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# A WEEKLY REVIEW OF CANADIAN CLIMATE

# CLIMATIC PERSPECTIVES



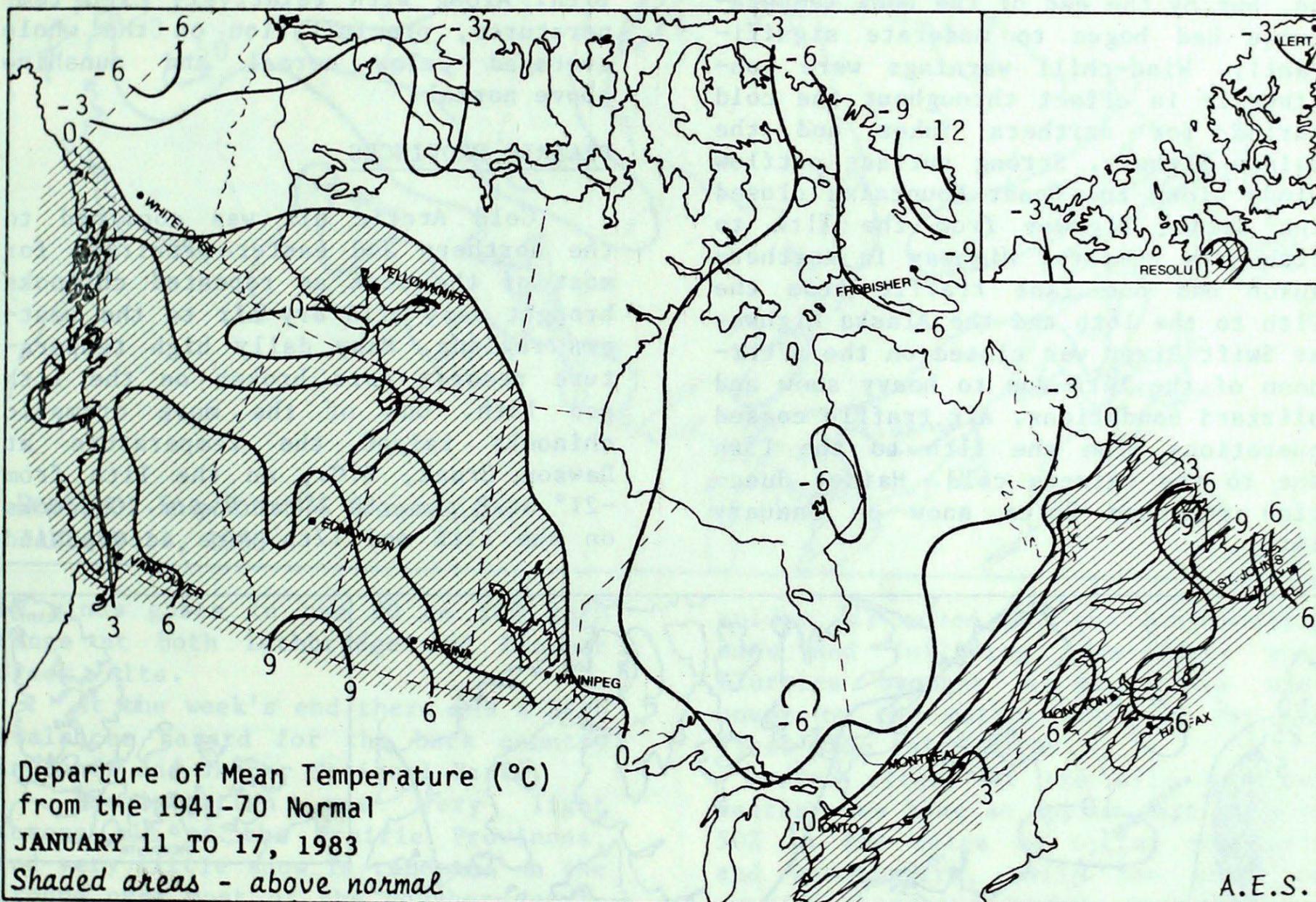
THE CANADIAN CLIMATE CENTRE,  
ATMOSPHERIC ENVIRONMENT SERVICE,  
4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H 5T4

## Canada

JANUARY 21, 1983

(Aussi disponible en français)

VOL. 5 NO. 3



### WEATHER HIGHLIGHTS FOR THE PERIOD - JANUARY 11 - 17, 1983

#### Devastating rainstorm over Newfoundland

A devastating three-day rainstorm burst a dam on the Exploits River in central Newfoundland. The resulting flood caused millions of dollars damage to Grand Falls and Bishop's Falls.

After a dismal season to date, a significant snowfall delighted skiers in Québec and New Brunswick.

While most of the country was reasonably dry, record-breaking rainfall occurred over the Atlantic Provinces.

The Yukon, eastern Arctic and northern parts of Ontario and Québec reported bitterly cold weather, but it was very mild with record-breaking high temperatures over most of British Columbia, the western Prairies and the Atlantic Provinces. Alberta reported a number of chinooks.

Temperatures ranged from 16.5° at Abbotsford, B.C., to -51.6° at Mayo, Yukon. St. Alban's, Nfld., received 269.4 mm total precipitation.

**NOTE:** The data shown in this publication are based on unverified reports from approximately 225 Canadian and 115 northern United States Synoptic stations.

YUKON AND THE NORTHWEST TERRITORIES

Bitterly cold weather gripped most of the Yukon and the eastern Northwest Territories this past week, with only the southern District of Mackenzie reporting above-normal readings.

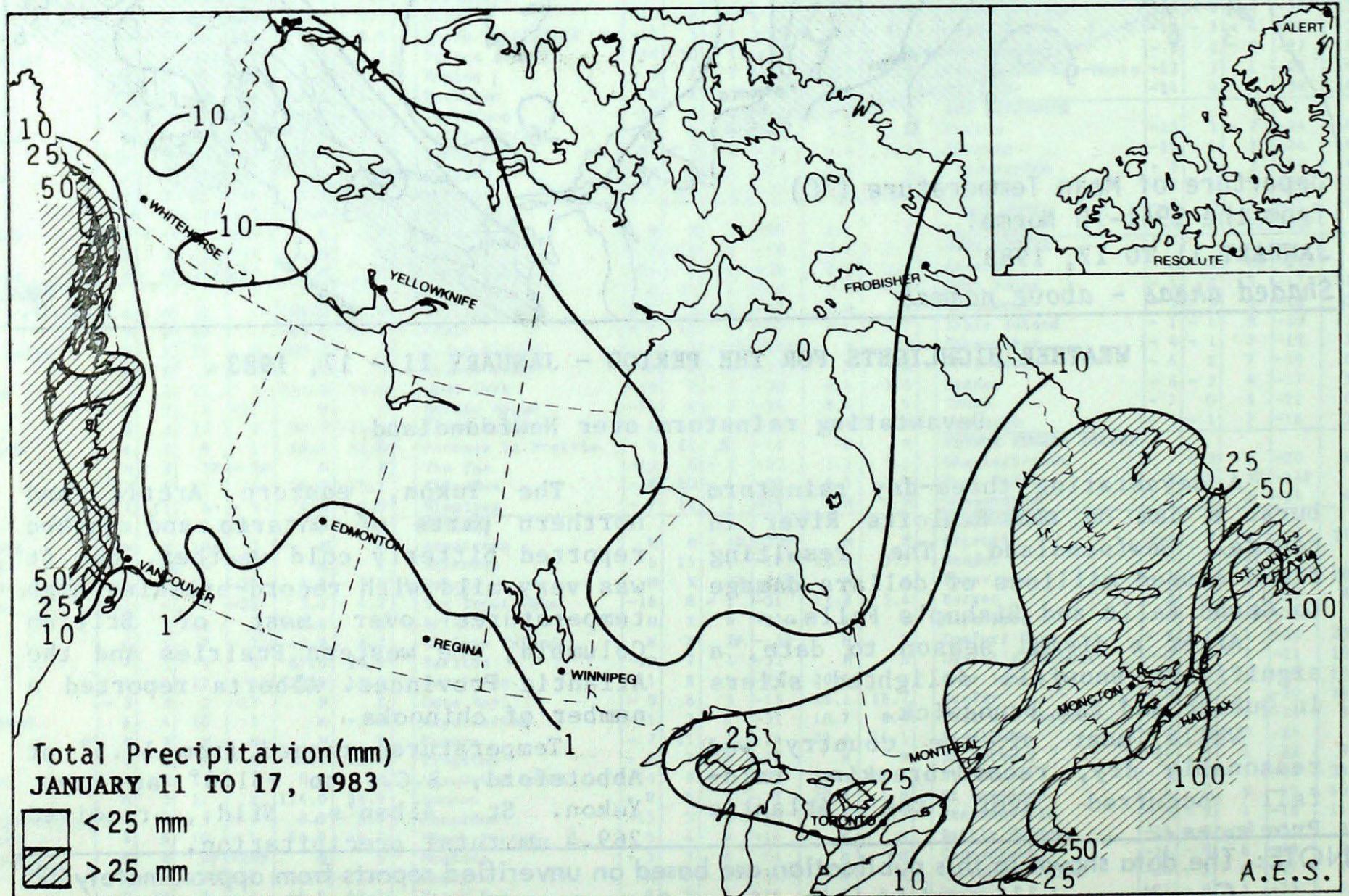
January 11th to the 15th was the coldest period over the Yukon. Ogilvie and Mayo touched  $-52^{\circ}$  during this period, but by the end of the week temperatures had begun to moderate significantly. Wind-chill warnings were continually in effect throughout the cold period for northern Yukon and the Haines Highway. Strong surface outflow winds along the Coast Mountains closed the Haines Highway from the 11th to 12th. The Dempster Highway in northern Yukon had one lane traffic from the 11th to the 16th and the Alaska Highway at Swift River was closed on the afternoon of the 14th due to heavy snow and blizzard conditions. Air traffic ceased operations from the 11th to the 15th due to the extreme cold. Haines Junction reported 26 cm snow on January 14th.

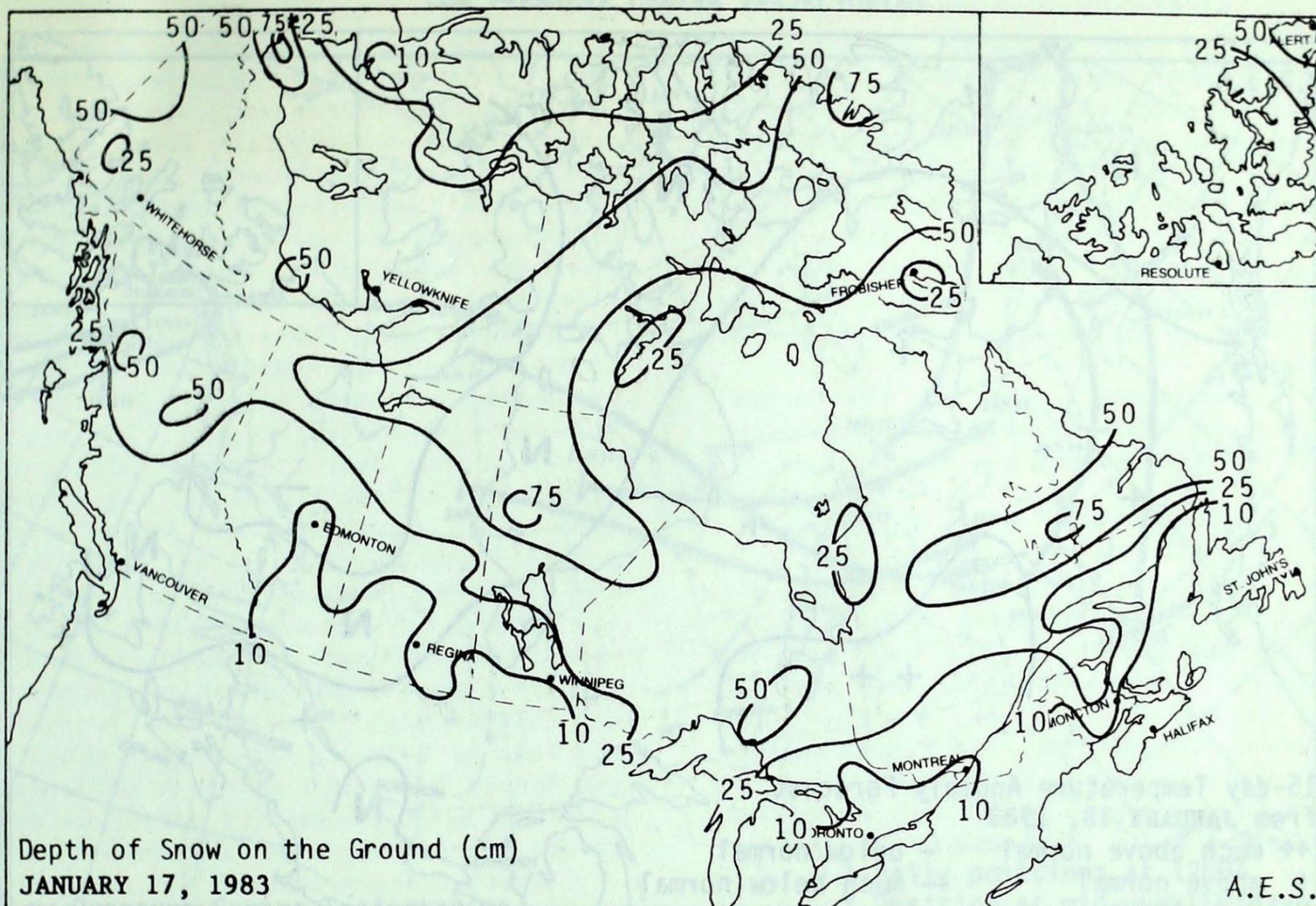
BRITISH COLUMBIA

A southwest flow of mild air kept temperatures well-above normal for the whole week. Only the Peace River region remained in frigid Arctic air. The first half of the week was especially mild, and a number of daily high temperature records were broken. The mercury rose to  $17^{\circ}$  at Abbotsford on the 11th. Along with relatively high temperatures, precipitation on the whole averaged below normal and sunshine above normal.

PRAIRIE PROVINCES

Cold Arctic air was confined to the northern and eastern Prairies for most of the week as repeated chinooks brought very mild dry air to the western regions. Many daily high temperature records were broken on the 11th and 12th. One of the more dramatic chinooks raised the temperature at Dawson Creek, B.C., on the 11th from  $-21^{\circ}$  at 8 p.m. to  $2^{\circ}$  at 9 p.m. Chinooks on the 11th and 12th were accompanied





by winds gusts in the 90 to 100 km/h range at both Lethbridge and Pincher Creek, Alta.

At the week's end there was a high avalanche hazard for the back country in Banff and Jasper National Parks.

Precipitation was very light across all of the Prairie Provinces, and very little snow is reported on the ground over most of the southern agricultural areas.

#### ONTARIO

Cold winter weather eased its way into Ontario during the past week, bringing an end to the above-normal temperatures that have been the dominant feature of the winter to date. Temperatures fell to as low as  $-38^{\circ}$  over northern Ontario by the week's end, with  $-20$  to  $-25^{\circ}$  readings reported in central regions and  $-15^{\circ}$  in the south.

Early in the week, heavy rain in the Trenton-Cobourg area caused some minor flooding as locally up to 29 mm fell on the 11th. However, as the

colder air moved in, the accompanying snow and following lake-effect snow flurries brought a measurable snow cover to the entire province for the first time this winter.

One effect of the mild snowless weather has been an approximate drop of 50% in the sales of skiing equipment and snowblowers, while the sales of running shoes and jogging equipment has shown a marked increase.

Some new ice growth was reported in the last week along coastal areas of the Great lakes, but all lakes are open, and general ice conditions are two to three weeks behind normal conditions for this time of year.

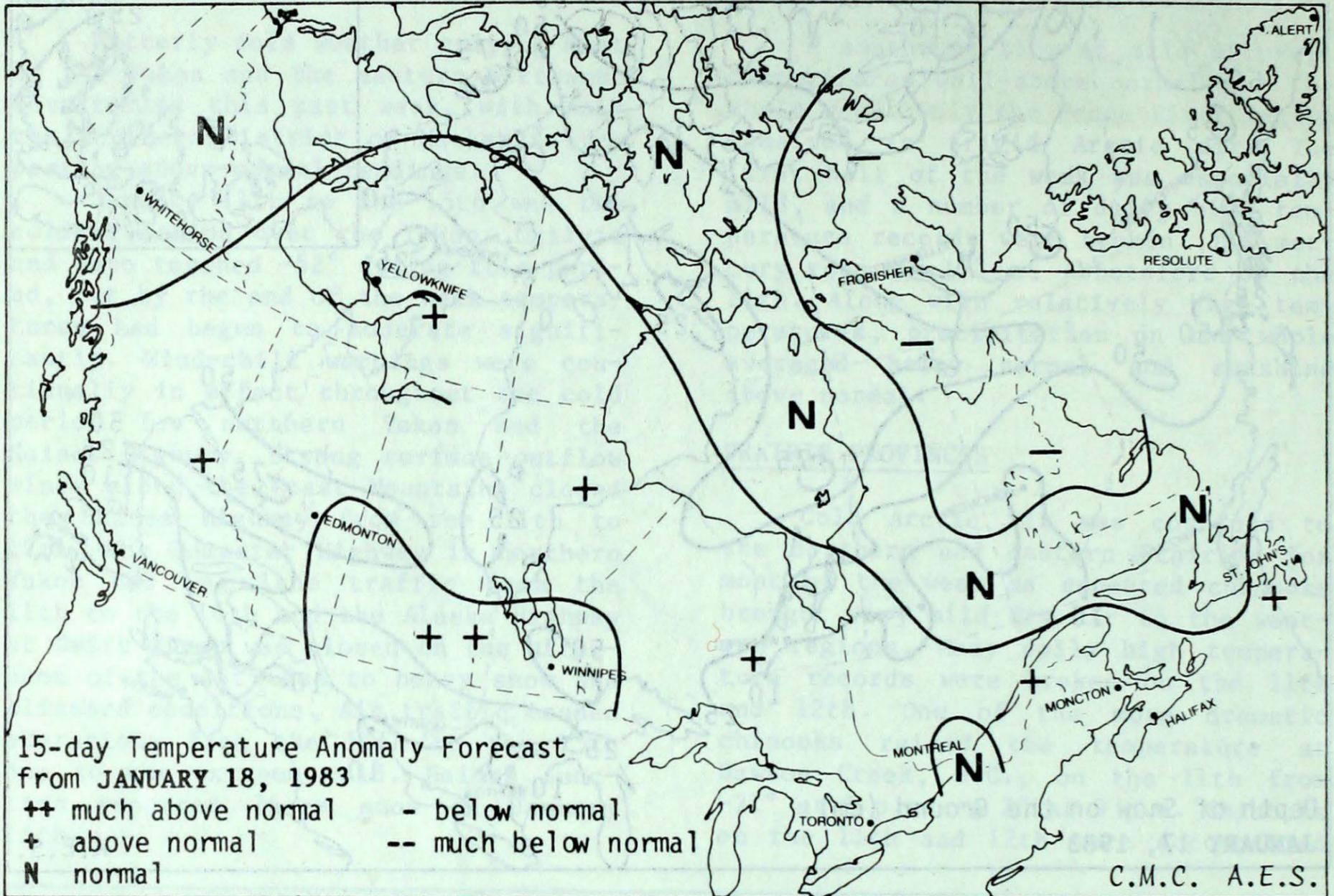
#### QUÉBEC

Cold air covered northern Québec all week, but it was mild and rainy over southern regions early in the week. A number of places reported new daily high temperature records on the 11th and 12th.

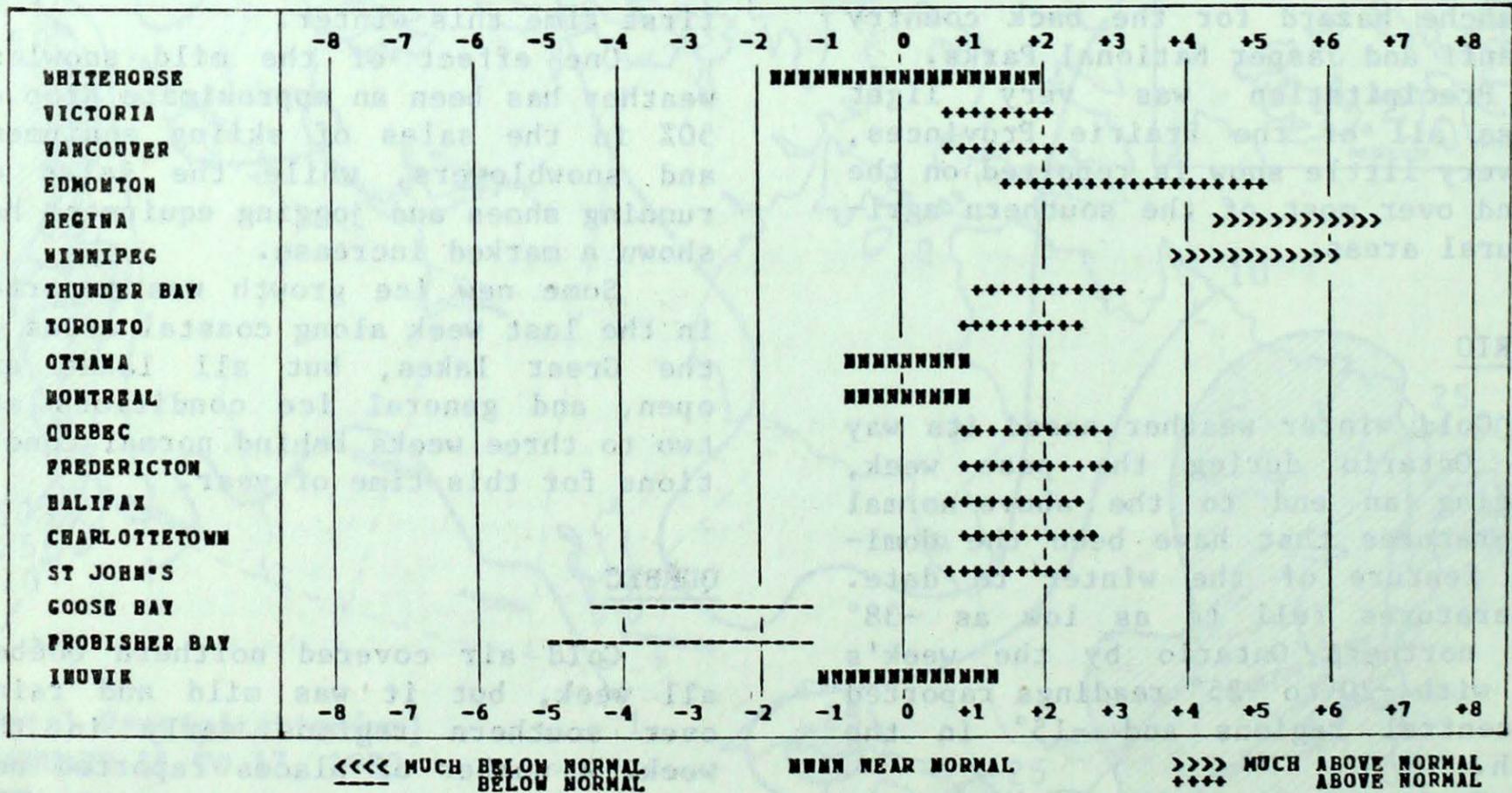
A vigorous snow storm crossed the Gaspé peninsula on the 16th, causing a

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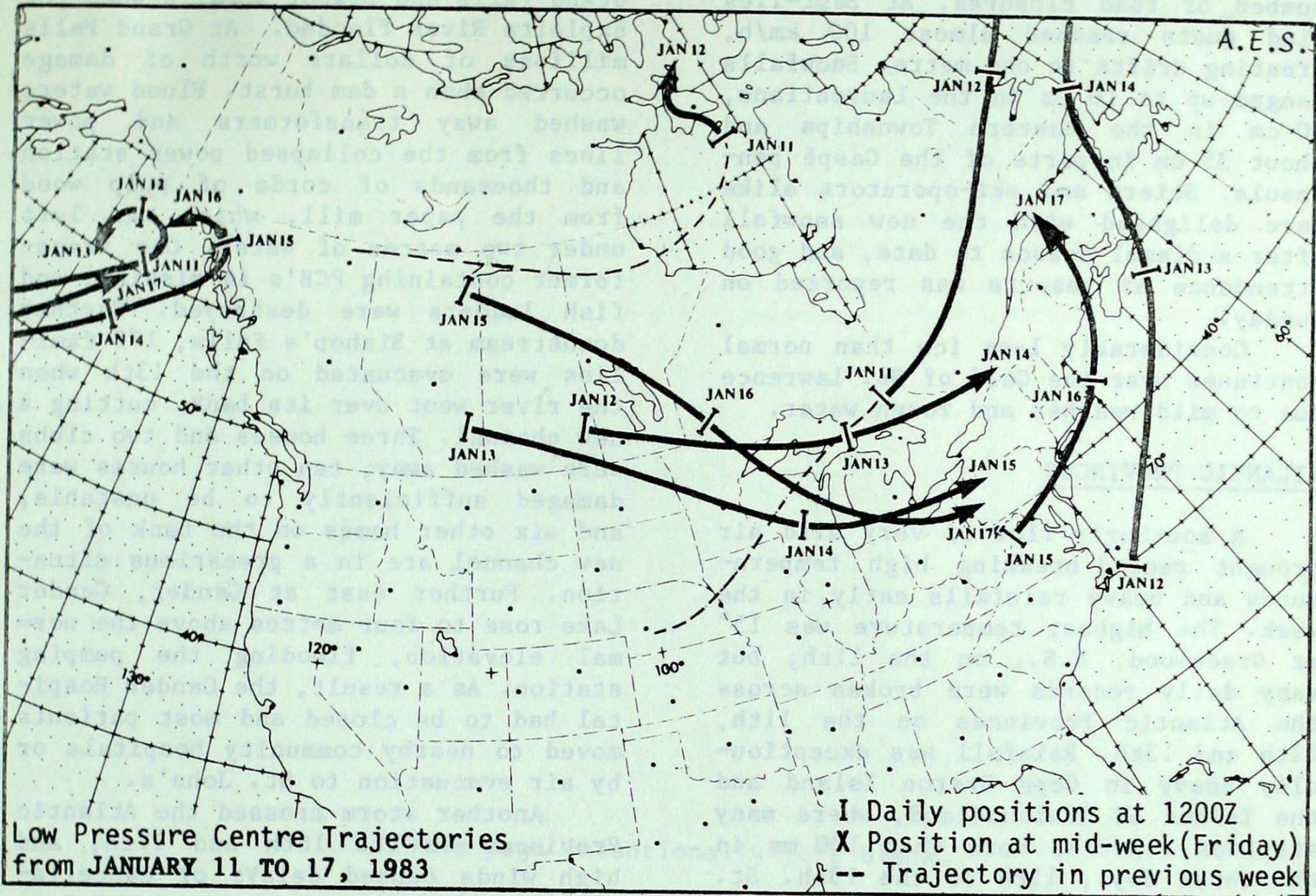
TEMPERATURE ANOMALY FORECAST



TEMPERATURE ANOMALY FORECAST FOR JAN 18 1983 TO FEB 1 1983



LOW PRESSURE CENTRE TRAJECTORIES



EXTREMES FOR THE WEEK

	MAXIMUM TEMPERATURE	LOCATION	MINIMUM TEMPERATURE	LOCATION	GREATEST PRECIPITATION	LOCATION
YUKON TERRITORY	-1.0	WHITEHORSE	-51.6	MAYO	16.4	WATSON LAKE
NORTHWEST TERRITORIES	-14.4	HAY RIVER	-49.5	SHEPHERD BAY	11.6	FORT SIMPSON
BRITISH COLUMBIA	16.5	ABBOYTSFORD	-31.0	FORT NELSON	95.0	AMPHITRITE POINT
ALBERTA	11.9	LETHBRIDGE	-37.0	HIGH LEVEL	11.3	HIGH LEVEL
SASKATCHEWAN	5.1	SWIFT CURRENT	-40.4	URANIUM CITY	9.4	COLLINS BAY
MANITOBA	-0.9	PILCT MCUND	-41.1	GILLAM	8.4	GIMLI
ONTARIO	6.2	TORONTO	-38.2	LANSDOWNE HOUSE	25.9	WIARTON
QUEBEC	8.8	GASPE SHERBROOKE	-42.5	SCHEFFERVILLE	51.9	SEPT-ILES
NEW BRUNSWICK	14.1	FREDERICTON	-18.1	ST STEPHEN	48.8	SAINT JOHN
NOVA SCOTIA	14.6	GREENWOOD	-14.9	GREENWOOD	136.6	SYDNEY
PRINCE EDWARD ISLAND	10.5	SUMMERSIDE	-11.6	SUMMERSIDE	35.4	CHARLOTTETOWN
NEWFOUNDLAND	13.9	ARGENTIA VTMS	-40.3	WABUSH LAKE	269.4	ST ALBANS

(continued from page 3)

number of road closures. At Sept-Iles wind gusts reached almost 100 km/h, creating drifts to one metre. Snowfalls ranged up to 10 cm in the Laurentians, 20 cm in the Eastern Townships and about 35 cm in parts of the Gaspé peninsula. Skiers and ski-operators alike were delighted with the new snowfall after a dismal season to date, and good attendance at resorts was reported on Sunday.

Considerably less ice than normal continues over the Gulf of St. Lawrence due to mild weather and rough water.

### ATLANTIC PROVINCES

A southerly flow of very mild air brought record-breaking high temperatures and heavy rainfalls early in the week. The highest temperature was 15° at Greenwood, N.S., on the 11th, but many daily records were broken across the Atlantic Provinces on the 11th, 12th and 13th. Rainfall was exceptionally heavy in Cape Breton Island and the Island of Newfoundland, where many stations reported more than 100 mm in the three days, 11th to the 13th. St. Albans, on the south coast of Newfoundland, received 258 mm in the three-day period, of which 141 mm fell on the 13th, a new daily total precipitation record for any month of the year. Most of the damage occurred on the 13th at

Grand Falls and Bishop's Falls when the Exploits River flooded. At Grand Falls millions of dollars worth of damage occurred when a dam burst. Flood waters washed away transformers and power lines from the collapsed power station and thousands of cords of pulp wood from the paper mill, which was left under two metres of water. One transformer containing PCB's is missing, and fish ladders were destroyed. Farther downstream at Bishop's Falls, 170 families were evacuated on the 13th when the river went over its bank, cutting a new channel. Three houses and two clubs were washed away, ten other houses were damaged sufficiently to be unstable, and six other homes on the bank of the new channel are in a precarious situation. Further east at Gander, Gander Lake rose to four metres above the normal elevation, flooding the pumping station. As a result, the Gander Hospital had to be closed and most patients moved to nearby community hospitals or by air evacuation to St. John's.

Another storm crossed the Atlantic Provinces on the 16th and 17th, and high winds caused delays or cancellations to the Bay of Fundy and P.E.I. ferries. This storm caused more rain and mild weather to most regions, but 20 to 35 cm of snow occurred over New Brunswick, much to the delight of skiers.



#### CLIMATIC PERSPECTIVES

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TEMPERATURE AND PRECIPITATION DATA FOR THE WEEK ENDING 0600 G.M.T. JANUARY 11, 1983

Station	Temperature (°C)				Precip. (mm)	
	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal
<b>YUKON</b>						
Burwash	-32	-1	-12	-47	1.7	0.1
Dawson	-36	-7	-16	-50	5.0	0.4
Faro	M	X	-5P	-46	M	X
Komakuk Beach	-31	-4	-23	-36	0.0	0.1
Mayo	-31	-3	-12	-52	12.5	5.1
Shingle Point	-32	-4	-24	-42	2.6	2.6
Teslin	M	X	-5P	-36	M	X
Watson Lake	-24	2	-13	-35	16.4	5.3
Whitehorse	-22	-2	-1	-38	9.8	5.2
<b>NORTHWEST TERRITORIES</b>						
Cape Parry	-33	-3	-25	-37	M	M
Cape Young	-34	-3	-24	-40	0.8	0.1
Clinton Point	-30	-1	-21	-36	1.0	1.1
Coppermine	-33	-4	-19	-42	3.5	1.7
Fort Reliance	-29	1	-15	-40	1.5	1.2
Fort Simpson	-29	1	-19	-39	11.6	6.5
Fort Smith	-26	1	-16	-36	8.5	3.7
Hay River	-26	0	-14	-33	6.3	0.6
Inuvik	-37	-4	-28	-44	2.4	0.3
Lady Franklin Point	M	M	-20P	-39	3.2	1.2
Nicholson Peninsula	M	M	-26P	-39	1.0	0.4
Norman Wells	-31	-1	-24	-41	5.7	1.2
Port Radium	M	X	-20P	-36	M	X
Robertson Lake	M	X	-19P	-43P	M	X
Tuktoyaktuk	M	M	-28P	-40	1.0	0.4
Yellowknife	-27	2	-17	-37	4.6	0.0
Baker Lake	-35	-2	-23	-42	M	M
Coral Harbour	-36	-5	-17	-41	M	M
Ennadai Lake	M	M	-22P	-39P	M	M
Jenny Lind Island	M	M	-23P	-44	0.0	0.5
Pelly Bay	-35	-3	-25	-42	0.0	0.3
Rankin Inlet	-35	X	-21	-42	0.0	X
Shepherd Bay	M	M	-23P	-50	0.5	0.6
Broughton Island	-32	-9	-28	-37	0.9	1.2
Cape Dorset	-30	X	-15	-36	M	X
Cape Dyer	-34	-12	-24	-42	2.4	-11.7
Cape Hooper	-32	-6	-29	-34	0.2	1.6
Clyde	-34	-7	-25	-42	M	M
Dewar Lakes	M	M	-26P	-39	M	M
Frobisher Bay	-34	-8	-20	-42	3.4	1.9
Longstaff Bluff	M	M	-23P	-41	M	X
Pond Inlet	-37	X	-21	-42	M	X
Alert	-35	-3	-27	-42	0.0	1.3
Eureka	-37	-1	-25	-47	M	M
Gladman Point	M	M	-24P	-45	0.0	1.0
Hall Beach	-33	-3	-21	-44	M	M
Mackar Inlet	M	M	-25P	-40	M	M
Resolute	-33	0	-25	-43	0.5	0.3
Byron Bay	M	M	-23P	-42	3.8	3.7
Cambridge Bay	-35	-1	-25	-45	0.4	0.6
Mould Bay	-36	-3	-26	-47	M	M
Sachs Harbour	-35	-5	-28	-39	M	M
<b>BRITISH COLUMBIA</b>						
Abbotsford	5	4	17	-1	5.0	-33.5
Alert Bay	5	2	11	0	49.6	-4.2
Amphitrite Point	7	X	11	2	95.0	X
Blue River	M	X	3P	-14P	M	X
Bull Harbour	6	2	11	-1	48.5	-9.0
Burns Lake	-6	X	5	-16	M	X
Cape Scott	7	3	11	3	61.9	-30.5
Cape St James	7	3	12	1	48.4	9.8
Clinton	M	X	2P	-9P	M	X
Comox	4	2	11	-2	35.4	-15.1
Cranbrook	-2	7	8	-15	0.0	-18.4
Dease Lake	-14	5	0	-26	9.0	0.9
Estevan Point	M	M	10P	0P	M	M
Ethelda Bay	6	X	10	2	M	X
Fort Nelson	-25	-2	-16	-31	5.8	-3.1
Fort St John	-12	5	1	-28	3.2	-5.8
Hope	5	X	10	0	10.6	X
Kamloops	1	7	12	-7	0.2	-7.5
Langara	5	3	9	0	42.1	-2.4
Lytton	3	8	15	-4	4.6	-33.0
Mackenzie	-6	X	5	-17	M	X
McInnes Island	6	3	10	3	48.8	-15.4
Nanaimo	M	X	M	M	M	X
Penticton	2	4	10	-6	1.2	-5.6
Port Alberni	M	X	11P	-2	M	X
Port Hardy	5	3	10	-1	42.2	-11.3
Prince George	-5	6	6	-15	0.0	-13.6
Prince Rupert	6	5	11	-1	47.3	-28.3
Puntzi Mountain	M	X	0P	-18P	M	X
Quesnel	-4	7	7	-12	0.0	-12.9
Revelstoke	-1	7	7	-9	4.8	-32.6
Sandspit	-5	4	10	-1	53.7	17.7
Smithers	-3	7	4	-13	9.5	-5.1

Station	Temperature (°C)				Precip. (mm)	
	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal
Stewart	1	X	4	-3	M	X
Terrace	0	5	6	-3	58.8	11.5
Vancouver	6	3	12	-3	7.7	-28.4
Victoria	6	3	14	-2	2.4	-31.2
Williams Lake	-2	7	6	-9	3.4	-7.6
<b>ALBERTA</b>						
Banff	-3	7	7	-15	0.8	-8.1
Calgary	-1	9	11	-19	0.0	-4.0
Cold Lake	-15	4	0	-31	2.5	-1.9
Coronation	-9	7	3	-24	1.6	-2.6
Edmonton Intl	-7	9	6	-23	0.8	-5.2
Edmonton Namao	-7	8	3	-24	0.0	-5.6
Edson	-10	6	1	-22	1.7	-2.6
Fort Chipewyan	-25	4	-14	-35	5.3	-1.6
Fort McMurray	-20	1	-5	-33	9.5	2.8
Grande Prairie	-9	8	4	-26	2.6	-6.6
High Level	-25	6	-15	-37	11.3	5.8
Jasper	-5	7	5	-16	5.8	-2.2
Lethbridge	1	9	12	-17	0.0	-4.9
Lloydminster	-12	X	2	-30	0.0	X
Medicine Hat	-1	10	8	-16	1.4	-4.1
Peace River	-16	4	-1	-29	3.2	-1.1
Red Deer	-8	6	6	-20	0.4	-4.5
Rocky Mountain House	-8	4	6	-21	0.2	-4.9
Slave Lake	-12	8	0	-26	4.5	-3.6
Whitecourt	-10	6	1	-22	3.8	-2.9
<b>SASKATCHEWAN</b>						
Broadview	-14	X	2	-32	0.2	X
Buffalo Narrows	-21	4	-6	-36	M	M
Collins Bay	-27	X	-15	-34	9.4	X
Cree Lake	-27	X	-8	-36	1.6	X
Eastend	M	X	4P	-16P	M	X
Elbow	-11	X	3	-30	M	X
Estevan	-10	5	4	-27	0.0	-5.4
Hudson Bay	-20	0	-4	-34	M	M
Kindersley	-8	8	4	-25	0.0	-3.8
La Ronge	-21	3	-5	-36	2.9	-1.9
Meadow Lake	-18	X	-3	-36	7.0	X
Moose Jaw	-8	6	4	-27	0.0	-4.1
Nipawin	-20	X	-3	-35	3.4	X
North Battleford	-13	5	2	-31	0.0	-5.4
Prince Albert	-17	3	-2	-35	2.4	-2.1
Regina	-13	4	2	-30	0.0	-4.6
Rockglen	M	X	1P	-18P	M	X
Saskatoon	-13	5	-3	-30	0.0	-4.5
Swift Current	-6	7	5	-25	0.0	-4.9
Uranium City	-26	2	-16	-40	8.8	2.0
Wynyard	-13	X	-2	-33	1.9	X
Yorkton	-16	2	-6	-32	0.8	-5.9
<b>MANITOBA</b>						
Bissett	-19	X	10	-30	8.3	X
Brandon	-15	3	-2	-27	0.6	-4.5
Churchill	-30	-2	-21	-40	3.7	0.5
Dauphin	-18	0	-5	-31	2.0	-3.6
Gillam	-30	X	-21	-41	6.2	X
Gimli	-18	1	-10	-27	8.4	2.2
Grand Rapids	M	X	-15P	-33P	M	X
Island Lake	-26	X	-19	-33	M	X
Lynn Lake	-27	1	-14	-34	7.4	1.9
Norway House	-25	X	-15	-34	2.0	X
Pilot Mound	-14	3	-1	-26	1.0	-3.7
Portage la Prairie	-15	1	-5	-26	1.4	-4.6
The Pas	-21	1	-8	-33	1.4	-4.1
Thompson	-27	-1	-17	-37	3.9	-2.4
Winnipeg	-17	1	-7	-26	1.5	-5.0
<b>ONTARIO</b>						
Armstrong	M	M	-17P	-34P	M	M
Atikokan	-19	0	-11	-32	7.9	-1.0
Barrie	M	X	-1P	-20P	M	X
Big Trout Lake	-28	-4	-20	-37	0.6	-6.5
Britt	M	X	-6P	-22P	M	X
Caribou Island	M	X	0P	-15P	M	X
Earlton	-19	-2	1	-30	M	M
Geraldton	-23	X	-7	-33	2.0	X
Gore Bay	-11	-1	3	-21	13.2	-2.9
Kapusking	-25	-6	0	-38	9.6	-2.6
Kenora	-18	-1	-9	-27	6.2	-2.1
Kingston	-6	3	5	-18	M	M
Lansdowne House	-27	-5	-18	-38	1.4	-5.9
London	-6	1	5	-15	8.1	-4.4
Moosonee	-25	-4	-2	-37	0.8	-10.0
Mount Forest	-8	2	3	-18	M	M
Muskoka	-9	2	3	-20	M	M
Nagagami	M	X	-15P	-37P	M	X
North Bay	-16	-2	2	-24	10.6	-4.1
Ottawa	-9	3	4	-21	15.6	3.7

Station	Temperature (°C)				Precip. (mm)	
	Average	Departure from Normal	Extreme Maximum	Extreme Minimum	Total	Departure from Normal
Petawawa	-12	X	2	-25	15.3	
Pickle Lake	-25	-4	-16	-34	0.8	
Red Lake	-21	-2	-10	-31	M	
Simcoe	-4	4	3	-13	M	
Sioux Lookout	-21	-3	-11	-33	9.5	
Sudbury	-17	-2	2	-25	12.2	
Thunder Bay	-17	-3	-4	-26	10.6	
Timmins	-22	-5	1	-32	M	
Toronto	-5	1	6	-15	8.8	
Trenton	-6	2	5	-19	4.4	
Upsala	M	X	-11P	-32P	M	
Wawa	-19	X	1	-32	11.3	
Warton	-7	-1	5	-14	25.9	
Windsor	-4	0	4	-13	2.5	
<b>QUÉBEC</b>						
Bagotville	-12	3	4	-25	17.8	
Baie-Comeau	-8	5	4	-17	48.2	
Blanc-Sablon	-3	10	5	-16	37.5	
Border	M	M	1P	-24P	M	
Chevery	M	X	3P	-20P	M	
Chibougamau	-22	X	0	-34	14.2	
Gaspé	-5	X	9	-17	45.4	