevan	951	928	1013
Prince Albert	755	797	836
Regina	789	958	937
Saskatoon	880	874	935
Swift Current	758	763	909
MANITOBA			
Brandon	789	934	949
Dauphin	757	854	906
Winnipeg	875	1048	1002
ONTARIO			
London	1029	1220	1176
Muskoka	907	1098	965
North Bay	827	995	943
Ottawa	1042	1229	1154
Thunder Bay	723	789	773
Toronto	1034	1148	1176
Trenton	1022	1134	1162
Windsor	1215	1436	1381
QUÉBEC			
Baie Comeau	542	562	628
Montréal	1040	1221	1184
Québec	876	973	967
Sept-Iles	507	485	545
Sherbrooke	829	916	1037
NEW BRUNSWICK			
Charlo	715	771	801
Fredericton	914	974	961
Moncton	857	799	862
NOVA SCOTIA			
Halifax	826	738	876
Sydney	714	654	707
Yarmouth	743	772	755
PRINCE EDWARD ISLAND			
Charlottetown	829	763	787
NEWFOUNDLAND			
Gander	669	480	603
St. John's	473	420	512
Stephenville	724	626	608

X = Season Ended

EXTREME RAINFALL EVENTS

by

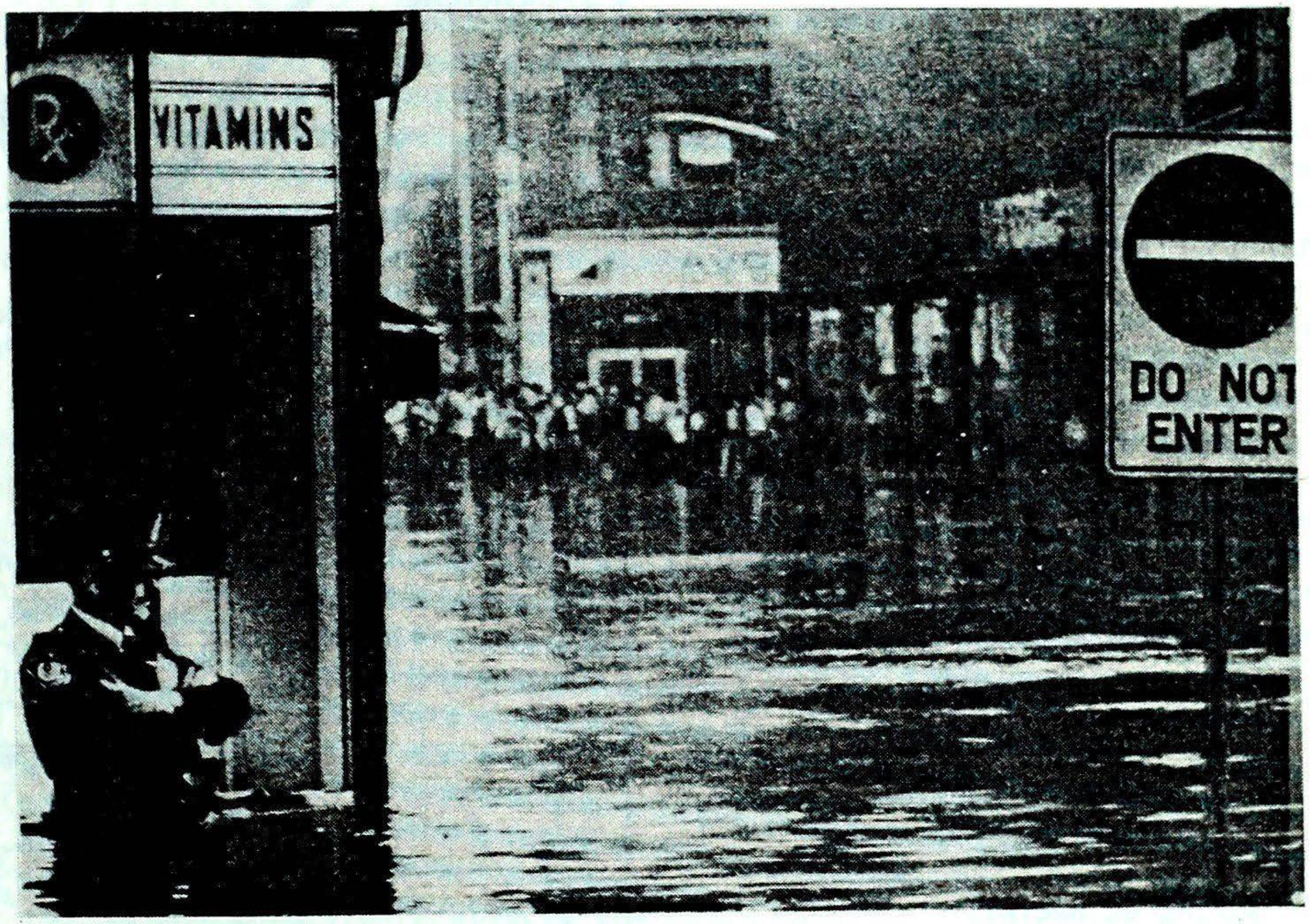
W.D. Hogg
Canadian Climate Centre

" Nightmare for flood victims".
"Mother-to-be saved as storm strikes".
"Residents row across street...after heavy rain".
"Damage evident as raging rivers recede".
"Flood relief paid by Feds".

These are merely a sample of 1983 headlines from Canadian newspapers referring to the consequences of extreme rainfall events. Moreover, these are typical of any year, not just this one.

Of course, heavy rain is not the only cause of floods. In fact, in Canada, snow melt and ice jams are frequently associated with overflowing rivers and lakes. Still, rainfall is almost always the sole or a contributing factor in major floods.

Naturally enough, different types of extreme rain events cause different types of floods. Most of us are familiar with the short but very intense summertime downpours which are often accompanied by thunder and lightning. In the most severe of these, effects are immediate and often dramatic. In the urban environment, storm sewers overflow, basements flood, underpasses fill with water, bridges wash out and property and even people are lost. Intense thunderstorm rainfalls occur very frequently across Canada during the warm weather months. Fortunately, each individual storm is quite small, often covering less than 100 square kilometres. Hence, although the probability of an extreme event occurring somewhere in Canada is high, the risk that it will occur where you live or work is much less. Urban areas are particularly vulnerable in these "flash flood" situations because of their high density of property and people and because large areas of roofs and pavement reduce infiltration and allow rapid movement of large volumes of water



Grand River (Ont.) flooding May, 1974

across the surface. The June 24, 1983 Saskatoon storm dumped 75 mm of rain on the city in an hour and over 100 mm during the course of the event while areas south of the city received up to 125 mm. This is still well short of the Canadian record one hour rainfall of 267 mm which belongs to Buffalo Gap in Southern Saskatchewan.

Rainstorms which last a day or more rarely produce rainfall rates or intensities which match the short duration severe thunderstorm event, but they still can create problems. Such storms usually cover much larger areas (thousands or tens of thousands of square kilometres) and of course, last longer. This means that much more water gets dumped on the countryside. When these huge volumes of water become concentrated in large and medium size rivers, the river floods and property near the river is damaged or destroyed. Snowmelt often greatly compounds the problem in Canada. Fewer of these events occur but

...RAINFALL 7B

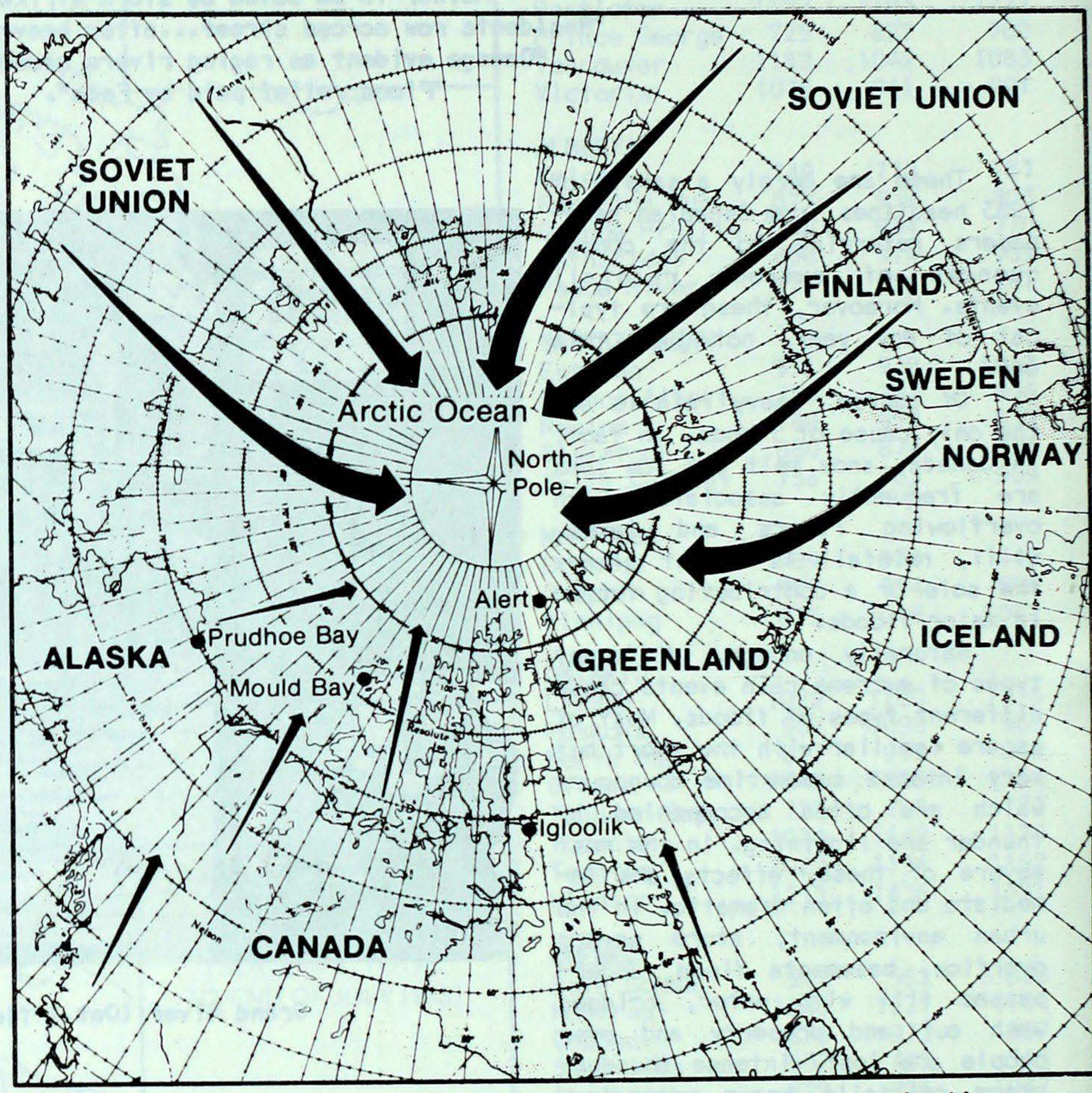
Arctic Haze

Atmospheric Environment Service Scientists have made some startling discoveries about the state of the air in the Arctic. During three years of sampling air at three northern stations; Mould Bay, Igloolik, and Alert, scientists discovered that air pollution forms a haze over most of the Arctic north of 60 degrees latitude. The pollution has its source in the U.S.S.R., Europe and to a lesser extent North America and dramatically increases in concentration during the winter.

Recent studies this past March and April with the United States and Norway, during the "Arctic Gas and Aerosol Sampling Project" (AGASP), indicate that although haze particles themselves are acidic, their acidity does not affect precipitation. The pH (a measure of acidity) of new snow samples taken at Alert during AGASP was neutral at approximately 7.2. The Haze particles also contribute to the formation of ice crystals in the atmosphere by acting as nuclei.

This spring's study also noted the persistent level of haze seen in previous years. However, the level of haze was decreased on two separate occasions due to short term drops in aerosol concentrations when different air masses arrived at Alert. Attempts are now underway to locate the sources of these air masses. Visibility throughout the AGASP experiment was generally better than 20 km except during periods of snow, blowing snow, or ice crystal precipitation events.

Arctic haze is caused by suspended particles which scatter light and reduce visibility horizontally, from 300 kilometres to approximately 30 kilometres, and may extend to a height of several thousand metres above the ground. Particle levels in the haze are 20 to 40 times higher in winter than summer, a direct result of a change in the source of the prevailing winds.



Arrows indicate sources of pollution causing haze over Arctic

The suspended particles consist of contaminants from coal and oil burning industrial areas and smelters in the mid-latitudes (30 to 60 degrees north). The particles are picked up by prevailing winds and deposited in the Arctic air mass. In fall and winter, the prevailing winds carry particles from the Soviet Union into the Arctic air mass. Late winter and early spring, particles are carried to the Arctic in prevailing winds blowing over western Europe, and to a lesser extent in North American wind systems.

North Amrican airborne pollution is generated mainly in the eastern part of the continent and is generally blown out over the Atlantic Ocean. U.S.S.R. pullution sources are either upwind or within the Arctic airmass and have a direct effect of the arctic atmosphere. European pollution enters the Arctic by travelling northward over Scandinavia or the U.S.S.R.

The Environment Canada three-station air monitoring network is part of an international research program in the Arctic including scientists from Norway, Denmark, Iceland, the United States and the U.K.

It is expected that the exact cause of arctic haze will be more clearly defined by 1984 when Canada plays host to the Third International Symposium on Arctic Air Chemistry. Results of ongoing research on the origin and effects of polar air pollution will be presented at the symposium. This scientific gathering should provide more insight into the problem of arctic haze and may influence the decision on whether formal international effort to curb arctic air pollution is warranted.

-Material provided by the Information Directorate

RAINFALL

(continued from 5B)

Individual storms affect much larger areas and more people. Fortunately, warning times are much greater both because the large events are more meteorologically visible and because it takes a long period for the water to fall as rain and to make its way overland to reach the river. Intense low pressure centres, including decaying hurricanes, are usually associated with these rain events. The risk of flooding increases if the low stalls or moves only slowly through the vulnerable river basin, thus prolonging the rain. British Colombia is prone to a special case of this situation. Storm systems from the Pacific frequently stall along the West Coast and feed moist Pacific air up the slopes of adjacent mountains resulting in prolonged periods of heavy rain. Swollen rivers and mud slides result. Ucluelet Brynnor Mines on the west coast of Vancouver Island recorded the Canadian record single day rainfall (489 mm) under just such conditions. The world record is nearly four times that amount (1870 mm) recorded at La Reunion Island in the Indian Ocean.

Modern meteorology uses many methods to monitor and predict extreme rainfall events. Numerical computer models of the atmosphere analyse and predict the motion and development of major storm systems. Balloon measurements of the upper atmosphere assist in the identification of areas matching the complex set of conditions required for the potential development of severe thundershowers. Once the systems or individual thunderstorms have formed, ground observations, satellite images at half hourly intervals and weather radar data at ten minute intervals are used to monitor motion and further growth, and to predict storm motion for the next few hours. The result is a very busy shift in the forecast office.

Use of information about the storm does not end when the rain stops. The Canadian Climate Centre collects the rainfall data, radar data and other climatological information. These data from historical storms are used to ensure the safe and cost effective design of water related structures. Statistical analysis of the frequency of severe rain events aids in the design of culverts and storm sewers which, on the average over many years, should not overflow too frequently but yet should not be an overwhelming burden on the tax payer. The same information is used by engineers to ensure that storm sewer systems in major cities do not frequently have to dump polluted water into our lakes and rivers during heavy rainfall events. Because of their cost and importance to the community, bridges must be designed such that they fail rarely and yet are cost effective and, again, extreme rainfall information for the region is essential to the process. The huge costs and risk of loss of life make it imperative that major hydroelectric and irrigation dams be able to survive any rainfall event possible during the expected life of the structure. Over 500 detailed published storm analyses are available to assist in the determination of things like required spillway capacity for such dams.

The next time the family picnic is spoiled by a torrential rainstorm you can take some small consolation in the knowledge that hydrometeorologists and engineers will make valuable use of the storm information for years to come. Your disappointed eight year old may not buy it though, mine didn't.

A ROUGH AND READY USER'S GUIDE TO PROBABILITY OF PRECIPITATION

Since July 1982, Environment Canada has included a probability of precipitation with most weather forecasts. Probability forecasts are a subjective analysis of your chances of encountering measurable precipitation at some time during the forecast period. For example, a 40% probability of rain today means there are 4 chances in 10 of you getting wet.

ISOLATED SHOWERS THIS MORNING, CLOUDY THIS AFTERNOON.
A FEW SHOWERS TONIGHT. RAIN TOMORROW.
PROBABILITY OF PRECIPITATION 10 PERCENT TODAY, 40 PERCENT TONIGHT, 90 PERCENT TOMORROW.

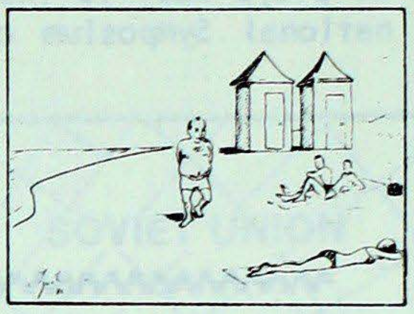
As the above example shows, probability forecasts are given at the end of each regular forecast for up to three specific periods: today, tonight and tomorrow. Today refers to the time period 6 am to 6 pm; tonight refers to the time period 6 pm to 6 am and tomorrow refers to the time period 6 am to midnight the following day.

Probability forecasts cannot be used to predict at which time, at which location or how much precipitation will occur. For example, a 60% probability of snow today does not mean that it will snow during 60% of the day or that it will snow in 60% of the forecast region. The probability figure does mean that there is a 60% chance of a measurable amount of snow falling at your location today.

Statistically one cannot determine the accuracy of a single probability forecast. The accuracy can only be verified after a number of forecasts. A 30% probability of precipitation forecast is accurate if the same forecast was made on one hundred occasions and if it rained on 30 of those occasions.

Probabilities

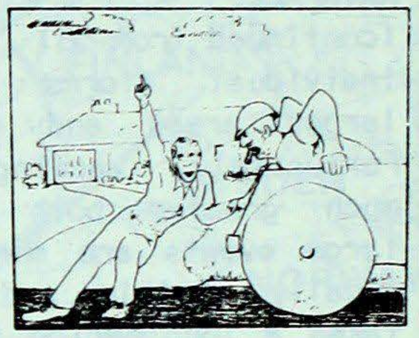
0% No precipitation even though it may be cloudy.



10% Dry weather with only one chance in ten of snow or rain falling

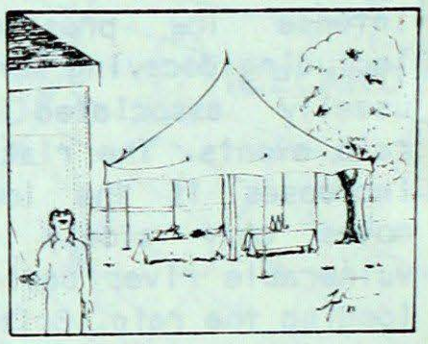
20% Dry weather still expected

30% Go ahead with your picnic, boating or ski plans but you may have to take shelter.



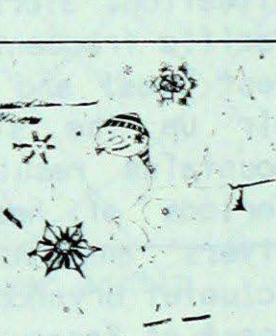
40% An umbrella is recommended. Make alternate plans for outdoor activities that are conducive to rain. Not a good day to pave the driveway. Keep your fingers crossed!

50% It's even Steven on whether it snows or not. Be prepared for all eventualities.



60% Want to water your lawn? The odds are favourable that Mother Nature might give you some help.

70% Suggest cancellation of outside events. The chances for dry weather have shrunk to three in ten.



80% Wet weather likely. Make appropriate plans.

90% The occurrence of precipitation is a near certainty. Venture out if you enjoy walking in the rain or playing in the snow.

100% Precipitation is a certainty.

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

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EDITOR: A. Shabbar; ASSISTANT EDITOR: R. Sarrazin;

Correspondents: T. Mullane, Ottawa; H. Wahl, Whitehorse; N. Penny, Vancouver; W. Prusak, Edmonton; F. Luciow, Winnipeg; B. Smith, Toronto; J. Miron, Montreal; F. Amirault, Halifax.

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

STATION	Temperature °C / Température °C				Snowfall (cm) / Chute de neige (cm)	Total Precipitation (mm) / Précipitation totale (mm)	% of Normal Precipitation / % de précipitation normale	Snow on ground at end of month (cm) / Neige au sol à la fin du mois (cm)	No. of days with Precip. 1.0 or more (mm) / Nombre de jours de préc. 1.0 ou plus (mm)	Bright sunshine (hours) / Durée de l'insolation (heures)	Degree Days below 18°C / Degrés-jours au-dessous de 18°C	Mean Sea Level Pressure (kPa) / Pression au niveau moyen de la mer (kPa)	Mean Vapour Pressure (kPa) / Pression de vapeur moyenne (kPa)
	Mean / Moyenne	Difference from Normal / Écart à la normale	Maximum / Maximale	Minimum / Minimale									
BRITISH COLUMBIA COLOMBIE-BRITANNIQUE													
Abbotsford A	16.4	-0.6	31.1	8.3	0.0	149.4	363	0	10	202	59.1	101.7	1.47
Alert Bay	13.2	-0.8	24.7	7.0	0.0	272.0	521	0	15		141.8	101.7	1.31
Blue River A	15.4	-1.0	33.2	6.6	0.0	165.9	220	0	22	152			
Bull Harbour	13.2	0.1	19.0	5.7	0.0	204.6	333	0	18		147.1	101.6	1.42
Burns Lake	13.8	0.0	24.2	2.9	0.0	68.6	159	0	17	209	131.2		
Cape St. James	14.3	1.6	22.0	8.8	0.0	137.5	235	0	17		116.5	101.6	1.41
Cape Scott	13.6	0.4	19.7	7.6	0.0	218.4	263	0	20		137.2	101.7	1.42
Castlegar A	17.4	-2.9	30.9	7.0	0.0	107.9	303	0	15	204	39.0	103.1	
Comox A	16.5	-0.9	27.1	8.1	0.0	33.4	120	0	8		51.4	101.6	1.32
Cranbrook A	15.9	-2.5	29.5	2.4	0.0	50.4	230	0	11	254	71.2	101.5	1.09
Dease Lake	12.2	-0.3	23.6	-0.7	0.0	90.9	164	0	17	202	178.3	101.4	1.03
Ethelda Bay													
Fort Nelson A	17.1	0.5	28.7	4.0	0.0	62.6	74	0	11	266	44.3	101.1	1.28
Fort St. John A	15.4	-0.2	27.4	7.0	0.0	115.7	150	0	13		82.9	101.2	1.22
Hope A	16.3	-2.2	30.4	8.6	0.0	255.1	689	0	15	160	65.0	101.6	1.43
Kamloops A	19.3	-1.5	37.2	8.0	0.0	28.3	126	0	7	236	17.5	101.3	1.15
Kelowna A	17.2	-1.5	30.9	5.3	0.0	57.3	238	0	11	218	45.5	101.4	1.25
Langara	13.3	1.1	17.2	9.1	0.0	118.7	148	0	19		146.2	101.4	1.33
Lytton	19.5	-2.1	36.5	10.1	0.0	9.4	85	0	4	231	17.8	101.3	1.10
Mackenzie A	14.0	-0.9	27.3	2.5	0.0	121.4	235	0	19	200	134.3		
McInnes Island	14.6	0.9	21.4	10.4	0.0	196.2	198	0	16		103.9		
Merry Island	17.0	-0.6	24.6	11.5	0.0	79.6	206	0	11	196	39.0		
Penticton A	17.6	-2.7	33.6	6.5	0.0	47.3	224	0	11	210	35.9	101.4	1.25
Port Alberni A	15.8	-1.6	31.7	6.0	0.0	64.0	269	0	7	185	72.6		
Port Hardy A	14.0	0.4	22.5	6.5	0.0	99.8	192	0	15	159	124.3	101.6	1.31
Prince George A	14.7	-0.4	27.3	4.5	0.0	111.4	187	0	14	230	103.8	101.4	1.20
Prince Rupert A	13.1	0.3	19.6	5.4	0.0	215.1	209	0	19	109	147.7	101.4	1.35
Princeton A	15.6	-2.2	33.7	4.7	0.0	46.2	205	0	10	207			
Quesnel A	15.8	-0.6	30.6	7.3	0.0	76.3	145	0	14		73.7	101.4	1.23
Revelstoke A	16.3	-2.1	29.8	8.8	0.0	150.4	268	0	18	184	60.2	101.5	1.36
Sandspit A													
Smithers A	14.1	-0.6	27.8	3.3	0.0	81.7	178	0	15	174	121.2	101.4	1.20
Stewart A	14.7	-0.1	28.2	7.2	0.0	84.7	129	0	18	123	102.4		
Terrace A	15.1	-1.0	29.0	6.4	0.0	74.1	131	0	16	161	97.4	101.4	1.11
Vancouver Harbour	16.7	-0.9	25.5	10.2	0.0	121.6	285	0	9		47.8		
Vancouver Int'l A	16.6	-0.7	24.8	9.4	0.0	79.6	249	0	10	217	44.4	101.6	1.44
Victoria Gonzales Heights	15.6	0.2	27.1	9.7	0.0	32.0	239	0	5	248	75.3		
Victoria Int'l A	16.1	-0.2	28.2	7.9	0.0	33.9	187	0	6	251	60.3	101.6	1.31
Victoria Marine	14.7	0.7	24.0	8.0	0.0	65.2	287	0	8		111.0	101.7	1.29
Williams Lake A	14.4	-1.0	31.5	3.4	0.0	55.3	114	0	13	245	117.7	101.4	1.03
YUKON TERRITORY TERRITOIRE DU YUKON													
Burwash A	12.4	0.1	23.3	-0.5	0.0	121.3	197	0	13		174.2	101.2	.92
Dawson A	15.9	1.2	30.5	4.0	0.0	64.3	190	0	13		73.0	101.0	1.20
Mayo A	15.8	0.6	30.2	4.6	0.0	69.8	135	0	11		79.7	101.0	1.21
Watson Lake A	14.9	0.0	27.5	1.9	0.0	55.0	95	0	11	276	97.3	101.1	1.08
Whitehorse A	13.7	-0.4	24.8	1.7	0.0	55.0	162	0	13	253	134.3	101.2	1.00
NORTHWEST TERRITORIES TERRITOIRES DU NORD-OUEST													
Alert	2.1	-1.5	9.6	-3.2	39.4	62.0	318	T	9	169	489.9	101.1	.63
Baker Lake	9.8	-1.2	25.7	-0.5	0.3	6.8	18	0	3	277	252.2	101.1	.88
Cambridge Bay A	9.0	1.1	19.8	1.6	T	9.3	42	0	1	327	279.2	101.3	.88
Cape Dyer A	3.6	-1.5	16.8	-2.6	16.4	79.6	186	T	11		446.1	100.8	.63
Cape Parry A	5.8	0.1	20.6	-1.4	0.0	23.2	136	0	6		377.8	101.3	.77
Clyde	4.2	0.1	14.7	-1.8	5.2	9.4	41	0	3	274	426.5	100.8	.64
Coppermine	9.1	-0.6	27.8	1.4	0.0	66.1	256	0	7	281	278.8	101.3	.89
Coral Harbour A	8.9	0.2	22.9	0.1	0.0	4.6	11	0	3	357	282.1	101.1	.78
Eureka	5.8	0.4	13.6	0.0	0.0	7.5	62	0	2	338	380.7	100.9	.66
Fort Reliance	14.3	0.4	26.5	2.1	0.0	19.2	56	0	4		119.0	101.0	1.12
Fort Simpson A	17.3	0.7	31.4	5.0	0.0	12.6	21	0	4	332	47.6	100.9	1.31
Fort Smith A	18.0	2.0	30.4	3.8	0.0	99.6	175	0	10	303	66.5	100.9	1.23
Frobisher Bay A	7.7	0.1	20.9	0.7	T	74.5	118	0	9	285	320.7	100.6	.72
Hall Beach A	7.0	1.6	20.0	0.8	T	8.2	24	0	3		342.5	100.8	.72
Hay River A	15.6	-0.2	25.9	4.2	0.0	11.0	23	0	2		89.0	101.0	1.22
Inuvik A	15.0	1.4	28.2	3.5	0.0	8.7	26	0	3	356	114.0	101.2	1.02
Mould Bay A	3.8	-0.1	16.2	-1.9	1.5	9.2	62	0	5	306	410.9	101.5	.66
Norman Wells A	17.3	1.0	28.0	7.2	0.0	23.2	41	0	7		47.9	101.0	1.23
Pond Inlet A													
Resolute A	3.9	-0.2	15.8	-2.0	9.9	39.9	177	1	5	307	436.8	101.1	.68
Sachs Harbour A	11.1	5.2	19.5	-2.2	0.6	14.2	93	0	5	364	324.4	101.4	.79
Yellowknife A	16.6	0.3	28.0	7.9	0.0	48.0	142	0	9	334	66.6	101.0	1.18
ALBERTA													
Banff	13.9	-0.9	30.0	4.0	0.0	56.3	133	0					
Brooks	17.5	-1.0	32.5	4.5	0.0	63.5	159	0		299			
Calgary Int'l A	16.5	0.1	31.3	5.0	0.0	59.0	90	0	11	311	55.9	101.3	1.03
Cold Lake A	17.1	0.2	28.0	6.4	0.0	70.2	82	0	10	227	42.7	101.1	1.42
Coronation A	17.2	-0.1	30.8	5.2	0.0	130.6	207	0	8	317	39.7	101.2	1.36
Edmonton Int'l A	16.6	0.8	28.6	7.2	0.0	104.5	114	0	11	295	52.4	101.2	1.41
Edmonton Municipal A	17.9	0.5	30.6	9.4	0.0	77.4	87	0	11	291	29.4	101.1	1.41
Edmonton Namao A	16.8	-0.1	29.3	8.1	0.0	84.2	110	0	16		48.5	101.2	1.40

JULY 1983 JUILLET

STATION	Temperature °C / Température °C: Mean / Moyenne	Difference from Normal / Écart à la normale	Maximum / Maximale	Minimum / Minimale	Snowfall (cm) / Chute de neige (cm)	Total Precipitation (mm) / Précipitation totale (mm)	% of Normal Precipitation / % de précipitation normale	Snow on ground at end of month (cm) / Neige au sol à la fin du mois (cm)	No. of days with Precip. 1.0 or more (mm) / Nombre de jours de préc. 1.0 ou plus (mm)	Bright sunshine (hours) / Durée de l'insolation (heures)	Degree Days below 18°C / Degrés-jours au-dessous de 18°C	Mean Sea Level Pressure (kPa) / Pression au niveau moyen de la mer (kPa)	Mean Vapour Pressure (kPa) / Pression de vapeur moyenne (kPa)
Edson A	15.0	0.0	31.6	3.6	0.0	92.5	75	0	13	256	96.5	101.2	1.16
Fort Chipewyan A	17.5	1.5	29.5	5.5	0.0	72.9	96	0					
Fort McMurray A	17.5	1.1	29.8	7.5	0.0	74.6	99	0	12	275	37.4	101.0	1.33
Grande Prairie A	15.9	0.0	30.1	6.0	0.0	173.1	266	0	13	280	81.3	101.2	1.26
High Level A	16.4	0.7	29.8	4.3	0.0	91.7	133	0	8	295	61.4	101.0	1.25
Jasper	14.3	-0.8	30.3	4.9	0.0	54.2	109	0	11	216	115.1	101.4	.97
Lethbridge A	17.7	-0.9	33.6	5.8	0.0	80.6	185	0	10	300	32.3	101.3	1.18
Medicine Hat A	19.0	-0.9	33.0	6.0	0.0	81.4	201	0	11	324	24.7	101.1	1.32
Peace River A	15.5	-0.2	28.4	6.1	0.0	123.3	204	0	16		80.6	101.1	1.31
Red Deer A	15.5	-0.6	30.9	3.5	0.0	83.1	107	0	14		80.5	101.3	1.32
Rocky Mountain House	14.6	-0.7	28.3	2.2	0.0	121.9	131	0	15		104.9	101.3	1.16
Slave Lake A	15.9	0.3	29.8	6.8	0.0	192.5	248	0	15	236	72.0	101.1	1.31
Suffield A	19.0	-0.4	33.5	5.3	0.0	51.5	158	0	9	296	24.2		
Whitecourt	14.7	-0.4	28.0	6.0	0.0	150.2	148	0	16		79.0	101.2	1.31
SASKATCHEWAN													
Broadview	19.4	1.7	33.4	4.2	0.0	62.8	123	0	10	336	20.4	101.2	1.43
Collins Bay	15.6	1.5	26.2	2.3	0.0	130.2	152	0	11	260	84.2	101.1	1.22
Cree Lake	16.9	1.3	28.0	1.3	0.0	60.7	77	0	9	280	50.8	101.0	1.22
Estevan A	21.8	1.9	38.1	8.6	0.0	55.7	103	0	9	352	4.5	101.2	1.57
Hudson Bay	18.6	1.3	32.4	4.0	0.0	184.8	232	0	14	269	24.9	101.1	1.58
Kindersley KY	18.5	0.2	33.4	7.0	0.0	153.2	321	0	9		28.3	101.1	1.43
La Ronge A	18.0	1.3	29.9	5.0	0.0	56.4	63	0	12		30.3	101.1	1.44
Meadow Lake	17.3	0.1	29.0	3.2	0.0	69.4	84	0	12	270	41.1	101.0	1.45
Moose Jaw A	20.5	0.8	36.0	7.4	0.0	103.4	194	0	6	339	10.3	101.2	1.46
Nipawin A	18.3		28.5	5.5	0.0	124.0		0	15	281	26.5	101.1	1.60
North Battleford A	18.3	0.2	30.0	7.1	0.0	42.6	65	0	8		26.5	101.1	1.47
Prince Albert A	18.5	1.1	29.6	6.5	0.0	82.5	126	0	11	188	16.6	101.2	1.45
Regina A	19.9	1.0	33.7	8.1	0.0	178.7	335	0	8	347	15.2	101.2	1.59
Saskatoon A	19.3	0.8	30.5	8.0	0.0	64.0	118	0	9		16.3	101.1	1.46
Swift Current A	18.7	0.4	35.9	7.8	0.0	91.0	194	0	9	299	55.1	101.1	1.29
Wynyard	18.7	0.7	30.5	5.1	0.0	195.6	347	0	13	323	25.4	101.2	1.55
Yorkton A	19.5	1.2	32.7	4.4	0.0	140.0	246	0	13	320	17.9	101.2	1.70
MANITOBA													
Bissett	21.1	2.8	34.3	1.5	0.0	19.5	27	0	3	287	15.9	101.1	1.68
Brandon A	20.2	1.4	32.8	2.0	0.0	70.4	106	0	7		18.5	101.2	1.85
Churchill A	11.3	-0.5	26.5	0.6	0.0	64.1	141	0	11	244	211.6	101.1	1.05
Dauphin A	20.1	1.6	31.5	3.9	0.0	82.2	128	0	12	301	14.6	101.2	1.76
Gillam A	16.9	1.9	28.2	2.7	0.0	64.4	69	0	12		60.9	101.1	1.29
Gimli	21.2	2.6	32.0	4.4	0.0	26.8	46	0	6	318	12.8	101.1	1.86
Island Lake	18.9	1.8	29.7	5.0	0.0	93.8	90	0	11		30.8	101.1	1.56
Lynn Lake A	17.0	1.2	27.9	3.5	0.0	105.8	129	0	13	258	25.8	101.1	1.27
Norway House A	18.7		32.9	5.3	0.0	96.6		0	10		27.8	101.1	1.50
Pilot Mound	21.5	2.9	33.9	3.1	0.0	47.0	65	0	6		14.4	101.3	1.78
Portage la Prairie A	22.2	2.5	34.4	3.5	0.0	37.3	49	0	6		10.6		
The Pas A	18.7	1.0	29.7	5.0	0.0	134.8	192	0	16	258	22.7	101.1	1.56
Thompson A	17.0	1.4	29.4	1.0	0.0	102.0	110	0	9	299	55.1	101.1	1.29
Winnipeg Int'l A	22.2	2.6	33.7	5.4	0.0	29.8	39	0	4	330	12.0	101.1	1.79
ONTARIO													
Atikokan	20.1	2.9	33.8	1.7	0.0	83.4	79	0	9		21.1	101.4	1.77
Earlton A	18.8	1.1	34.0	5.4	0.0	81.2	100	0	8		33.2	101.4	
Geraldton	19.4	3.1	34.0	2.8	0.0	133.8	164	0	11		33.4	101.4	1.53
Gore Bay A	21.2	2.4	33.2	9.6	0.0	43.3	71	0	4		9.2	101.5	1.73
Hamilton	23.7	2.0	35.8	9.0	0.0	78.6	117	0	7	323	3.6		
Hamilton A	22.2	1.7	34.4	9.1	0.0	126.6	180	0	6		6.6		
Kapuskasing A	18.5	1.7	32.9	2.6	0.0	61.2	64	0	14		41.9	101.3	1.53
Kenora A	22.1	2.9	35.8	6.2	0.0	63.9	70	0	7		13.5	101.2	1.94
Kingston A	21.2	1.1	34.3	10.0	0.0	71.5	134	0	6	307	5.9	101.5	1.85
Lansdowne House	19.3	2.3	33.3	5.0	0.0	98.1	102	0	13		31.1	101.1	1.57
London A	21.9	1.6	33.3	7.9	0.0	85.5	118	0	6	274	9.6	101.7	1.93
Moosonee	15.2	-0.1	31.4	-1.1	0.0	67.6	70	0	14	247	112.3	101.1	1.38
Mount Forest	19.8	1.6	31.2	4.2	0.0	63.0	83	0	5		26.7	101.6	1.76
Muskoka A	20.1	1.8	31.6	4.9	0.0	37.5	48	0	6		20.2		
North Bay A	19.6	1.3	32.4	5.2	0.0	39.6	39	0	6	288	25.9	101.5	1.62
Ottawa Int'l A	21.9	1.3	33.2	10.2	0.0	64.3	75	0	10	305	3.2	101.3	1.59
Petawawa A	19.8	1.1	34.2	5.8	0.0	40.2	48	0	9		17.1	101.4	1.62
Peterborough A	20.8	1.6	33.0	6.7	0.0	87.0	112	0	7		11.2		
Pickle Lake	19.8	2.7	33.2	4.6	0.0	88.4	80	0	9		26.3	101.3	1.54
Red Lake A	20.1	1.9	35.8	4.3	0.0	55.9	64	0	7	273	22.7	101.2	1.61
St. Catharines A	23.1	1.4	35.7	10.4	0.0	50.8	74	0	7		2.3		
Sarnia A	22.5	1.6	35.0	8.0	0.0	37.4	62	0	5		8.2		
Sault Ste. Marie A	20.4	3.1	32.9	3.8	0.0	68.4	123	0	6	305	15.6	101.5	1.76
Simcoe	21.9	1.3	34.0	8.0	0.0	157.2	229	0			8.5	101.7	1.87
Sioux Lookout A	21.2	2.9	35.7	2.8	0.0			0	8		19.0	101.3	1.71
Sudbury A	20.3	1.6	35.0	5.2	0.0	41.2	50	0	6		16.7	101.4	1.54
Thunder Bay A	19.6	2.0	34.1	2.7	0.0	62.4	83	0	6		27.6	101.3	1.77
Timmins A	17.5	0.3	34.4	2.0	0.0	122.2	135	0	12		45.9	101.4	1.37
Toronto	23.4	1.4	35.4	11.6	0.0	19.3	26	0	7		2.0		
Toronto Int'l A	22.3	1.7	35.7	7.8	0.0	18.3	26	0	5		7.8	101.5	1.74
Toronto Island A	21.9	1.6	35.8	11.3	0.0	15.2	21	0	5		2.1	101.5	1.79
Trenton A	22.0	1.4	34.2	10.1	0.0	29.4	48	0	5		3.9	101.4	1.78
Trout Lake (Big)	18.3	2.3	28.9	5.7	0.0	76.8	49	0	9		42.1	101.1	1.43
Waterloo-Wellington A	21.3	1.5	33.4	6.6	0.0	96.2	127	0	6		14.6		
Wawa A	16.5		29.9	1.5	0.0	68.7		0	9		49.0	101.5	1.50
Wiarton A	20.1	1.6	31.5	6.0	0.0	47.6	63	0	5		18.6	101.5	1.70
Windsor A	23.7	1.5	34.6	10.6	0.0	194.1	233	0	10		3.3	101.6	1.99

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NOVA SCOTIA NOUVELLE-ECOSSE													
Eddy Point	17.5	0.2	26.1	9.0	0.0	205.5	212	0	13	188	34.4	101.1	1.69
Greenwood A	19.0	-0.1	32.5	6.6	0.0	94.9	122	0	9		17.0	101.1	1.62
Halifax Int'l A	18.4	0.2	27.1	8.4	0.0	121.2	129	0	11		21.0	101.2	1.57
Sable Island	16.4	0.9	22.0	9.3	0.0	124.9	136	0	11	200	53.0	101.2	1.74
Shearwater A	18.3	0.9	27.6	9.8	0.0	103.0	106	0	8	207	17.9	101.1	1.61
Sydney A	17.4	-0.3	30.6	8.0	0.0	218.0	269	0	18	177	41.5	101.1	1.59
Truro	17.9	0.1	28.8	4.5	0.0	122.0	133	0	9	197	31.5	101.1	1.65
Yarmouth A	16.4	0.1	23.4	10.0	0.0	66.7	86	0	7	236	49.2	101.2	1.56
PRINCE EDWARD ISLAND ILE-DU-PRINCE-EDOUARD													
Charlottetown A	17.8	-0.5	30.1	8.9	0.0	101.7	121	0	12		31.9	101.0	1.65
Summerside A	18.1	-0.8	28.5	9.9	0.0	106.3	136	0	11	217	23.0	101.0	1.59
NEWFOUNDLAND TERRE-NEUVE													
Argentia	16.0	2.0	30.9	4.0	0.0	138.2	190	0	15	165	61.7	101.1	1.53
Battle Harbour	9.7	-0.9	22.8	4.0	0.0	156.2	222	0	12		259.1	100.9	1.03
Bonavista	15.8	1.1	27.3	6.2	0.0	67.0	110	0	16		80.2	101.3	1.46
Burgeo	14.4	0.9	21.7	8.2	0.0	211.9	156	0	17	127	114.7	101.1	1.47
Cartwright	13.3	0.7	32.0	2.3	0.0			0	12	196	162.4	100.8	1.15
Churchill Falls A	13.3	-0.4	28.0	4.2	0.0	102.0	85	0	15	208	148.5	100.9	1.08
Comfort Cove	16.6	0.0	32.9	6.1	0.0	131.2	167	0	20		64.1	101.1	1.49
Daniel's Harbour	15.1	0.7	25.3	8.4	0.0	156.8	176	0	19	126	91.2	101.0	1.49
Deer Lake A	16.6	0.7	32.3	2.8	0.0	158.1	204	0	16		72.2	101.0	1.56
Gander Int'l A	16.8	0.3	30.9	4.0	0.0	138.2	200	0	15	165	61.7	101.1	1.53
Goose A	15.8	0.0	35.0	4.4	0.0	149.7	142	0	11	199	85.7	100.8	1.21
Hopedale	11.1	0.6	24.7	2.1	0.0	138.5	164	0	10		216.0	100.8	.96
Port-aux-Basques	14.4	1.2	20.1	8.4	0.0	172.2	159	0	19		110.1	101.1	1.48
St. Anthony	13.0	0.0	27.4	1.5	0.0	192.7	236	0	14		157.7	101.0	1.27
St. John's A	16.5	1.0	31.5	6.5	0.0	121.4	161	0	15	192	66.7	101.4	1.51
St. Lawrence	15.3	3.2	23.2	8.3	0.0	194.5	192	0	13		83.8		
Stephenville A	17.0	1.0	25.5	8.0	0.0	172.8	180	0	15	134	52.7	101.0	1.53
Wabush Lake A	12.8	-0.7	31.0	5.0	0.0	140.6	133	0	17	211	160.4	101.0	1.06

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QUEBEC													
Bagotville A	18.3	0.4	35.7	6.9	0.0	64.8	54	0	7		31.4	101.1	1.38
Baie Comeau A	15.3	-0.5	28.9	5.0	0.0	37.6	46	0	7	222	90.1	101.0	1.31
Blanc Sablon													
Chibougamau A	16.0	0.2	32.2	2.1	0.0	90.0	68	0	10	220	84.6	101.2	1.28
Kuujjuac A	9.6	-1.8	22.8	0.2	0.0	58.2	101	0	11	190	262.2	100.7	.78
Gaspe A	16.6	-0.6	34.8	3.9	0.0	97.2	117	0	11	207	71.5	100.9	1.46
Inukjuac A	9.0	-0.3	21.6	1.1	T	53.6	99	0	8	237	278.9	100.9	.91
La Grande Riviere	12.9		25.9	-0.2	T	90.3		0	10	225	158.1	101.0	1.07
Maniwaki	18.6	0.3	31.4	4.6	0.0	69.1	75	0	10	257	31.6	101.3	1.69
Matagami A	15.9	0.3	29.5	3.1	0.0	112.3	107	0	11	256	87.3		
Mont Joli A	16.7	-0.6	35.9	7.5	0.0	25.3	34	0	8	224	55.1	101.0	1.39
Montreal Int'l A	21.4	0.5	33.1	8.8	0.0	67.4	75	0	11	266	5.6	101.2	1.76
Montreal Mirabel Int'l A	20.4		32.0	6.1	0.0	73.8		0	8		11.7	101.3	1.68
Natashquan	14.3	0.1	24.5	6.0	0.0	115.5	122	0	15	190	115.7	100.9	1.37
Nitchequon	12.2	-1.4	24.0	1.1	1.0	105.5	99	0	13	166	174.2	101.1	1.11
Kuujjuarapik A	8.5	-2.0	25.0	-0.4	T	75.8	92	0	9	199	296.8	101.0	.91
Quebec A	19.8	0.7	34.8	7.8	0.0	73.2	63	0	7	242	12.9	101.2	1.74
Roberval A	19.8	1.9	35.7	7.5	0.0	55.7	47	0	7	255	19.9	101.1	1.47
Ste. Agathe des Monts	18.3	1.1	30.1	5.4	0.0	73.6	69	0	9	254	26.9	101.4	1.63
St. Hubert A	21.1	0.4	34.7	8.5	0.0	93.5	96	0	12		8.1	101.2	1.77
Schefferville A	11.6	-1.0	24.3	2.5	0.0	144.2	149	0	15		196.5		.99
Sept-Iles A	14.5	-0.7	26.8	5.4	0.0	81.4	84	0	10	210	111.1	100.9	1.28
Sherbrooke A	18.1	0.3	33.7	4.5	0.0	69.2	59	0	12	242	35.7	101.4	1.68
Val d'Or A	17.9	0.8	30.6	4.8	0.0	88.4	87	0	11	270	50.4	101.4	1.45
NEW BRUNSWICK NOUVEAU-BRUNSWICK													
Charlo A	17.2	-0.2	35.2	7.0	0.0	108.9	125	0	12	243	55.9	101.0	1.49
Chatham A	18.7	-0.5	34.3	6.8	0.0	71.4	78	0	11	217	21.8	101.0	1.51
Fredericton A	19.2	-0.1	32.8	6.8	0.0	94.0	106	0	11	239	16.0	101.0	1.60
Moncton A	18.2	-0.3	31.4	6.9	0.0	151.7	160	0	9	214	25.6	101.0	1.62
Saint John A	17.4	0.5	26.5	8.2	0.0	81.8	79	0	9	217	31.2	101.1	1.50

STATION	Temperature °C / Température °C				Snowfall (cm) / Chute de neige (cm)	Total Precipitation (mm) / Précipitation totale (mm)	% of Normal Precipitation / % de précipitation normale	Snow on ground at end of month (cm) / Neige au sol à la fin du mois (cm)	No. of days with Precip. 1.0 or more (mm) / Nombre de jours de préc. 1.0 ou plus (mm)	Bright sunshine (hours) / Durée de l'insolation (heures)	Degree Days above 5°C / Degrés-jours au-dessus de 5°C		Mean Dew Point °C / Point de rosée moyen °C
	Mean / Moyenne	Difference from Normal / Écart à la normale	Maximum / Maximale	Minimum / Minimale							This Month / Présent mois	Since Jan. 1st / Depuis le 1er janv.	
AGROCLIMATOLOGICAL STATIONS AGROCLIMATOLOGIQUES													
BRITISH COLUMBIA COLOMBIE-BRITANNIQUE													
Agassiz	16.7	-1.2	30.5	6.0	0.0	242.7	520	0	14	157	363.0	1357.1	
Kamloops													
Sidney													
Summerland	17.7	-3.2	29.5	6.5	0.0	53.2	240	0	14	240	394.5	1194.0	
ALBERTA													
Beaverlodge													
Ellerslie	16.5		29.0	6.5	0.0	78.2		0	11	297	357.3	845.6	
Fort Vermilion													
Lacombe	15.7	-0.4	29.5	4.0	0.0	91.3	126	0	12	279	328.1	775.3	
Lethbridge													
Vauxhall													
Vegreville	17.3	1.0	28.5	7.5	0.0	161.9	217	0	16				
SASKATCHEWAN													
Indian Head	19.8	4.2	34.5	6.0	0.0	176.2	332	0	14				
Melfort	18.3	0.9	29.0	7.0	0.0	126.0	196	0	9	255	401.5	861.0	
Regina	20.0	1.4	35.0	7.5	0.0	149.6	283	0	9		464.3	910.0	
Saskatoon	18.8		30.0	7.5	0.0	68.6		0	8	315	433	949.0	
Scott	17.4	0.2	34.0	4.0	0.0	74.8	124	0	12	299	383.5	863.5	
Swift Current South	18.8	0.3	35.5	8.0	0.0	95.7	249	0	9	320	326.7	1061.9	
MANITOBA													
Brandon	20.9	1.7	34.0	1.5	0.0	73.2	105	0	6	305	475.0	986.1	
Glenlea	22.5	2.9	34.0	2.0	0.0	22.1	30	0	5	312	522.0	1058.0	
Morden	22.5	2.3	35.0	3.0	0.0	36.6	50	0	4	325	542.4	1122.4	
ONTARIO													
Delhi	22.3	1.6	33.5	7.0	0.0	140.6	199	0	8	292	552.8	1233.9	
Elora	21.0		32.8	5.9	0.0	42.2		0	5	297	498.5	1060.0	
Guelph	21.4	1.7	33.9	5.0	0.0	52.3	63	0	5	289	514.1	1080.0	
Harrow	23.8	1.8	34.0	9.0	0.0	61.3	77	0	9	284	580.6	1180.2	
Kapuskasing													
Merivale													
Ottawa	21.8	1.2	32.7	9.5	0.0	80.6	95	0	10	301	521.1	1176.7	
Smithfield	22.2	2.0	34.5	9.5	0.0	31.4	46	0	5		532.0	1163.0	
Vineland Station	23.5	2.0	33.8	10.5	0.0	54.4	88	0	7	313	573.4	1226.2	
Woodslee	23.2	1.6	35.0	8.5	0.0	211.4	261	0	9				
QUEBEC													
La Pocatiere	18.8	0.1	34.0	7.5	0.0	83.4	88	0	9	252	427.6	882.7	
L'Assomption	21.1	0.9	34.5	7.0	0.0	58.9	63	0	9	262	493.5	1113.1	
Lavaltrie													
Lennoxville													
Normandin	17.7	0.8	34.5	2.0	0.0	54.8	48	0	10	253	393.6	790.0	
St. Augustin													
Ste. Clothilde	21.5	1.3	34.5	8.5	0.0	82.1	91	0	12	276	511.7	1167.4	
NEW BRUNSWICK NOUVEAU-BRUNSWICK													
Fredericton													
NOVA SCOTIA NOUVELLE-ECOSSE													
Kentville	19.6	0.4	31.0	7.0	0.0	77.2	110	0	7	222	454.4	1095.5	
Nappan	18.2	0.2	23.6	12.5	0.0	155.2	184	0	9	194	407.8	971.1	
PRINCE EDWARD ISLAND ILE-DU-PRINCE-EDOUARD													
Charlottetown	18.4	-0.5	30.0	9.5	0.0	88.0	109	0	11	204	415.0	960.4	
NEWFOUNDLAND TERRE-NEUVE													
St. John's West	17.0	1.4	28.0	7.0	0.0	121.6	165	0	15	190	371.5	735.9	