



# Climatic Perspectives

Weekly

January 2 to 8, 1995

A weekly review of Canadian climate and water

Vol. 17 No. 2

## Cold, dry conditions

*High pressure dominated the Yukon, British Columbia and Prairie Provinces and resulted in cold temperatures and little precipitation.*

It was clear, cold and dry in the Yukon due to a high pressure ridge. An interesting feature of the ridge was the warm air aloft, on the 3rd: while surface temperatures at Whitehorse were between  $-25$  and  $-16^{\circ}\text{C}$ , the temperature at 1000 m above the ground was  $5^{\circ}\text{C}$ . The warm air surfaced at higher ground in the north where Eagle Plains (elevation 720 m) recorded  $0.5^{\circ}\text{C}$ .

The week was clear and crisp in Victoria, British Columbia. There, the mean was 1.1 Celsius degrees below normal and sunshine totalled 33.9 hours (normal 16.0 hours). Prince George was 8.3 degrees below normal and recorded only 3.0 hours of sunshine (normal 11.1 hours) due to an inversion which trapped low cloud in the valley and was typical of many B.C. Interior locations. A deep low over the eastern Pacific affected northern Vancouver Island beginning on the 6th. A series of frontal systems gave periods of rain and strong southeast winds to the area, for the rest of the week.

A northerly flow covered the Prairie Provinces with cold arctic air. Temperatures were  $-30$  to  $-20^{\circ}\text{C}$ , with a few locations in the extreme north reporting  $-40^{\circ}\text{C}$ . Brisk winds combined with the cold to produce dangerously-high wind-chill factors. Precipitation totals were generally less than 1 mm.

### Ontario, Quebec

Strong west winds produced heavy lake-effect snowsqualls in the snowbelt areas of Ontario. Areas such as Dorset, Muskoka, the Dundalk Highlands and Algoma received 50 to 80 cm while near 100 cm fell in the Parry Sound area. Snow conditions became excellent for skiers and snowmobilers.

Weekly temperatures averaged near normal in southern Quebec, also in the Lac St-Jean and Chibougamau areas despite two days of cold, January 3-4. On those two days temperatures were below normal by four to eight degrees at Lac St-Jean/Saguenay and six to thirteen degrees at Chibougamau. Snowfall totals were similar in the Montréal, Sept-Îles and Lower North Shore areas (13 to 22 cm) but greater around Québec City (42.4 cm).

### Wet weekend, Atlantic Provinces

Temperatures were one to two degrees above normal in the Maritimes and southeastern Newfoundland. A disturbance over the weekend gave a mixture of snow, freezing rain and very strong winds to areas of the Maritimes. Bas Caraquet, New Brunswick, recorded 29 cm of snow. Halifax Int'l Airport reported wind gusts to 111 km/h on the 7th and in the city, a temperature of  $11.7^{\circ}\text{C}$  broke the 1962 record of  $9.4^{\circ}\text{C}$ . Areas along the Atlantic coast received rain and temperatures were well above normal.

Rainfall totals from the storm included Hart Island (near Canso), Nova Scotia (40 mm); Saint John, New Brunswick (42 mm); Charlottetown, P.E.I. (17 mm); and St. Lawrence, Newfoundland (57.4 mm). Road washouts and flooded basements occurred along the south coast of Newfoundland and Avalon Peninsula.

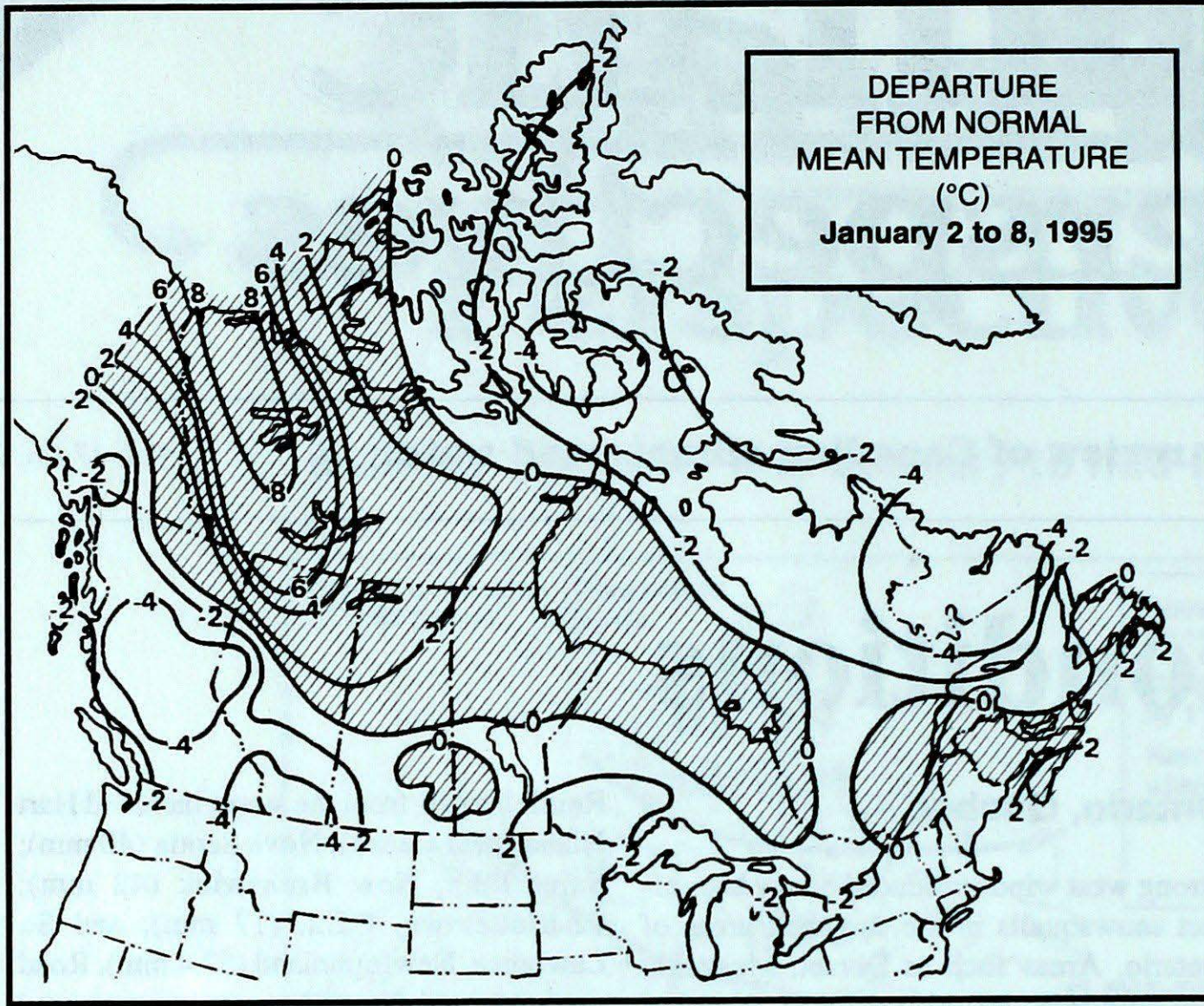
### Mild, District of Mackenzie

The deep upper low in the eastern Pacific and its resultant southerly flow, allowed milder-than-normal temperatures to penetrate the District of Mackenzie. Coppermine rose to  $-7.0^{\circ}\text{C}$  on the 4th (old record  $-9.0^{\circ}\text{C}$ , 1979). Inuvik averaged 9.1 degrees above normal, recording  $-5.0^{\circ}\text{C}$  on the 2nd and  $-3.6^{\circ}\text{C}$  on the 3rd. By midweek, the District came under the influence of a cold dome of Arctic air and temperatures plummeted. Inuvik's maximum on the 8th was  $-29.6^{\circ}\text{C}$ . Conditions were clear and cold in the High Arctic.

### A Look Ahead...

For the week of January 16, above-normal temperatures are expected east of Saskatchewan. Elsewhere, near-normal temperatures are likely. Significant precipitation is possible for most of British Columbia, southwestern Alberta, southern Manitoba, the southern half of Ontario, southern Quebec and the Atlantic Provinces.





### Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	-16.1	-24.7
Iqaluit A	-21.1	-29.1
Yellowknife A	-24.1	-32.3
Vancouver Int'l A	4.7	-0.8
Victoria Int'l A	5.5	-0.5
Calgary Int'l A	-6.3	-17.4
Edmonton Int'l A	-11.3	-22.4
Regina A	-12.1	-23.3
Saskatoon A	-13.7	-23.9
Winnipeg Int'l A	-13.8	-23.7
Ottawa Int'l A	-6.3	-14.8
Toronto (Pearson) Int'l A	-2.1	-9.8
Montréal Int'l A	-5.7	-14.2
Québec A	-7.5	-15.9
Fredericton A	-4.1	-13.9
Saint John A	-2.6	-12.2
Halifax (Shearwater)	0.1	-7.7
Charlottetown A	-2.8	-10.3
Goose A	-11.9	-20.9
St John's A	-0.1	-6.4

### Weekly temperature and precipitation extremes

	Maximum temperature (°C)	Minimum temperature (°C)	Greatest precipitation (mm)
<b>British Columbia</b> . . . . .	Victoria Int'l A 9	Puntzi Mountain (aut) -37	Comox A 24
<b>Yukon Territory</b> . . . . .	Shingle Point A -2	Faro (aut) -35	Watson Lake A 1
<b>Northwest Territories</b> . . . . .	Inuvik A 3	Eureka -45	Rankin Inlet A 1
<b>Alberta</b> . . . . .	Calgary A 2	Fort Chipewyan A -37	Edmonton Int'l A 2
<b>Saskatchewan</b> . . . . .	Swift Current A -7	La Ronge A -37	Broadview 3
<b>Manitoba</b> . . . . .	Dauphin A -9	Thompson A -37	Gillam A 6
<b>Ontario</b> . . . . .	Toronto (City) 1	Armstrong (aut) -36	Warton A 33
<b>Quebec</b> . . . . .	Montréal A -2	Schefferville A -40	Blanc Sablon A 29
			Québec A 29
<b>New Brunswick</b> . . . . .	Saint John A 9	St-Léonard A -24	Saint John A 61
<b>Nova Scotia</b> . . . . .	Greenwood A 13	Truro -14	Truro 51
<b>Prince Edward Island</b> . . . . .	Charlottetown A 8	Charlottetown A -16	Charlottetown A 39
<b>Newfoundland and Labrador</b> . . . . .	Argentia A 11	Wabush Lake A -40	St Lawrence 85

#### Across The Country...

<b>Highest Mean Temperature</b> . . . . .	Cape St James (B.C.) 7
<b>Lowest Mean Temperature</b> . . . . .	Eureka (N.W.T.) -39

95/01/02-95/01/08



**CLIMATIC PERSPECTIVES  
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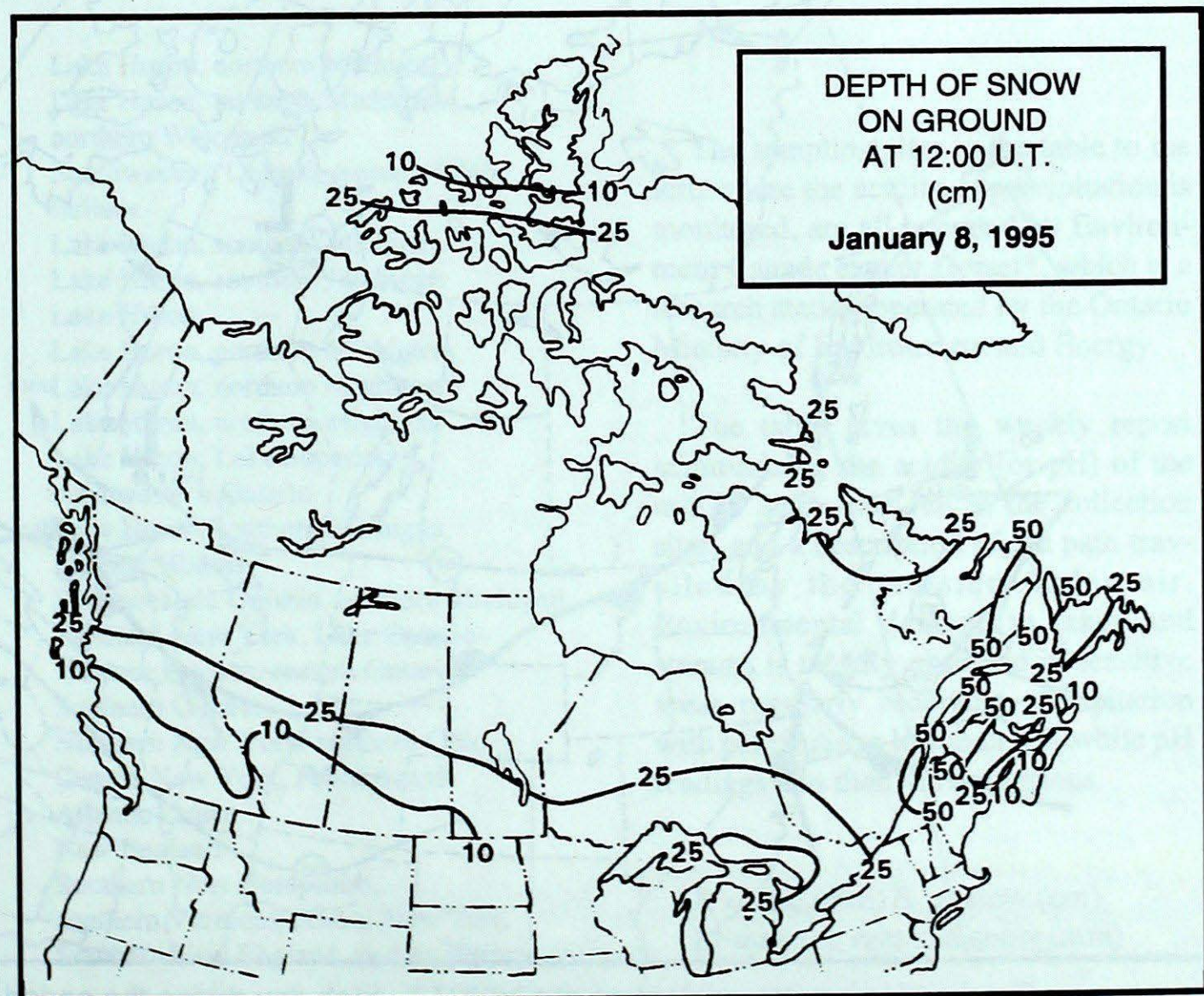
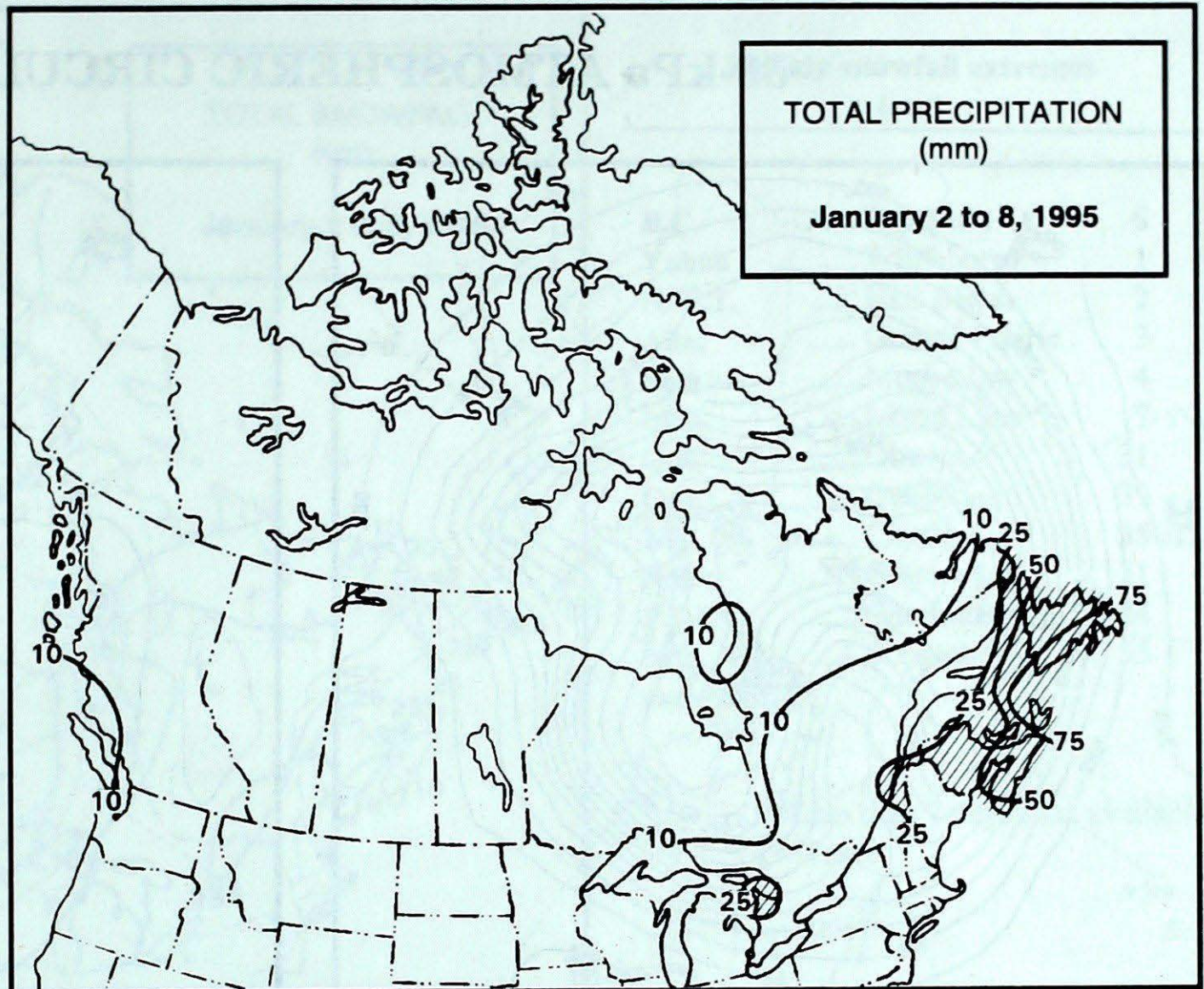
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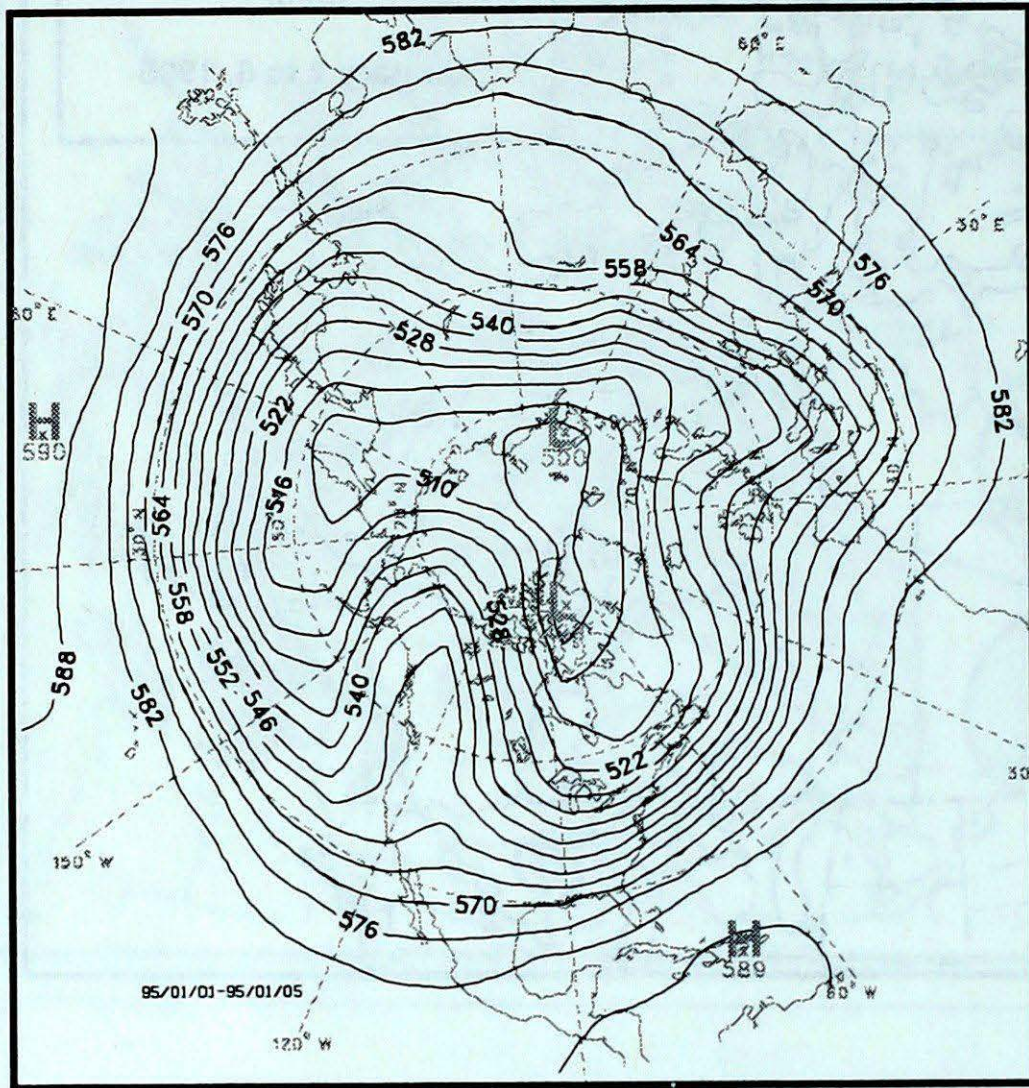
The purpose of the publication is to make topical information available to the public concerning the Canadian climate and its socio-economic impact.

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 Atmospheric Environment Service.

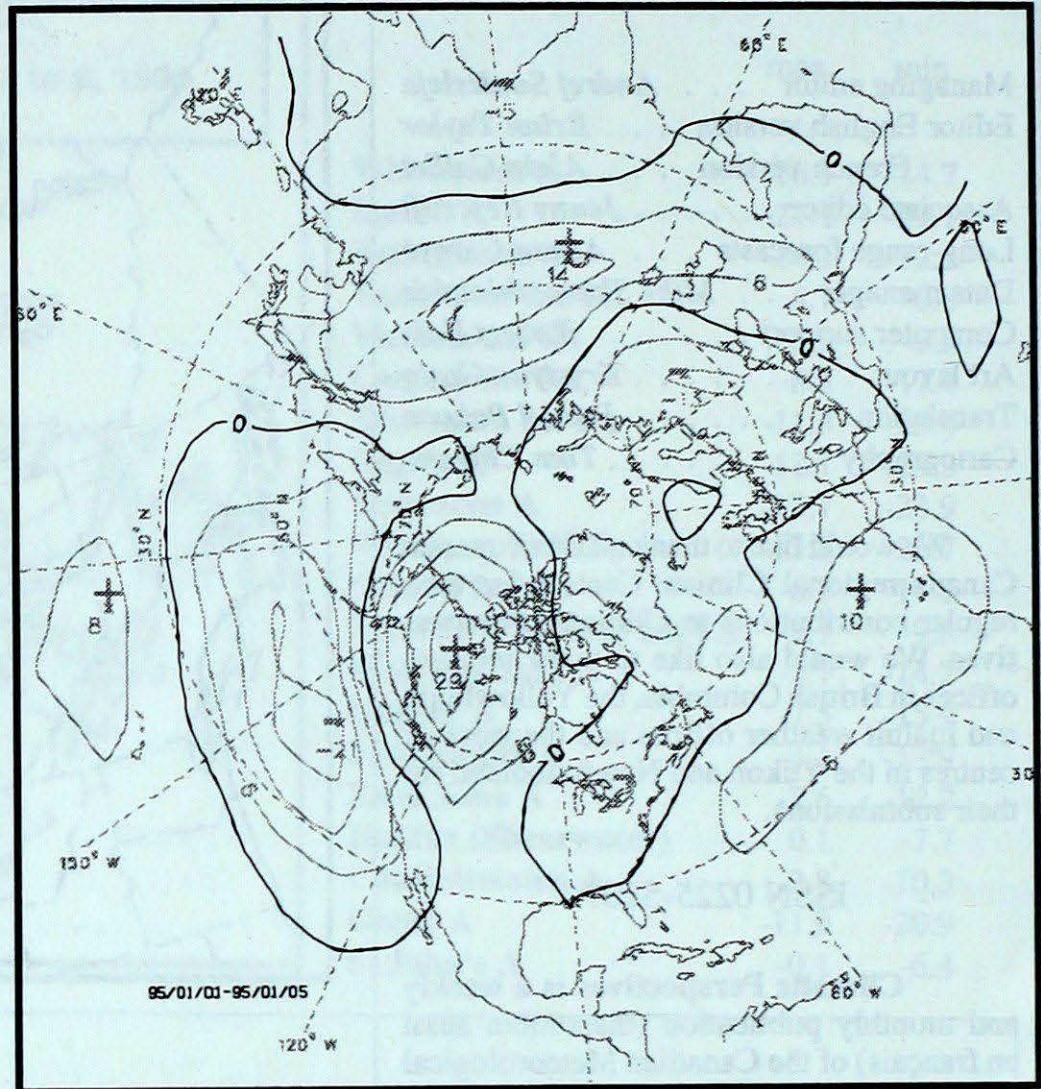




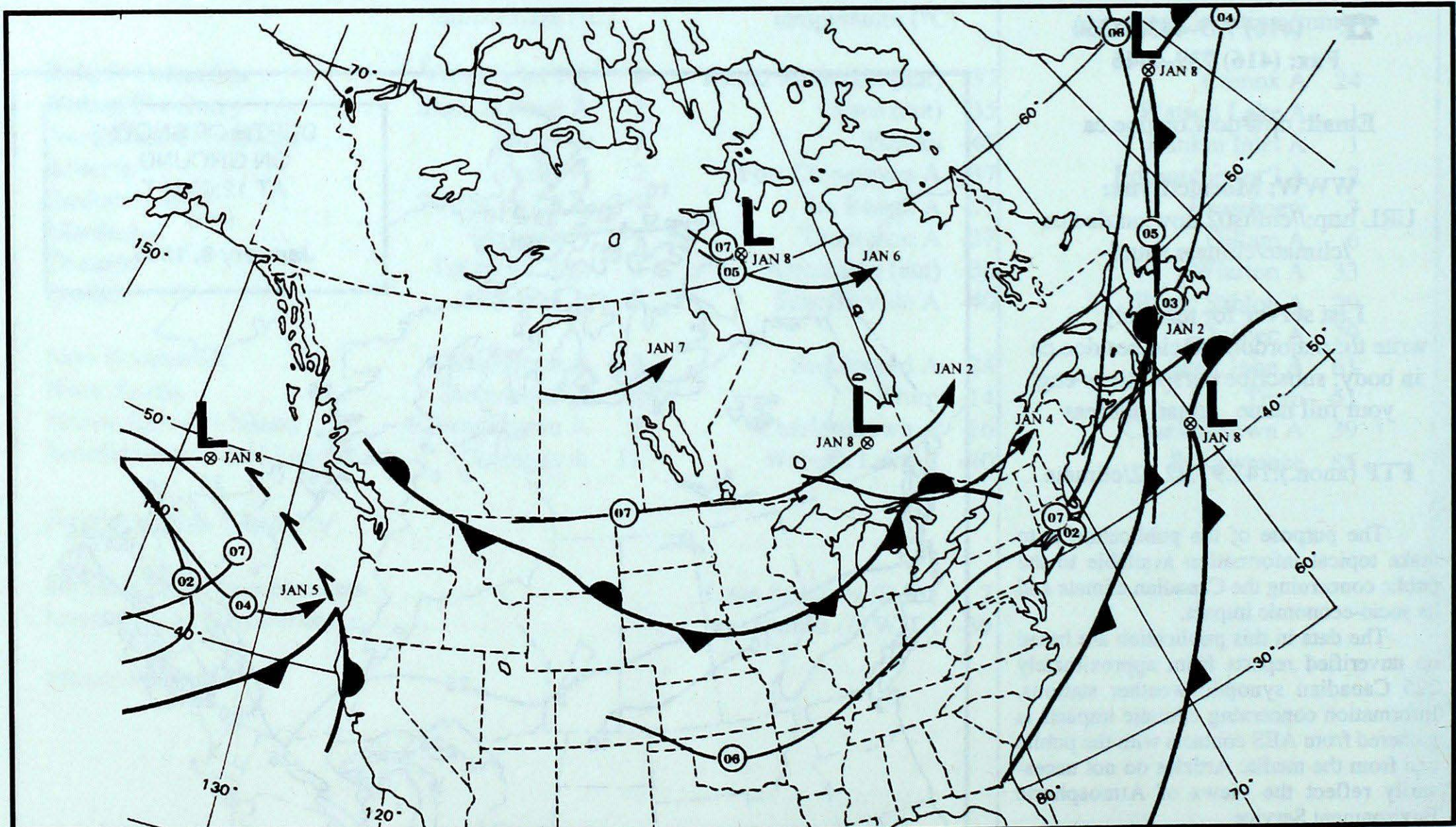
# 50-kPa ATMOSPHERIC CIRCULATION



Mean geopotential height  
50-kPa level (6-decametre intervals)

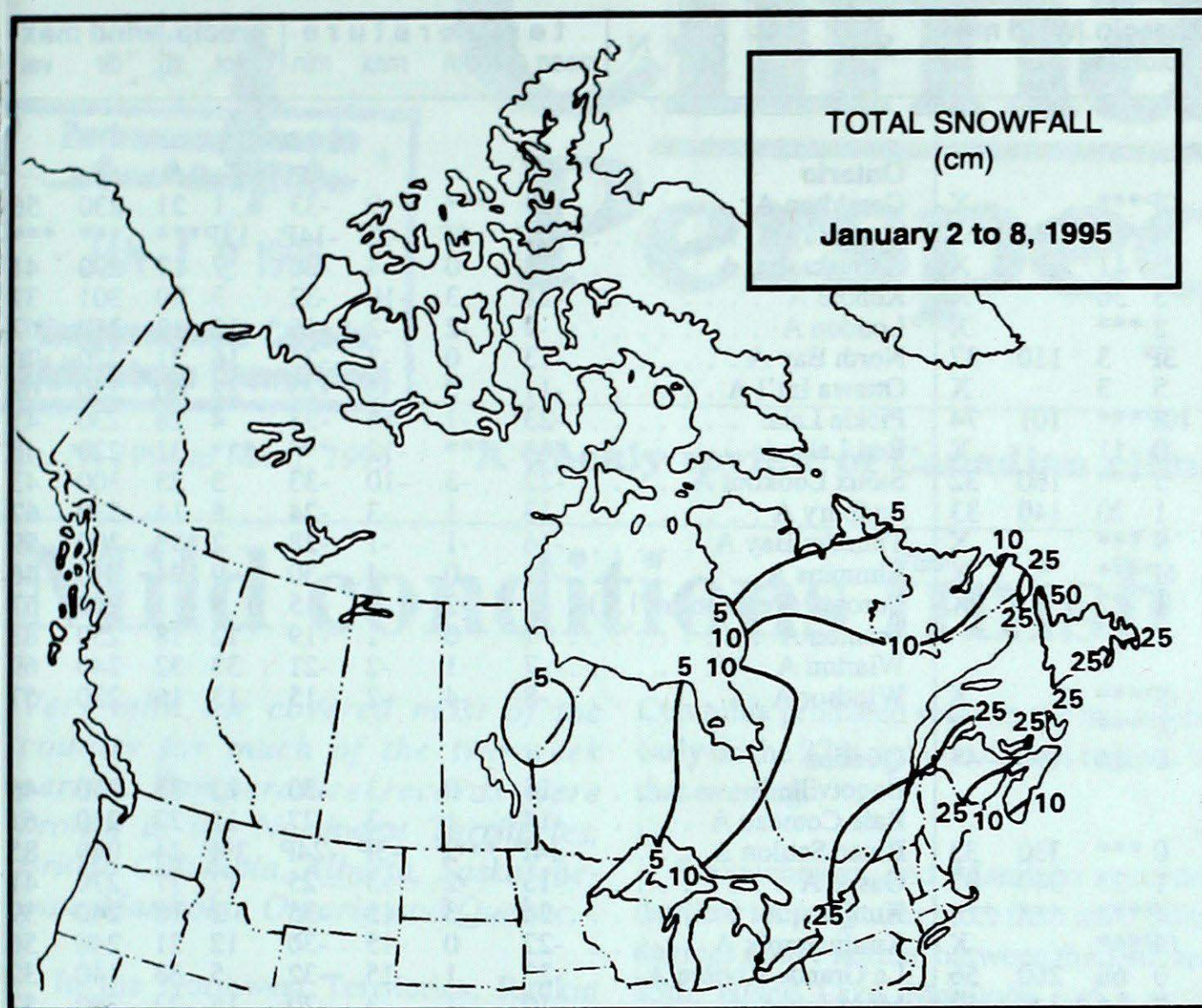


Mean geopotential height anomaly  
50-kPa level (6-decametre intervals)



Tracks of low pressure centres at 12:00 U.T. each day during the period. Fronts depicted on last day.





**Weekly snowfall extremes  
(cm)**

B.C.	..... Penticton	8
Yukon	..... Whitehorse	1
N.W.T.	..... Hall Beach	2
Alta.	..... Grande Prairie	3
Sask.	..... Moose Jaw	4
Man.	..... Island Lake	7
Ont.	..... Ottawa	31
Que.	..... Québec	39
N.B.	..... Charlo	35
N.S.	..... Greenwood	21
P.E.I.	..... Charlottetown	24
Nfld.	..... St. Anthony	55
and Lab.		

P=Less than 7 days data available  
Tr=Trace

**ACID RAIN REPORT**

Site	Day	pH	Amount	Air Path To Site	December 27, 1994 to Jan. 7, 1995
Egbert, Ont.	1	4.4	2 S	Lake Huron, northern Michigan	<p>The sampling sites in the table to the left, where the acidity of precipitation is monitored, are all operated by Environment Canada except Dorset*, which is a research station operated by the Ontario Ministry of Environment and Energy.</p> <p>The table gives the weekly report summarizing the acidity (or pH) of the 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.</p>
	4	4.9	5 S	Lake Huron, northern Michigan, northern Wisconsin	
	6	4.8	10 S	Southwestern Ontario, western Ohio, Indiana	
Dorset*, Ont.	27	4.1	1 M	Lake Huron, southern Michigan	
	28	4.1	1 M	Lake Huron, southern Michigan	
	1	4.5	4 S	Lake Huron	
	2	4.5	5 S	Lake Huron, northern Michigan	
	3	4.9	6 S	Lake Huron, northern Michigan	
	4	4.8	15 S	Lake Huron, northern Michigan	
	5	5.1	4 S	Lake Huron, Lake Superior, northwestern Ontario	
Sutton, Que.	6	4.8	10 S	Lake Huron, southern Michigan, Indiana, Illinois	
	7	4.7	6 S	Southwestern Ontario, southern Michigan	
	1	4.7	5 S	Northern New York, Lake Ontario	
	2	4.5	7 S	Western Quebec, eastern Ontario	
	3	4.3	7 S	Southern Ontario	
Kejimkujik, N.S.	6	4.5	11 S	Northern New York, northern Ohio	
	7	4.5	1 S	Central New York, Pennsylvania	
	1	5.0	18 M	Atlantic Ocean	
	2	4.1	8 S	New England	
	3	4.1	3 S	Southern New Hampshire, southern Vermont, central New York	
	4	4.2	6 S	Southern New England, eastern Pennsylvania	

R = rain (mm) S = snow (cm)  
M = mixed rain and snow (mm)



STATION | temperature | precip. | wind max | STATION | temperature | precip. | wind max  
 mean anom max min | ptot st | dir vel | mean anom max min | ptot st | dir vel

British Columbia							
Blue River A	-23P	-7P	-14P	-30P	0P***		X
Comox A	0	-2	8	-6	24 ***	130	63
Cranbrook A	-18	-4	-10	-27	5 11		X
Fort Nelson A	-22	2	-12	-32	3 36		X
Fort St John A	-20	-3	-11	-29	2 ***		X
Kamloops A	-10P	-3P	-5P	-13P	3P 3	110	37
Penticton A	-6	-3	0	-12	5 3		X
Port Hardy A	3P	0P	8P	-4P	10P***	101	74
Prince George A	-21	-9	-13	-27	0 11		X
Prince Rupert A	-2	-1	8	-10	5 ***	160	32
Smithers A	-18	-7	-11	-26	1 20	140	33
Vancouver Int'l A	0	-2	8	-6	9 ***		X
Victoria Int'l A	2P	-1P	9P	-4P	6P***		X
Williams Lake A	-20	-8	-3	-27	1 22		X
Yukon Territory							
Teslin (aut)	-29P	***P	-24P	-33P	0P***		X
Watson Lake A	-27P	-2P	-20P	-35P	0P***		X
Whitehorse A	-25	-5	-15	-34	0 14	190	48
Northwest Territories							
Alert	-34	-1	-25	-39	0 ***	330	33
Baker Lake A	-30	2	-16	-39	1 23	340	87
Cambridge Bay A	-32P	0P	-22P	-39P	0P***	***	***
Clyde A	-26P	1P	0P	-36P	0P***		X
Coppermine A	-23	2	-7	-38	0 68	260	56
Coral Harbour A	-31	-2	-18	-38	0 16	340	52
Eureka	-39	-3	-29	-45	0 9		X
Fort Smith A	-23P	3P	-12P	-32P	0P 33		X
Hall Beach A	-35	-6	-18	-40	1 42	050	57
Inuvik A	-20	9	-3	-35	0 40	160	46
Iqaluit A	-25	0	-14	-36	1 24		X
Mould Bay A	-29P	4P	-16P	-34P	0P***	***	***
Norman Wells A	-20	9	-6	-37	0 ***	280	37
Resolute A	-33	-2	-27	-40	0 49	360	57
Yellowknife A	-27	1	-12	-39	1 21	340	56
Alberta							
Calgary Int'l A	-15	-3	2	-23	1 5		X
Cold Lake A	-17	2	-12	-28	0 24	330	35
Edmonton Namao A	-18	-2	-9	-27	0 17	150	33
Fort McMurray A	-18	3	-13	-27	1 17		X
Grande Prairie A	-23	-6	-14	-32	1 37		X
High Level A	-18	6	-12	-29	1 25		X
Lethbridge A	-18P	-8P	-2P	-30P	0P***		X
Medicine Hat A	-17	-4	-4	-26	0 ***	230	37
Peace River A	-20P	0P	-12P	-28P	0P 16		X
Saskatchewan							
Estevan A	-20	-4	-12	-31	0 10	350	59
La Ronge A	-23	2	-13	-37	1 35	300	48
Regina A	-18	-1	-11	-29	1 9	350	61
Saskatoon A	-19	0	-11	-31	2 ***	330	41
Swift Current A	-18P	-3P	0P	-26P	0P***	***	***
Yorkton A	-20	-1	-12	-31	1 20	320	56
Manitoba							
Brandon A	-20	-1	-11	-31	1 9	300	50
Churchill A	-25	2	-14	-35	1 ***	320	67
Lynn Lake A	-26	1	-15	-35	2 21	330	52
The Pas A	-24	-1	-14	-34	1 23	010	48
Thompson A	-25P	2P	-14P	-37P	2P 28	330	46
Winnipeg Int'l A	-21	-2	-11	-31	1 16	190	56

Ontario							
Geraldton A	-20	***	-9	-33	1 21	230	56
Gore Bay A	-7P	2P	-2P	-14P	13P***	***	***
Kapuskasing A	-18	0	-4	-30	7 17	290	41
Kenora A	-21	-3	-10	-32	3 20	301	37
London A	-9	-2	-2	-16	12 12	210	67
North Bay A	-13	0	-3	-23	16 21	270	70
Ottawa Int'l A	-11	0	-3	-23	22 40	230	67
Pickle Lake	-23	-1	-14	-33	4 28	230	41
Red Lake A	***	***	-12	***	*** 31	220	48
Sioux Lookout A	-22	-3	-10	-33	3 25	300	43
Sudbury A	-13	1	-3	-24	8 14	230	67
Thunder Bay A	-16	-1	-1	-28	2 ***	300	59
Timmins A	-17	0	-4	-30	9 24	240	46
Toronto (Pearson Int'l A)	-8	-2	-1	-15	9 11	240	67
Trenton A	-7	0	1	-19	12 18	250	83
Warton A	-7	-1	-2	-21	33 32	240	69
Windsor A	-8	-4	-2	-15	13 16	220	57
Quebec							
Bagotville A	-15	0	-3	-30	13 33	250	46
Baie Comeau A	-14	1	-3	-27	11 27	210	61
Blanc Sablon A	-14P	***P	-3P	-24P	29P 24	040	85
Gaspé A	-13	-2	-3	-25	17 77	270	41
Kuujuuaq A	-26	-3	-15	-35	2 18	240	39
Kuujuarapik A	-22	0	-15	-30	12 21	240	56
La Grande Rivière A	-23	1	-15	-32	5 33	140	32
Mont Joli A	-10	1	-3	-20	15 22	280	52
Montréal Int'l A	-9P	1P	-2P	-21P	0P***	230	61
Natashquan A	-16	-5	-3	-29	15 66	230	54
Québec A	-11	1	-3	-26	29 62	240	57
Schefferville A	-28P	-5P	-18P	-40P	0P***		X
Sept-Îles A	-16	-3	-3	-29	7 23	230	43
Sherbrooke A	-11P	0P	0P	-22P	5P***	***	***
Val-d'Or A	-17	0	-3	-33	8 20	240	44
New Brunswick							
Fredericton A	-8	1	0	-19	36 29	280	59
Miscou Island (aut)	-8P	1P	-2P	-18P	0P***		X
Moncton A	-7	1	3	-19	48 28	250	56
Saint John A	-7	1	9	-23	61 3	200	95
St Leonard A	-12	***	-4	-24	18 60		X
Nova Scotia							
Greenwood A	-3	2	13	-11	37 11	200	83
Shearwater A	-2	2	11	-11	42 ***	210	83
Sydney A	***	***	11	***	*** 3	200	95
Yarmouth A	0	2	10	-9	32 3	190	65
Prince Edward Island							
Charlottetown A	-5	1	8	-16	39 30	180	67
East Point (auto)	-4	***	7	-16	0 ***		X
Newfoundland and Labrador							
Cartwright	-18	-5	-11	-27	7 87	340	56
Churchill Falls A	-25	-4	0	-36	0 ***		X
Gander Int'l A	-5	1	8	-17	56 38	190	111
Goose A	-24P	-8P	-16P	-33P	0P 29	250	44
Stephenville A	-5	0	7	-11	72 37	210	95
St John's A	-2	1	10	-15	70 21	210	113
St Lawrence	-1	2	8	-15	85 6		X
Wabush Lake A	-28	-5	-17	-40	2 43		X

95/01/02-95/01/08

mean = mean weekly temperature, °C  
 max = maximum weekly temperature, °C  
 min = minimum weekly temperature, °C  
 anom = mean temperature anomaly, °C  
 ptot = weekly precipitation total in mm  
 st = snow thickness on the ground in cm  
 dir = direction of max wind, deg. from north  
 vel = wind speed in km/h  
 — Annotations —  
 X = no observation  
 P = less than 7 days of data  
 \* = missing data when going to printing.