Climatic Perspectives

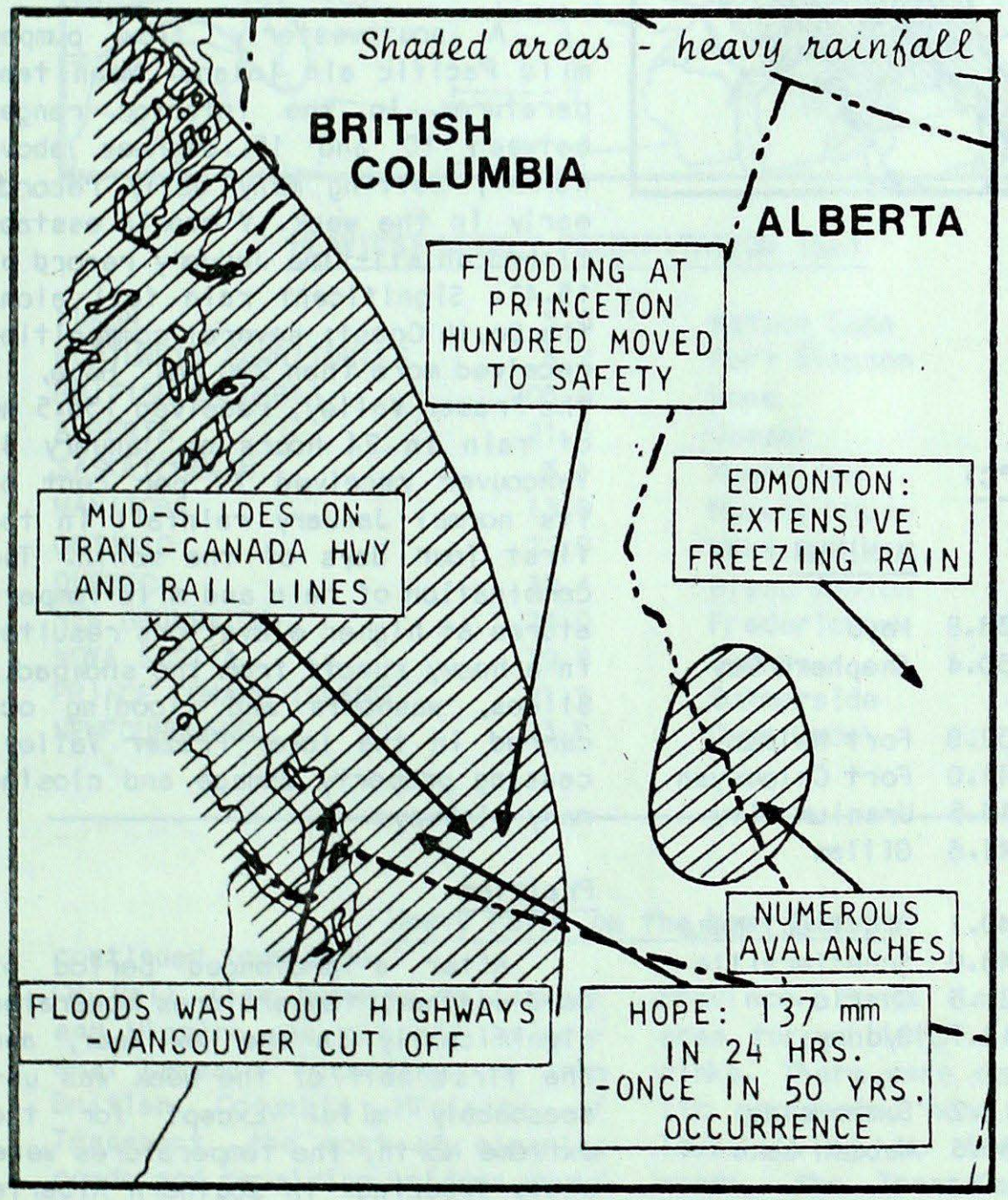
A WEEKLY REVIEW OF CANADIAN CLIMATE

JANUARY 13,1984 (Aussi disponible en français) VOL.6 NO.1

FOR THE PERIOD JANUARY 3-9, 1984

• *Mild weather ushers in New Year across most of Canada*

• Heavy rains and snowmelt cause floods and avalanches in B.C.



Torrential rains in the 80 to 210 mm range flooded major highways, wrecked bridges and broke railway lines throughout most of southwestern British Columbia. Hundreds of people were forced out of their homes when the raging waters threatened their safety. The heavy rains and rising temperatures combined to produce rock slides and flooding that washed over main highways, isolating Vancouver from the rest of the Province. The Trans-Canada Highway was closed by several slides between Vancouver and Hope. At Vancouver, 97 mm of rain, during the first 4 days of January, was about 75 per cent of the January amount. On January 4, Hope received 136.5 mm of rain which nearly equalled the record 24 hours fall - a once in a 50 years occurrence. The lower Fraser Valley was the hardest hit; creeks and rivers transformed into raging torrents. High crests of water jammed behind huge chunks of ice and created severe problems in the community of Princeton, where about 200 people were moved to safety. Rail traffic was stopped when

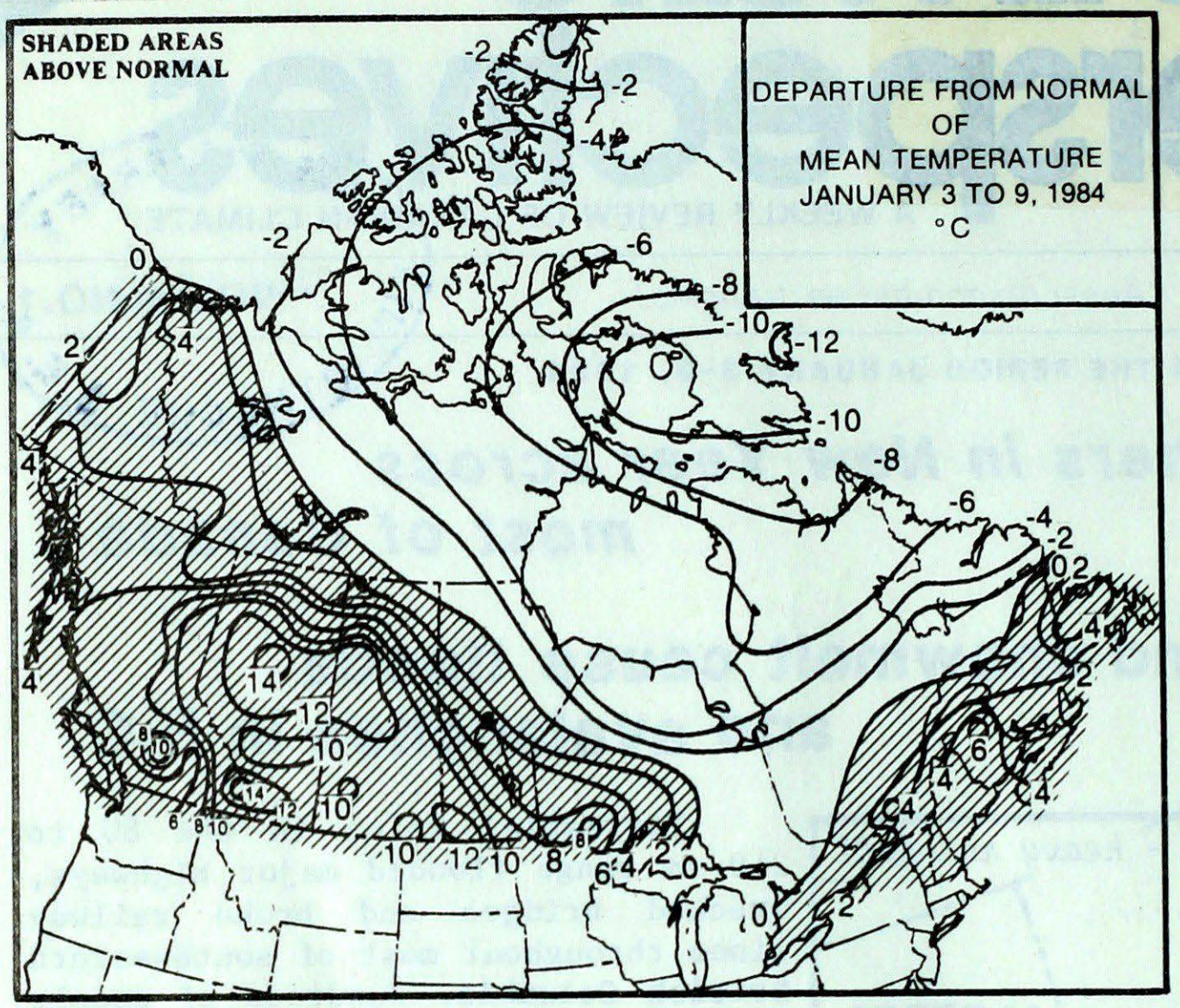
...Continued on page 3

• Yet another storm hits Newfoundland

ISSN 0225-5707
UDC: 551.506.1(71)

NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian synoptic stations.

Canada



WEEKLY TEMPERATURES EXTREMES (°C)

	MAXIMUM		MINIMUM	
YUKON TERRITORY	1.1	Whitehorse	-38.8	Mayo
NORTHWEST TERRITORIES	-14.5	Fort Smith	-50.4	Shepherd Bay
BRITISH COLUMBIA	15.4	Victoria	-32.8	Fort Nelson
ALBERTA	16.0	Lethbridge	-41.0	Fort Chipewyan
SASKATCHEWAN	8.5	Swift Current	-43.5	Uranium City
MANITOBA	5.3	Portage La Prairie	-41.6	Gillam
ONTARIO	6.0	Thunder Bay	-40.1	Big Trout Lake
QUÉBEC	5.1	Bagotville	-48.0	Schefferville
NEW BRUNSWICK	4.1	St Stephen	-21.3	Charlo
NOVA SCOTIA	8.5	Sable Island	-14.7	Sydney
PRINCE EDWARD ISLAND	3.9	East Point	-13.2	Summerside
NEWFOUNDLAND	9.5	Argentia	-43.6	Wabush Lake

ACROSS THE NATION

Warmest mean temperature	7.8	Victoria A, BC
Coolest mean temperature	-42.0	Eureka, NWT

ACROSS THE COUNTRY...

Yukon and Northwest Territories

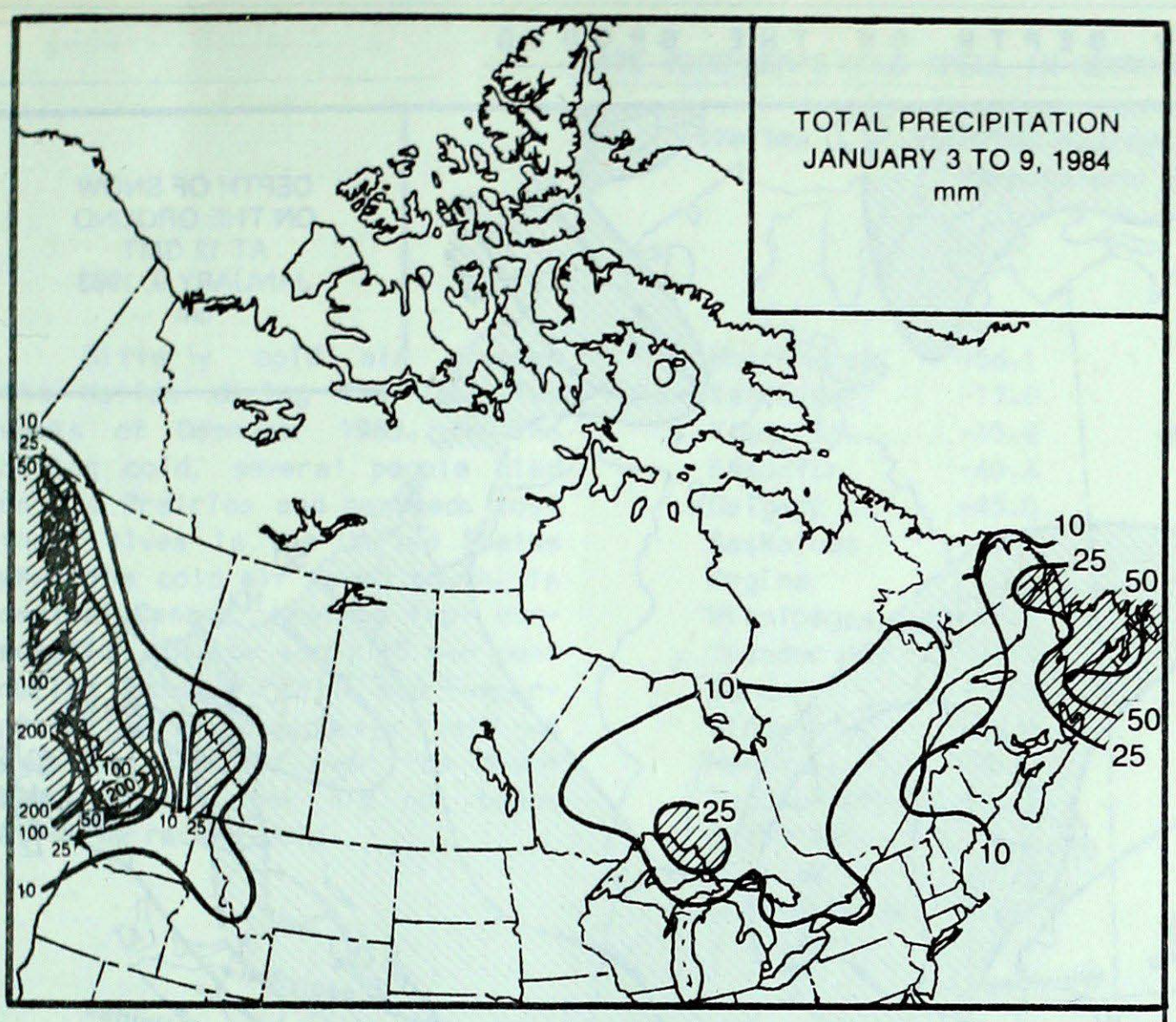
The welcome respite from the bitter cold ended in the southern Yukon as cold air covered areas west of the Mackenzie Valley. By the weekend, the temperatures dropped to the bone-chilling -35°. In the central and northern Yukon, the cooling was more modest. Precipitation was light almost everywhere; Teslin received the most, 7 cm of snow. In the southern Yukon, 10-15 cm of snow on the ground was not enough to satisfy cross-country enthusiasts; however, snow depth increased to nearly 45 cm in central areas.

British Colombia

A southwesterly flow pumped mild Pacific air inland. Mean temperatures in the interior ranged between 10 and 15 degrees above normal, setting many daily records early in the week. Victoria esstablished an all-time January record of 15.4°. Significant rain fell along the South Coast; several communities received more than 200 mm. Hope, in the Fraser Valley, received 136.5 mm of rain in 24 hours on January 4. Vancouver received 75 per cent of its normal January rainfall in the first four days of the month. The combination of rain and mild temperatures at higher elevations resulted in a heavy runoff from the snowpack. Slides, washouts and flooding occurred in the lower Frazer Valley, causing property damage and closing many highways.

Prairies

After a prolonged period of cold weather, temperatures moderated significantly in the New Year, and the first half of the week was unseasonably mild. Except for the extreme North, the temperatures were above freezing. In southern Alberta the mercury reached double digit values on January 4 and 5, breaking numerous daily records. Rain fell in some areas; Banff set a new 24 hour rainfall record of 20.3 mm. Due to the mild weather, avalanche hazard in the Rocky Mountains was extreme.



HEAVIEST WEEKLY PRECIPITATION (mm)

YUKON	5.6	Watson Lake
NORTHWEST TERRITORIES	8.2	Fort Simpson
BRITISH COLUMBIA	205.0	Hope
ALBERTA	21.3	Jasper
SASKATCHEWAN	6.1	Moose Jaw
MANITOBA	13.0	Norway House
ONTARIO	27.9	Wawa
QUÉBEC	39.4	Blanc Sablon
NEW BRUNSWICK	24.0	Fredericton
NOVA SCOTIA	39.8	Sydney
PRINCE EDWARD ISLAND	21.2	Summerside
NEWFOUNDLAND	93.0	Cape Race

Heavy rains on the West Coast

continued from page 1

CP Rail line between Chilliwack and Mission was cut off in several areas. According to the British Columbia Ministry of Transport, the cost of clearing roads and repairing bridges would amount to about $5 million. Later, the same weather system moved into Alberta and produced widespread freezing rain in the Province. Roads in the Edmonton area turned into virtual skating rinks. There were dozens of traffic accidents, none of them serious. Owing to the treacherous roads, the Trans-Canada Highway between Banff and Lake Louise was closed for about 14 hours, and major ski resorts were shut down. Numerous snow slides occurred and many mountain highways had to be closed.

Ontario

A break from the very cold weather was a welcome relief to the residents of Ontario. Except for the northwestern region, the temperatures rose to near or above normal. Record high values were set in many locations on January 4th-5th, many dating back to January 1946. For the first time in several weeks, rain fell in southern Ontario; but it did very little to reduce the snow cover. With abundant snow on the ground at the resorts, skiing and other winter sports were in full swing. By the week's end, Timmins had the deepest snow cover in the Province, 98 cm.

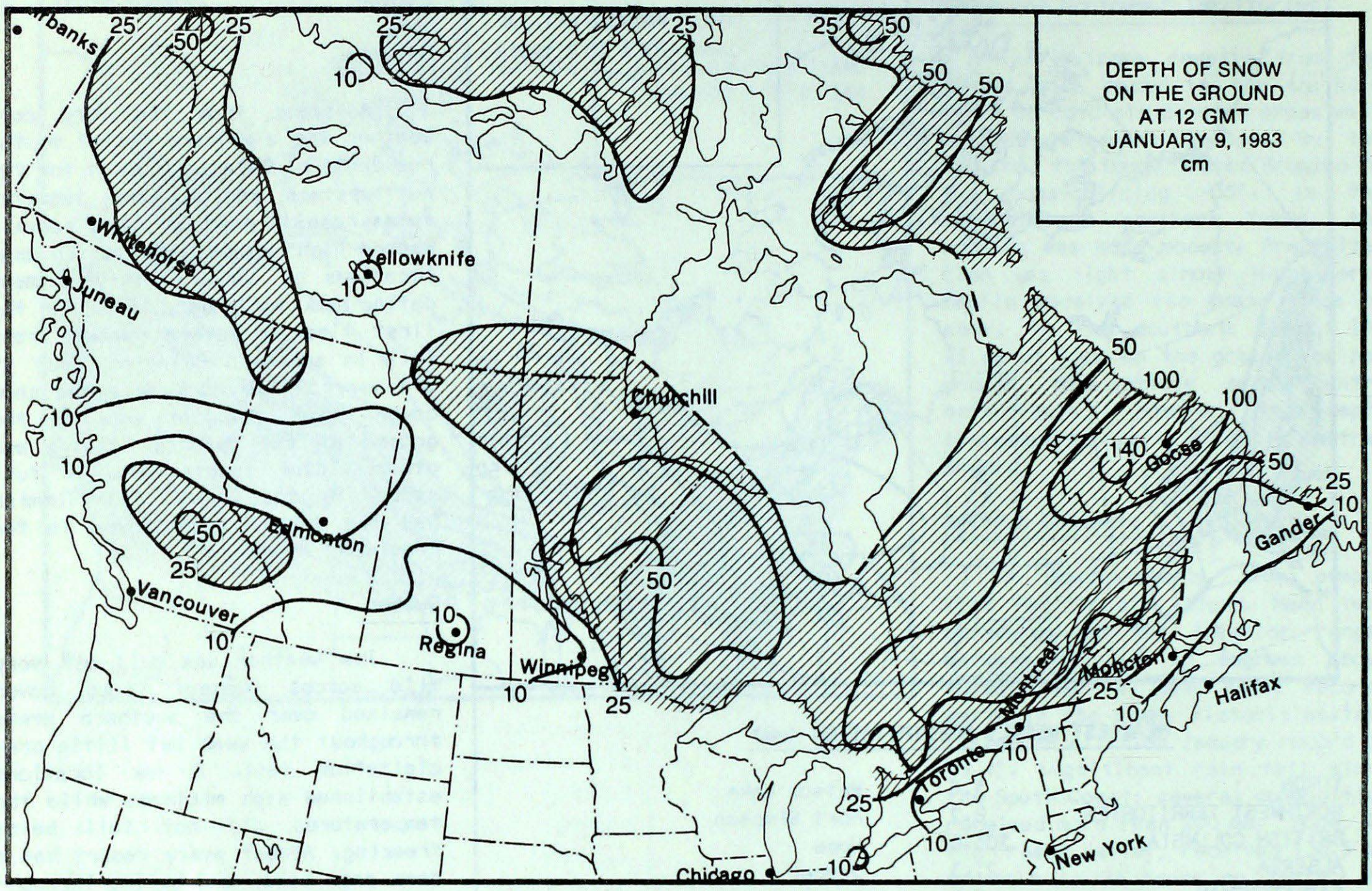
Québec

The weather was dull but very mild across Québec. Cloud cover remained over the southern areas throughout the week but little precipitation fell. A few locations established high minimums while the temperatures did not fall below freezing. Almost every resort had a deep snow base, and skiing throughout the South was good to excellent. After the weekend, very cold air flooded central and northern Québec and the temperatures fell near -45°. At Schefferville on January 8, -48° equalled the record low for January.

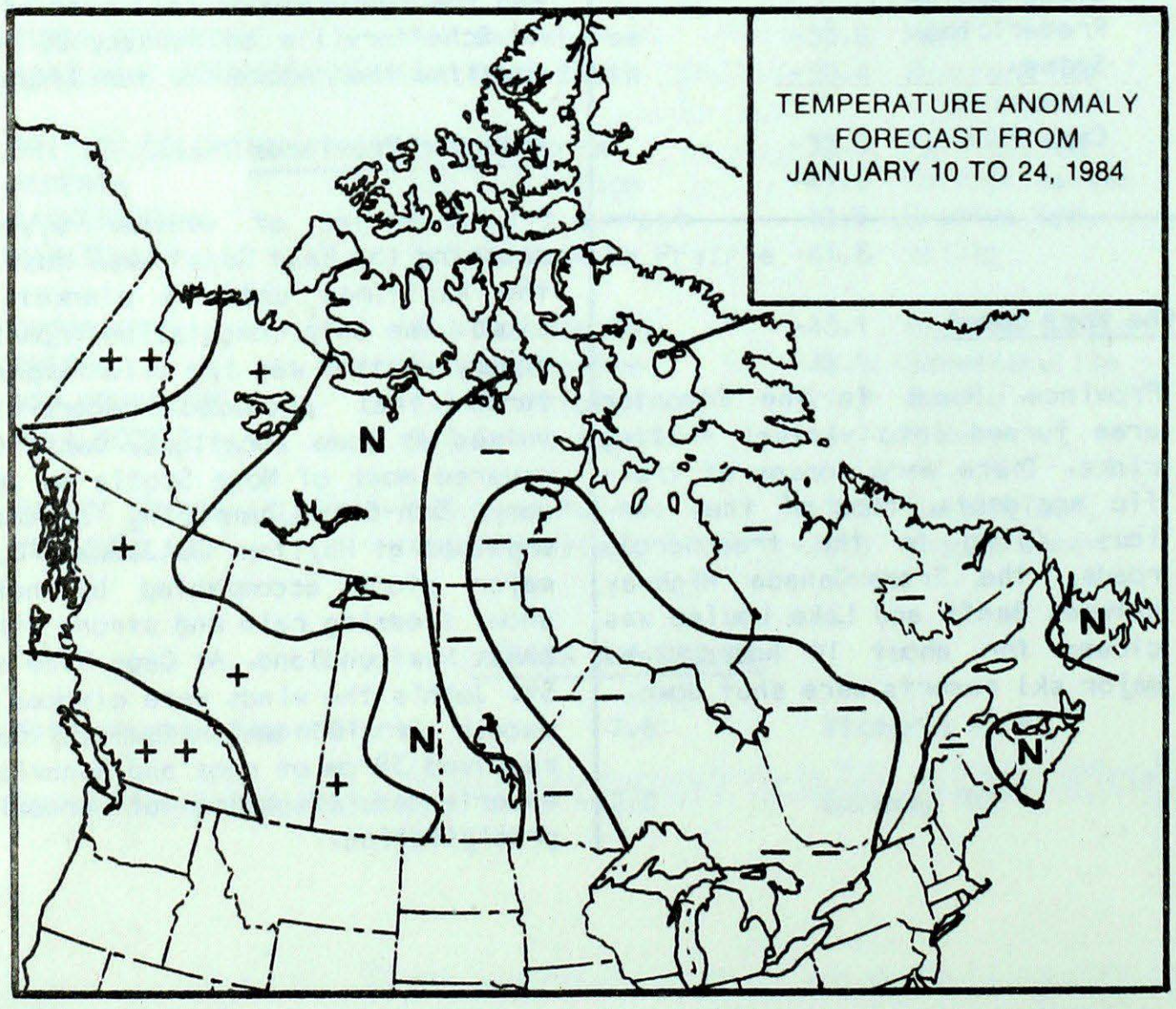
Atlantic Provinces

A series of weather systems crossing the East Coast kept most of the Maritimes under a blanket of cloud. The only consolation from the dreary weather was the mild temperatures that produced record-high values at some locations. Dense fog covered most of Nova Scotia on January 5th-6th, hampering aircraft movement at Halifax. On January 8, a major storm accompanied by heavy snow, freezing rain and strong winds swept Newfoundland. At Cape Race and St. John's the winds were clocked in excess of 100 km/h. Comfort Cove received 38 cm of snow and Bonavista experienced 12 hours of freezing precipitation.

SNOW DEPTH ON THE GROUND



TEMPERATURE ANOMALY FORECAST



Temperature Anomaly Forecast

The temperature anomaly forecast, for each of the 70 Canadian stations, is prepared by searching historical weather maps to find cases similar to the present one. The principle used is that a prediction for the next 15 days may be based on what is known to have actually happened during 15-day periods. After the five best cases are selected, the surface temperature anomalies are calculated. This results in five separate forecasts, which are averaged to provide the forecast depicted.

++ **much above normal**

+ **above normal**

N **normal**

- **below normal**

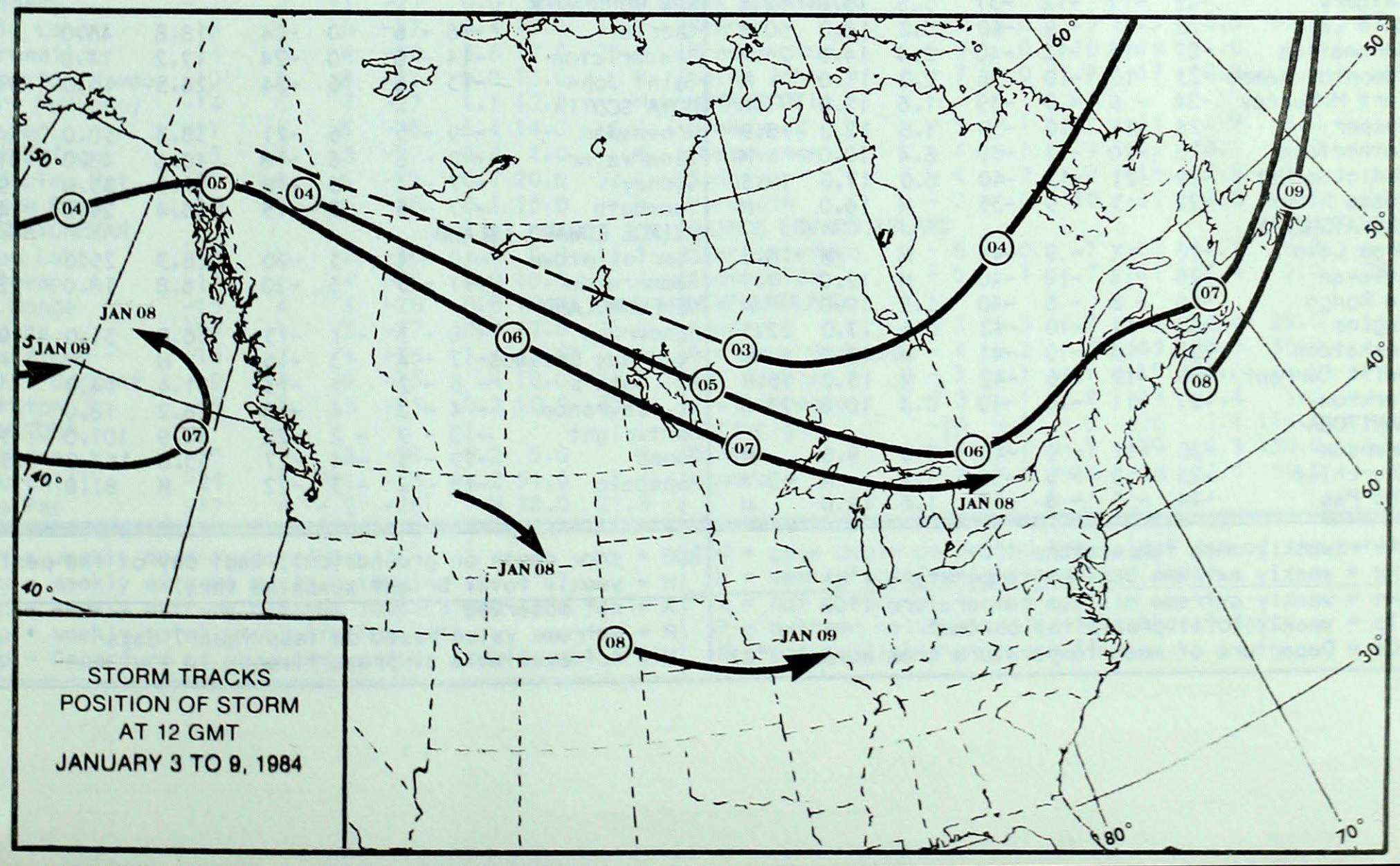
-- **much below normal**

LATE DECEMBER'S COLD SPELL IN RETROSPECT

Bitterly cold air covered the Nation during the last two weeks of December 1983. In the biting cold, several people died on the Prairies and hundreds lost their lives in the United States when the cold air moved south. In central Canada, heating fuel consumption rose by about 15 per cent during December. While the temperatures were dangerously cold on the Prairies and over the Great Lakes basin, they did not break all-time record cold.

Station	All-Time Minimum temperature	Date	Minimum Temperatures During Late Dec. Cold Snap	
Whitehorse	-56.1	Jan. 21, 1906	-37.4	Dec. 30
Vancouver	-17.8	Jan. 14, 1950	-13.2	Dec. 23
Victoria	-15.6	Jan. 28, 1950	- 8.1	Dec. 23
Edmonton	-49.4	Jan. 19, 1886	-37.3	Dec. 23
Calgary	-45.0	Feb. 4, 1893	-36.5	Dec. 23
Saskatoon	-50.0	Jan. 2, 1893	-41.1	Dec. 23
Regina	-50.0	Jan. 1, 1885	-42.2	Dec. 23
Winnipeg	-47.8	Dec. 24, 1879	-32.8	Dec. 23
Thunder Bay	-41.1	Jan. 30, 1950	-30.3	Dec. 20
Toronto	-32.8	Jan. 10, 1859	-22.0	Dec. 25
Windsor	-32.8	Jan. 29, 1873	-23.4	Dec. 21
Montréal	-33.9	Dec. 29, 1933	-27.0	Dec. 20
Québec City	-36.7	Jan. 10, 1890	-29.6	Dec. 20
Saint John	-36.7	Feb. 11, 1948	-24.0	Dec. 20
Halifax	-29.4	Feb. 18, 1922	-18.2	Dec. 20
Charlottetown	-32.8	Jan. 29, 1879	-20.4	Dec. 26
St. John's	-29.4	Feb. 16, 1875	-12.9	Dec. 20

STORM TRACKS



TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT DECEMBER 27, 1983

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	-34	- 8	-27	-42	0.0	33.0	M
Mayo A	-37	-13	-31	-43	0.0	20.0	M
Watson Lake	-33	- 9	-24	-43	0.0	19.0	M
Whitehorse	-27	- 9	-16	-36	0.0	9.0	13.9
NORTHWEST TERRITORIES							
Fort Smith	-24	0	- 5	-41	2.6	12.0	2.6
Inuvik	-13	13	- 3	-24	0.8	47.0	0.0
Norman Wells	-16	10	- 3	-29	1.4	8.0	0.0
Yellowknife	-20	5	- 5	-33	2.6	6.0	8.3
Baker Lake	-26	3	- 5	-42	4.9	24.0	0.0
Cape Dyer	-21	- 3	-14	-30	2.4	39.0	M
Clyde	-23	2	-15	-28	2.6	76.0	M
Frobisher Bay	-29	- 7	-22	-35	3.4	27.0	M
Alert	-25	5	-13	-38	M	14.0	M
Eureka	-26	9	-12	-40	10.4	28.0	M
Hall Beach	-24	1	-14	-35	M	M	M
Resolute	-21	10	- 4	-35	M	25.0	M
Cambridge Bay	-20	11	- 5	-33	2.8	19.0	0.0
Mould Bay	-19	13	- 3	-32	M	24.0	M
Sachs Harbour	-17	11	- 4	-23	9.6	23.0	M
BRITISH COLUMBIA							
Cape St. James	1	- 4	6	- 4	11.6	M	24.4
Cranbrook	-24	-17	-14	-34	8.1	27.0	M
Fort Nelson	-17	5	- 7	-28	1.0	16.0	5.5
Fort St. John	-19	- 5	- 9	-30	2.0	26.0	M
Kamloops	-19	-16	- 9	-27	11.2	11.0	M
Penticton	-13	-12	- 3	-21	3.0	10.0	M
Port Hardy	- 3	- 6	6	-11	9.6	M	M
Prince George	-24	-16	- 8	-33	0.0	17.0	28.6
Prince Rupert	- 5	- 4	7	-16	0.0	0.0	29.5
Revelstoke	-16	-11	- 7	-24	8.6	34.0	22.2
Smithers	-22	-14	- 7	-31	0.0	15.0	12.1
Vancouver	- 4	- 7	6	-13	5.2	0.0	38.7
Victoria	- 3	- 7	6	- 8	5.6	M	33.5
Williams Lake	-25	-16	-13	-33	10.8	34.0	17.0
ALBERTA							
Calgary	-25	-17	-12	-37	5.8	13.0	32.4
Cold Lake	-26	-11	- 9	-40	0.2	18.0	60.0
Coronation	-27	-15	-12	-40	2.4	14.0	25.4
Edmonton Namao	-23	-10	-10	-36	2.2	15.0	M
Fort McMurray	-24	- 6	- 9	-39	1.6	12.0	M
Jasper	-24	-14	-10	-35	1.6	12.0	16.9
Lethbridge	-26	-20	-11	-39	6.4	10.0	M
Medicine Hat	-29	-21	-13	-40	6.0	17.0	19.3
Peace River	-22	- 5	- 9	-35	M	16.0	M
SASKATCHEWAN							
Cree Lake	-28	X	- 9	-44	M	M	16.8
Estevan	-26	-14	-10	-40	M	12.0	7.7
La Ronge	-26	- 8	- 8	-40	1.5	19.0	M
Regina	-28	-14	-10	-42	0.6	17.0	22.5
Saskatoon	-28	-13	-10	-41	M	12.0	M
Swift Current	-30	-19	-16	-42	M	15.0	15.8
Yorkton	-27	-11	-10	-40	0.4	10.0	27.0
MANITOBA							
Brandon	-26	-11	- 9	-40	3.0	9.0	M
Churchill	-23	2	- 5	-38	8.4	M	12.4
The Pas	-24	- 5	- 8	-33	1.6	18.0	M
Thompson	-26	- 2	- 9	-43	M	32.0	M
Winnipeg	-24	- 8	- 9	-33	2.1	5.0	21.4
ONTARIO							
Big Trout Lake	-24	- 2	-10	-33	12.1	58.0	M
Earlton	-20	- 6	- 5	-41	M	52.0	M
Kapuskasing	-21	- 4	-10	-33	9.0	44.0	M
Kenora	-24	- 9	- 9	-32	6.8	40.0	M
London	-13	- 8	2	-22	20.2	5.0	M
Moosonee	-21	- 3	-10	-34	7.0	22.0	9.5
Muskoka	-16	- 7	2	-35	M	M	M
North Bay	-17	- 5	- 1	-31	14.6	21.0	M
Ottawa	-17	- 7	3	-28	15.8	30.0	28.6
Pickle Lake	-24	- 5	-10	-31	5.0	59.0	M
Red Lake	-24	- 6	-10	-34	6.2	48.0	10.4
Sudbury	-18	- 5	- 3	-32	6.9	36.0	M
Thunder Bay	-20	- 8	- 6	-30	9.5	28.0	21.4
Timmins	-21	- 6	- 6	-33	30.2	75.0	M
Toronto	-13	- 8	3	-22	16.4	3.0	M
Trenton	-12	- 6	4	-23	25.4	M	M
Wiarton	-12	- 7	1	-23	40.3	32.0	9.7
Windsor	-14	-11	2	-22	21.1	4.0	M
QUEBEC							
Bagotville	-21	- 7	- 5	-32	23.5	46.0	M
Blanc-Sablon	-12	- 4	- 1	-23	17.9	18.0	11.4
Inukjuak	-22	- 2	-12	-30	M	16.0	6.1
Kuujjuaq	-23	- 4	-11	-39	12.6	29.0	6.7
Kuujjuarapik	-20	- 2	- 9	-34	12.7	24.0	M
Manawaki	-18	- 6	- 1	-37	22.4	30.0	22.2
Mont-Joli	-16	- 6	- 4	-24	36.7	48.0	5.2
Montréal	-16	- 7	2	-27	17.6	20.0	M
Natashquan	-15	- 4	1	-25	26.4	27.0	M
Nitchequon	-26	- 5	-11	-43	24.4	65.0	10.0
Québec	-18	- 7	- 3	-30	33.8	72.0	20.5
Schefferville	-25	- 4	-15	-38	29.7	76.0	6.4
Sept-Iles	-20	- 7	- 2	-31	31.5	74.0	30.1
Sherbrooke	-18	- 7	0	-31	25.2	28.0	21.2
Val-d'Or	-21	- 6	- 4	-39	23.2	54.0	18.2
NEW BRUNSWICK							
Charlo	-16	- 6	0	-24	18.8	46.0	M
Fredericton	-14	- 6	0	-24	12.2	14.0	M
Saint John	-13	- 6	6	-24	26.5	16.0	34.7
NOVA SCOTIA							
Greenwood	- 9	- 5	6	-21	38.3	50.0	M
Shearwater	- 8	- 6	6	-18	40.6	43.0	31.8
Sydney	- 7	- 4	6	-18	51.1	33.0	19.3
Yarmouth	- 7	- 5	7	-15	36.4	25.0	14.5
PRINCE EDWARD ISLAND							
Charlottetown	-10	- 4	3	-20	28.3	25.0	M
Summerside	-11	- 5	3	-20	16.8	18.0	22.3
NEWFOUNDLAND							
Gander	- 8	- 3	- 1	-15	36.8	31.0	19.1
Port aux Basques	- 7	- 4	3	-15	M	M	M
St. John's	- 5	- 2	5	-13	31.4	14.0	M
St. Lawrence	- 4	- 3	4	-10	26.2	18.0	M
Cartwright	-13	- 2	- 2	-22	44.9	101.0	7.7
Goose	-19	- 5	- 4	-27	55.8	163.0	17.3
Hopedale	-15	- 2	- 3	-22	M	81.0	M

Av = weekly mean temperature (°C)
Mx = weekly extreme maximum temperature (°C)
Mn = weekly extreme minimum temperature (°C)
Tp = weekly total precipitation (mm)
Dp = Departure of mean temperature from normal (°C)

SOG = snow depth on ground (cm), last day of the period
H = weekly total bright sunshine (hrs)

X = not observed
P = extreme value based on less than 7 days
M = not available at press time

TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT JANUARY 3, 1984

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	-33	- 7	-16	-42	2.9	35.0	M
Mayo A	-31	- 7	- 8	-42	5.8	28.0	M
Watson Lake	-26	- 2	3	-41	4.6	24.0	15.2
Whitehorse	-23	- 6	4	-37	2.2	11.0	2.4
NORTHWEST TERRITORIES							
Fort Smith	-18	7	-11	-24	5.6	16.0	M
Inuvik	-25	5	- 9	-44	2.4	50.0	0.0
Norman Wells	-22	5	-14	-30	3.1	11.0	0.0
Yellowknife	-21	7	-12	-29	9.0	4.0	2.7
Baker Lake	-31	1	-20	-39	1.0	24.0	0.0
Cape Dyer	-24	- 6	-17	-34	3.3	38.0	M
Clyde	-29	- 4	-22	-35	3.0	76.0	M
Frobisher Bay	-31	- 9	-21	-40	1.2	25.0	5.3
Alert	-33	- 2	-22	-39	M	12.0	M
Eureka	-36	1	-25	-45	0.2	24.0	M
Hall Beach	-35	- 7	-23	-45	0.0	24.0	M
Resolute	-34	- 3	-29	-40	1.0	25.0	M
Cambridge Bay	-30	3	-15	-40	2.9	22.0	0.0
Mould Bay	-37	- 2	-21	-45	M	24.0	M
Sachs Harbour	-31	- 1	- 7	-43	0.2	21.0	M
BRITISH COLUMBIA							
Cape St. James	6	2	9	3	66.9	M	M
Cranbrook	-14	- 1	2	-29	2.9	35.0	10.4
Fort Nelson	-22	0	-14	-30	0.6	17.0	20.2
Fort St. John	-10	5	6	-26	0.4	16.0	M
Kamloops	- 8	- 3	4	-23	4.1	19.0	10.4
Penticton	- 4	- 2	2	-14	16.0	M	3.5
Port Hardy	4	1	9	- 4	71.0	M	8.9
Prince George	-12	- 1	7	-29	18.9	22.0	17.7
Prince Rupert	1	2	10	-11	42.2	M	8.7
Revelstoke	- 8	0	3	-22	28.7	59.0	7.5
Smithers	-10	0	9	-26	14.9	9.0	8.3
Vancouver	2	0	9	- 7	61.2	M	11.0
Victoria	3	0	10	- 3	52.5	M	13.2
Williams Lake	- 9	1	7	-26	5.5	38.0	15.2
ALBERTA							
Calgary	- 7	2	11	-27	0.0	9.0	44.6
Cold Lake	-13	3	6	-27	0.4	18.0	32.9
Coronation	-14	0	4	-30	3.6	17.0	25.7
Edmonton Namao	-10	2	8	-22	0.0	13.0	M
Fort McMurray	-14	6	7	-27	1.1	12.0	M
Jasper	-11	1	5	-28	6.4	14.0	16.0
Lethbridge	- 6	2	8	-27	0.4	1.0	M
Medicine Hat	-11	0	6	-27	0.7	20.0	32.1
Peace River	-13	5	6	-28	0.1	15.0	M
SASKATCHEWAN							
Cree Lake	-16	X	2	-30	M	9.0	16.1
Estevan	-13	1	4	-25	0.0	10.0	23.4
La Ronge	-15	4	4	-28	0.8	19.0	M
Regina	-14	1	3	-27	0.4	17.0	26.0
Saskatoon	-15	2	4	-26	1.4	12.0	M
Swift Current	- 9	4	5	-23	M	18.0	24.2
Yorkton	-15	3	3	-25	0.2	10.0	33.2
MANITOBA							
Brandon	-15	1	2	-25	0.2	5.0	M
Churchill	-25	1	-11	-35	4.2	51.0	2.3
The Pas	-17	4	- 2	-26	M	18.0	27.8
Thompson	-22	1	-10	-40	10.8	28.0	21.6
Winnipeg	-16	1	1	-25	M	M	37.8
ONTARIO							
Big Trout Lake	-22	1	-13	-34	7.6	62.0	M
Earlton	-14	1	- 4	-33	M	61.0	M
Kapuskasing	-18	0	- 7	-36	2.6	42.0	M
Kenora	-16	0	- 2	-29	1.0	M	M
London	- 9	- 4	- 2	-19	14.3	12.0	19.9
Moosonee	-20	- 1	- 9	-36	1.4	23.0	25.0
Muskoka	-11	- 2	- 3	-21	M	83.0	M
North Bay	-11	1	- 5	-23	22.2	49.0	11.4
Ottawa	-11	0	- 4	-22	25.8	52.0	24.8
Pickle Lake	-21	0	- 5	-33	0.4	54.0	M
Red Lake	-19	0	- 3	-30	0.2	44.0	26.5
Sudbury	-12	1	- 5	-24	17.0	51.0	12.8
Thunder Bay	-15	- 2	- 3	-26	0.2	22.0	33.5
Timmins	-16	1	- 5	-31	6.4	86.0	M
Toronto	- 8	- 3	- 1	-18	13.8	14.0	M
Trenton	- 8	- 1	0	-24	14.4	20.0	M
Wiarton	- 7	- 2	- 1	-16	36.3	60.0	4.1
Windsor	- 9	- 6	- 2	-23	13.3	16.0	M
QUEBEC							
Bagotville	-15	0	- 6	-29	21.0	50.0	M
Blanc-Sablon	-12	- 5	3	-24	13.6	18.0	25.8
Inukjuak	-24	- 2	-16	-30	3.6	16.0	8.5
Kuujjuaq	-24	- 3	-15	-33	3.4	27.0	1.7
Kuujjuarapik	-24	- 4	-14	-35	4.8	24.0	16.6
Maniwaki	-14	- 1	- 6	-31	19.4	39.0	15.8
Mont-Joli	-11	- 1	- 2	-22	27.0	50.0	13.8
Montréal	-10	0	1	-20	21.6	28.0	19.2
Natashquan	-11	- 1	2	-29	27.0	36.0	M
Nitchequon	-24	- 3	-13	-38	6.4	63.0	5.0
Québec	-11	0	- 2	-22	29.4	91.0	12.6
Schefferville	-24	- 3	-14	-35	5.8	77.0	19.5
Sept-Iles	-16	- 3	- 1	-26	23.4	64.0	20.9
Sherbrooke	-10	2	1	-22	22.8	33.0	23.8
Val-d'Or	-16	0	- 6	-34	13.6	61.0	19.3
NEW BRUNSWICK							
Charlo	-13	- 3	3	-25	18.0	56.0	25.4
Fredericton	- 8	0	10	-19	11.0	1.0	M
Saint John	- 7	0	9	-17	18.8	3.0	M
NOVA SCOTIA							
Greenwood	- 5	- 1	12	-17	M	4.0	M
Shearwater	- 4	- 1	9	-12	33.7	7.0	M
Sydney	- 4	- 2	9	-15	37.9	11.0	M
Yarmouth	- 2	0	10	-11	7.8	0.0	20.9
PRINCE EDWARD ISLAND							
Charlottetown	- 6	0	7	-12	11.7	8.0	M
Summerside	- 5	1	7	-11	5.4	2.0	25.4
NEWFOUNDLAND							
Gander	- 7	- 3	7	-19	24.4	25.0	14.5
Port aux Basques	- 4	- 2	6	-15	25.0	35.0	M
St. John's	- 3	- 1	11	-11	44.0	1.0	9.6
St. Lawrence	- 3	- 1	8	-14	42.4	5.0	M
Cartwright	-16	- 5	- 3	-26	2.1	110.0	M
Goose	-19	- 4	- 7	-29	19.3	130.0	32.4
Hopedale	-19	- 6	-10	-28	11.5	89.0	M

Av = weekly mean temperature (°C)
Mx = weekly extreme maximum temperature (°C)
Mn = weekly extreme minimum temperature (°C)
Tp = weekly total precipitation (mm)
Dp = Departure of mean temperature from normal (°C)

SOG = snow depth on ground (cm), last day of the period
H = weekly total bright sunshine (hrs)

X = not observed
P = extreme value based on less than 7 days
M = not available at press time

TEMPERATURE, PRECIPITATION AND BRIGHT SUNSHINE DATA FOR THE WEEK ENDING 0600 GMT JANUARY 10, 1984

STATION	TEMP				PRECIP		SUN
	Av	Dp	Mx	Mn	Tp	SOG	H
YUKON TERRITORY							
Dawson	-27	1	-12	-37	4.8	39.0	M
Mayo A	-24	2	- 3	-39	5.2	39.0	M
Watson Lake	-19	5	0	-36	5.6	26.0	M
Whitehorse	-14	4	1	-30	2.6	11.0	11.8
NORTHWEST TERRITORIES							
Fort Smith	-24	2	-15	-40	1.6	22.0	0.5
Inuvik	-27	5	-17	-40	5.8	57.0	M
Norman Wells	-27	3	-19	-37	4.2	13.0	1.1
Yellowknife	-28	0	-19	-40	1.2	10.0	0.0
Baker Lake	-38	- 6	-33	-42	M	24.0	0.0
Cape Dyer	-34	-13	-24	-42	2.3	40.0	M
Clyde	M	M	-27P	-42	M	81.0	M
Frobisher Bay	-37	-12	-30	-41	0.4	25.0	1.5
Alert	-34	- 1	-29	-39	3.2	15.0	M
Eureka	-42	- 5	-35	-46	M	20.0	M
Hall Beach	-41	-12	-29	-46	0.0	24.0	M
Resolute	-37	- 6	-31	-43	M	25.0	M
Cambridge Bay	-38	- 5	-32	-43	M	19.0	0.0
Mould Bay	-37	- 3	-30	-45	M	24.0	M
Sachs Harbour	-32	- 2	-22	-44	0.0	19.0	M
BRITISH COLUMBIA							
Cape St. James	7	3	10	4	87.0	M	0.6
Cranbrook	2	15	11	- 6	0.7	7.0	18.3
Fort Nelson	-20	4	-10	-33	0.2	16.0	21.6
Fort St. John	- 5	10	9	-21	3.6	3.0	M
Kamloops	0	5	4	- 3	2.2	9.0	1.7
Penticton	3	6	9	- 1	5.8	M	4.1
Port Hardy	7	4	12	1	91.7	M	0.9
Prince George	- 2	8	7	-11	32.2	26.0	M
Prince Rupert	5	7	11	- 3	87.3	M	2.3
Revelstoke	2	12	4	0	42.2	33.0	0.0
Smithers	- 2	8	6	-11	12.6	5.0	5.8
Vancouver	8	5	13	4	78.2	M	1.7
Victoria	8	5	15	3	38.4	M	2.3
Williams Lake	- 1	9	9	- 8	18.1	78.0	3.9
ALBERTA							
Calgary	- 1	10	12	-11	0.6	0.0	17.4
Cold Lake	- 6	12	7	-26	M	M	M
Coronation	- 6	9	6	-16	6.8	22.0	13.6
Edmonton Namao	- 3	13	6	-18	0.0	6.0	M
Fort McMurray	-13	7	7	-34	0.4	4.0	20.9
Jasper	- 1	11	5	-12	21.3	28.0	1.8
Lethbridge	4	12	16	- 5	0.3	0.0	M
Medicine Hat	- 1	10	9	-11	3.6	5.0	M
Peace River	- 7	14	7	-23	0.7	4.0	M
SASKATCHEWAN							
Cree Lake	-20	X	1	-37	M	M	14.5
Estevan	- 5	9	6	-28	4.0	8.0	22.7
La Ronge	-13	13	5	-34	3.6	17.0	M
Regina	- 6	11	4	-29	3.1	10.0	29.0
Saskatoon	- 6	11	6	-24	0.8	5.0	M
Swift Current	- 3	10	9	-20	M	7.0	M
Yorkton	- 7	11	5	-29	0.9	1.0	29.0
MANITOBA							
Brandon	- 6	13	4	-26	0.0	0.0	M
Churchill	-30	- 3	-19	-40	4.4	46.0	19.9
The Pas	-16	6	3	-31	4.0	13.0	M
Thompson	-28	1	-13	-37	4.6	35.0	13.2
Winnipeg	-10	8	4	-28	2.8	2.0	19.3
ONTARIO							
Big Trout Lake	-29	- 5	-12	-40	8.4	74.0	M
Earlton	-15	1	2	-32	M	61.0	M
Kapuskasing	-20	- 2	1	-35	16.8	49.0	M
Kenora	-12	6	3	-30	4.7	41.0	M
London	- 5	1	1	-16	M	M	9.7
Moosonee	-23	- 4	1	-38	10.6	27.0	23.5
Muskoka	- 9	1	1	-26	M	73.0	M
North Bay	-13	- 1	0	-30	17.4	50.0	7.9
Ottawa	- 9	2	2	-22	3.2	40.0	13.5
Pickle Lake	-22	0	- 2	-40	22.8	69.0	M
Red Lake	-16	4	2	-33	8.6	46.0	16.8
Sudbury	-14	0	1	-30	15.2	41.0	M
Thunder Bay	-11	4	6	-28	7.0	26.0	16.3
Timmins	-19	- 1	1	-38	11.6	98.0	M
Toronto	- 6	0	2	-18	5.9	7.0	M
Trenton	- 5	2	3	-17	10.3	11.0	M
Wiarton	- 6	- 1	2	-20	14.6	43.0	6.2
Windsor	- 3	1	3	-11	8.8	10.0	M
QUEBEC							
Bagotville	-14	1	5	-32	2.2	49.0	M
Blanc-Sablon	- 9	2	3	-27	39.4	M	M
Inukjuak	-28	- 6	-17	-33	M	17.0	7.7
Kuujjuaq	-29	- 8	-15	-37	M	27.0	14.2
Kuujjuarapik	-28	- 7	-15	-38	8.4	18.0	M
Maniwaki	-11	2	2	-29	8.2	41.0	14.6
Mont-Joli	- 8	2	2	-17	M	41.0	5.5
Montréal	- 7	2	2	-23	M	15.0	8.1
Natashquan	-12	- 1	0	-24	6.8	37.0	14.7
Nitchequon	-26	- 4	- 4	-47	5.4	56.0	M
Québec	- 8	3	1	-19	12.4	87.0	M
Schefferville	-29	- 7	- 6	-48	8.8	59.0	M
Sept-Iles	-13	0	0	-24	9.6	66.0	20.6
Sherbrooke	- 7	4	2	-22	3.3	23.0	8.2
Val-d'Or	-17	0	1	-34	10.6	67.0	13.4
NEW BRUNSWICK							
Charlo	- 7	6	1	-21	9.4	64.0	7.9
Fredericton	- 4	4	3	-15	24.0	16.0	M
Saint John	- 2	4	4	-14	11.4	5.0	M
NOVA SCOTIA							
Greenwood	- 2	2	4	-12	9.2	2.0	M
Shearwater	0	3	6	- 9	21.4	0.0	8.0
Sydney	- 1	2	8	-15	39.8	3.0	3.5
Yarmouth	0	2	5	- 8	16.8	0.0	6.1
PRINCE EDWARD ISLAND							
Charlottetown	- 3	3	3	-13	19.7	7.0	M
Summerside	- 3	3	2	-13	21.2	14.0	7.7
NEWFOUNDLAND							
Gander	- 3	2	5	-17	41.4	35.0	8.3
Port aux Basques	- 2	1	5	-13	52.4	4.0	M
St. John's	- 1	2	9	-15	68.2	M	1.8
St. Lawrence	0	4	8	- 8	41.8	0.0	M
Cartwright	-16	- 4	0	-27	17.8	120.0	14.2
Goose	-22	- 7	- 1	-37	9.7	134.0	M
Hopedale	-20	- 6	- 4	-32	6.0	90.0	M

Av = weekly mean temperature (°C)
Mx = weekly extreme maximum temperature (°C)
Mn = weekly extreme minimum temperature (°C)
Tp = weekly total precipitation (mm)
Dp = Departure of mean temperature from normal (°C)

SOG = snow depth on ground (cm), last day of the period
H = weekly total bright sunshine (hrs)

X = not observed
P = extreme value based on less than 7 days
M = not available at press time

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

Annual subscription rate for weekly issues---
$35.00
Annual subscription rate for one issue per month
including monthly supplement--- $10.00

EDITOR: A. Shabbar

STAFF WRITER: A. Radomski

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

ACID RAIN REPORT ISSUED BY ENVIRONMENT CANADA FOR JANUARY 1-7, 1984

LONGWOODS NEAR LONDON ONTARIO

The air associated with the strongly acidic snow, which fell January 4 with a pH of 4.0, had passed over Wisconsin, Illinois, Michigan and southern Ontario. The air which produced moderately acidic snow with a pH of 4.6 on the following day, January 5, came from the west and southwest over Wisconsin, Indiana, Michigan, Ohio and southern Ontario. Air which had passed over northwest Ontario, Lake Superior, Lake Huron, and southern Ontario brought strongly acidic snow, with a pH reading of 4.2, to the region on January 6.

DORSET*
MUSKOKA
ONTARIO

The air associated with the strongly acidic precipitation which fell January 1 (pH 3.7) and January 3 (pH 4.2) came from the southwest across Michigan, Lake Huron and southern Ontario. Air which passed over northwestern Ontario, Lake Superior, Lake Huron and the Sudbury Basin, produced strongly acidic rain and wet snow January 4 with a pH reading of 3.8. The strongly acidic precipitation which fell on the following day, January 5 with a pH of 4.0, was produced by air which had passed over Michigan, Lake Huron and the Sudbury Basin. The strongly acidic snowfall January 7 with a pH value of 4.1, was associated with air arriving from the northwest over the Sudbury Basin.

CHALK RIVER
OTTAWA VALLEY
ONTARIO

The strongly acidic snow which fell January 1, 3, and 5 with a pH reading of 4.2 each day, was associated with air which passed over Michigan, Lake Huron and the Sudbury Basin.

MONTMORENCY
QUEBEC CITY
QUEBEC

Not available.

KEJIMKUJIK
SOUTHWESTERN
NOVA SCOTIA

The rain which fell January 4 was strongly acidic with a pH reading of 3.7 and was associated with air that came from the southwest across Ohio, Pennsylvania, New York and New England. The moderately acidic rain which fell January 6 with a pH of 4.5, had a more southerly pathway across the Atlantic from North Carolina and Virginia. The strongly acidic rain which fell January 7 had a pH reading of 4.2 and was produced in air which had passed over Ohio, Pennsylvania, West Virginia, Virginia and the east coast of North America.

*Data supplied by the Ontario Ministry of Environment.

Environmental damage to lakes and streams is usually observed in sensitive areas regularly receiving precipitaion with pH less than 4.7

This report was prepared by the Federal Long Range Transport of Air Pollutants (LRTAP) Liaison Office. For further information please contact Dr. H.C. Martin at (416) 667-4803.