Weekly

Climatic Perspectives

January 23 to 29, 1995 | **A weekly review of Canadian climate and water** | Vol. 17 No. 5

Snowy week in Newfoundland

For the second week in a row, Gander and Deer Lake had record-daily snowfalls.

Snow began in western Newfoundland on the 23rd and moved slowly eastwards. Another intense disturbance moved up from the south on the 25th, giving more than 30 cm of snow to eastern areas. Daily snowfall records of 18 to 34 cm were set at Deer Lake, January 23; St. John's, January 23/24 and Gander, January 24/25. Snowfall totals, January 23-25, were 78 cm at Gander, 59 cm at La Scie and 56 cm at St. John's. Under an area of high pressure, Labrador was cold at the beginning of the week but moderated by midweek. An onshore flow in northern Labrador gave 20 cm of snow to Nain, on the 26th.

Change to cold in Maritimes

The week began mild in the Maritimes but turned cold on the 25th. Near-record cold on the 27th included -26.5°C at Bathurst, New Brunswick. Weekly precipitation totals were as low as 0.8 mm at Westernhead, Nova Scotia. Influenced by the Gulf of St. Lawrence, Charlottetown, P.E.I., recorded 32 cm of snow.

Mostly mild

After a clear start, the southern Yukon experienced cloudy conditions and temperatures near ten degrees above normal. In the west and far north, clear and cold conditions dominated. However, a major Pacific storm moved over the Yukon at the end of the week giving coastal areas 10 to 20 cm of snow and blizzard conditions to the far north.

Temperatures under generally cloudy skies, averaged 10 to 15 degrees above normal in the southern Mackenzie, extending the milder-than-normal weather to seven weeks. The Mackenzie Delta was three degrees above normal. Mild air extended through the District of Keewatin and Baffin Island. Blizzard warnings in the Territories were infrequent - only being issued on the 24th, along the west coast of Hudson Bay.

Mild conditions encouraged trees to bud in Victoria: 13.1°C was recorded on the 29th (old record 12.2°C, 1960). A series of frontal systems over the weekend gave periods of rain to Port Hardy (41.6 mm, January 29). The central and southern interior continued cloudy. To the 29th, Prince George had recorded only 7.1 hours of sun for the month (record monthly low 21.7 hours, 1992). Localised flooding occurred throughout Kamloops on the 29th due to a temperature of 10.1°C which caused a quick snow melt.

A ridge of high pressure provided mainly sunny skies over southern and central Alberta, but the north was cloudy. Temperatures ranged from five degrees above normal, in the southeast, to 15 degrees above normal in the northeast. Chinook winds pushed temperatures into the teens in the south on the 29th. Skiers were disheartened by the mild weather and the fact that almost no snow has fallen over the last two weeks.

Cold arctic air over Saskatchewan and Manitoba was replaced by mild conditions, midweek. Eastern areas that started the week at -30 to -20°C came close to 0°C by the weekend. Several sites in the north set new daily-high minimum temperature records as thermometers stayed above -15°C.

Southern Ontario finally saw the sun on the 27th, after 17 days of cloud. Temperatures were slightly above normal in southern and northeastern Ontario but six to eight degrees above normal along the Manitoba border. The mild winter and January rain have made for dangerous ice conditions on lakes and rivers in central areas of the province. Several snowmobilers have died as a result of crashing through thin ice.

Temperatures were above normal in most of Quebec. Slightly-below normal temperatures were recorded in the Eastern Townships, Gaspé Peninsula and the lower North Shore. Gaspé received 14.6 cm of snow on the 23rd, but sunshine returned for a weekly total of 31.7 hours.

A Look Ahead...

For the week of February 6, above-normal temperatures are expected across the Prairies and the central Northwest Territories. Below-normal temperatures are forecast for coastal British Columbia, northern Quebec and Baffin Island. Elsewhere, temperatures will be near normal. Significant precipitation is expected for southern and coastal B.C. and eastern Newfoundland.

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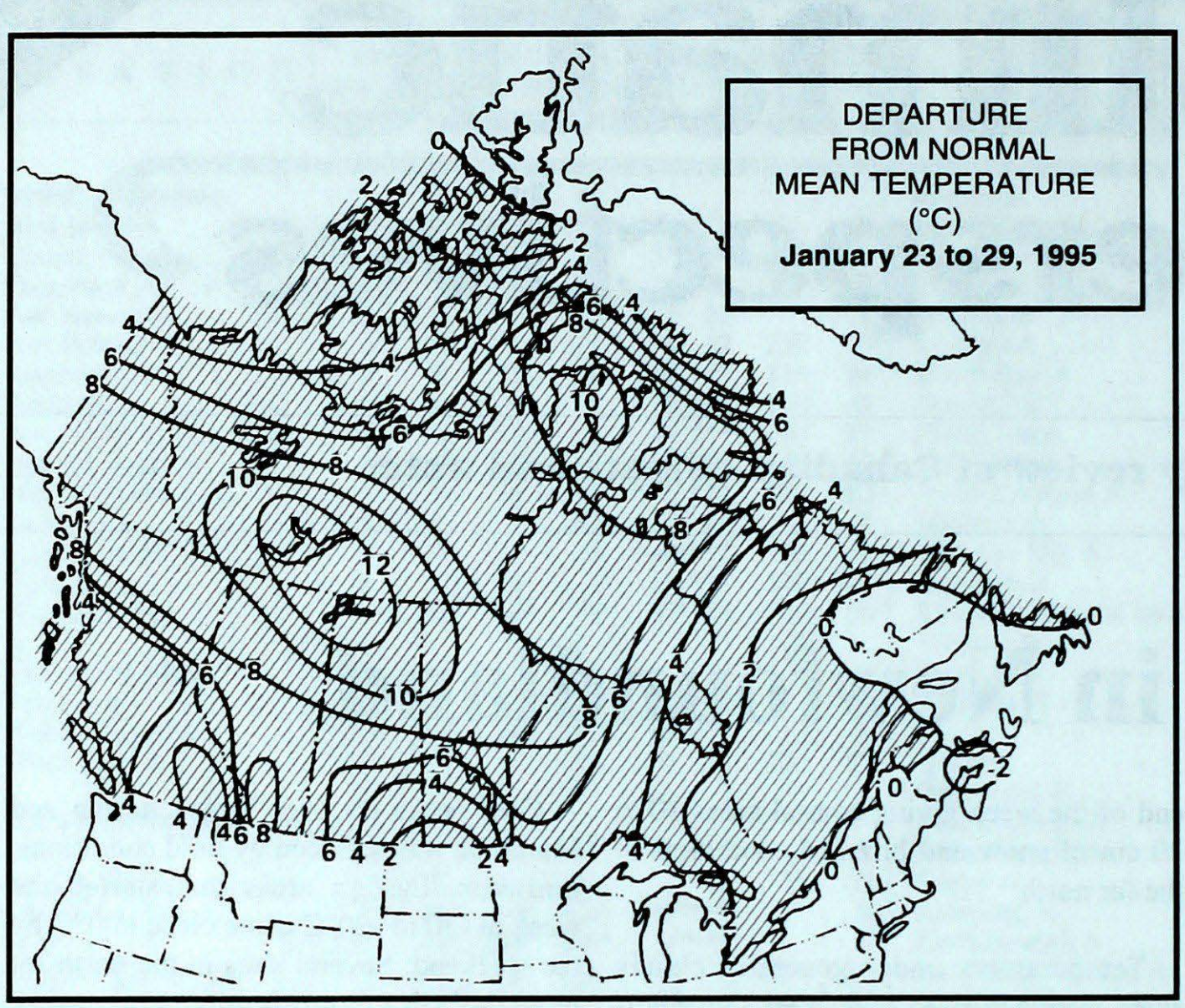
Canada



Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	-16.3	-25.2
Iqaluit A	-21.6	-30.2
Yellowknife A	-25.5	-33.7
Vancouver Int'l A	5.2	-0.5
Victoria Int'l A	5.8	-0.3
Calgary Int'l A	-6.5	-18.0
Edmonton Int'l A	-10.9	-22.1
Regina A	-13.9	-24.3
Saskatoon A	-15.4	-25.6
Winnipeg Int'l A	-15.0	-25.0
Ottawa Int'l A	-5.7	-14.3
Toronto Int'l A	-2.5	-10.6
Montréal Int'l A	-4.9	-13.3
Québec A	-6.9	-15.4
Fredericton A	-2.5	-13.1
Saint John A	-1.4	-11.5
Halifax (Shearwater)	0.5	-7.0
Charlottetown A	-2.4	-10.2
Goose A	-11.3	-20.6
St John's A	-0.5	-7.2

Weekly temperature and precipitation extremes

	Maximum temperature (°C)		Minimum temperature (°C)		Greatest precipitation (mm)	
British Columbia	Abbotsford A	14	Puntzi Mountain (aut)	-27	Port Alberni A	106
Yukon Territory	Drury Creek	6	Old Crow	-47	Stewart Crossing	11
Northwest Territories	Fort Smith A	-3	Eureka	-45	Coral Harbour A	9
Alberta	Calgary Int'l A	11	Grande Prairie A	-27	Calgary Int'l A	1
an	North Battleford A	4	Cree Lake	-27	Swift Current A	6
Manitoba	Lynn Lake A	-2	Norway House A	-35	Gillam A	6
Ontario	Windsor A	1	Geraldton A	-33	Gore Bay A	10
Quebec	Blanc Sablon A	-1	La Grande IV A	-37	Gaspé A	19
New Brunswick	Saint John A	1	St Leonard A	-22	Moncton A	17
Nova Scotia	Sable Island	4	Amherst (aut)	-19	Greenwood A	9
Prince Edward Island	Charlottetown A	1	Charlottetown A	-22	Charlottetown A	26
Newfoundland and Labrador	Burgeo	3	Churchill Falls A	-33	Gander Int'l A	90

Across The Country...

Highest Mean Temperature	Cape St James (B.C.)	8
Lowest Mean Temperature	Eureka (N.W.T.)	-38

95/01/23-95/01/29

CLIMATIC PERSPECTIVES
VOLUME 17

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We would like to thank all Environment Canada regional Climate Centres for their regular contributions to **Climatic Perspectives**. We would also like to thank weather offices in British Columbia, the Yellowknife and Iqaluit weather offices and the weather centres in the Yukon and Newfoundland for their submissions.

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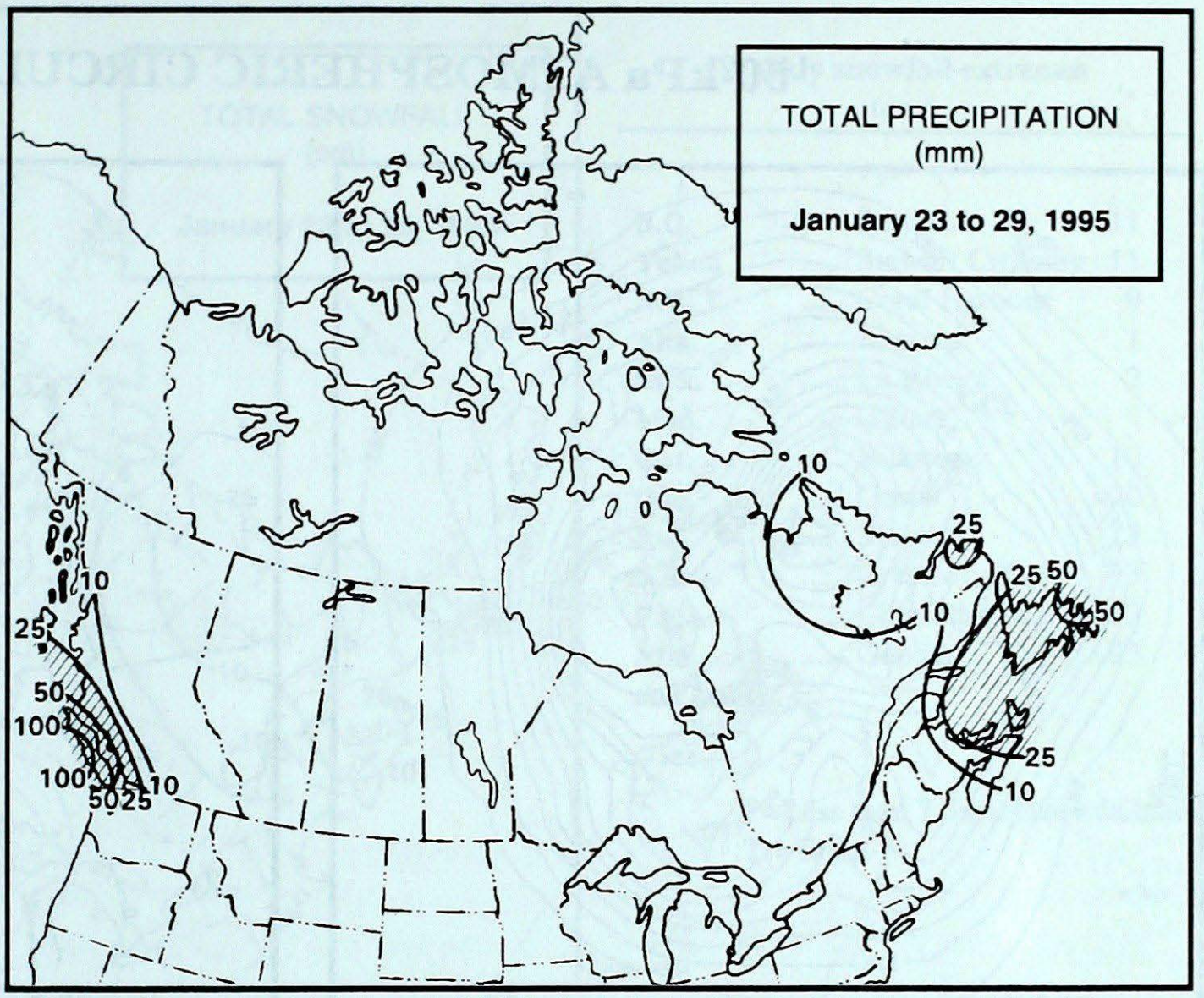
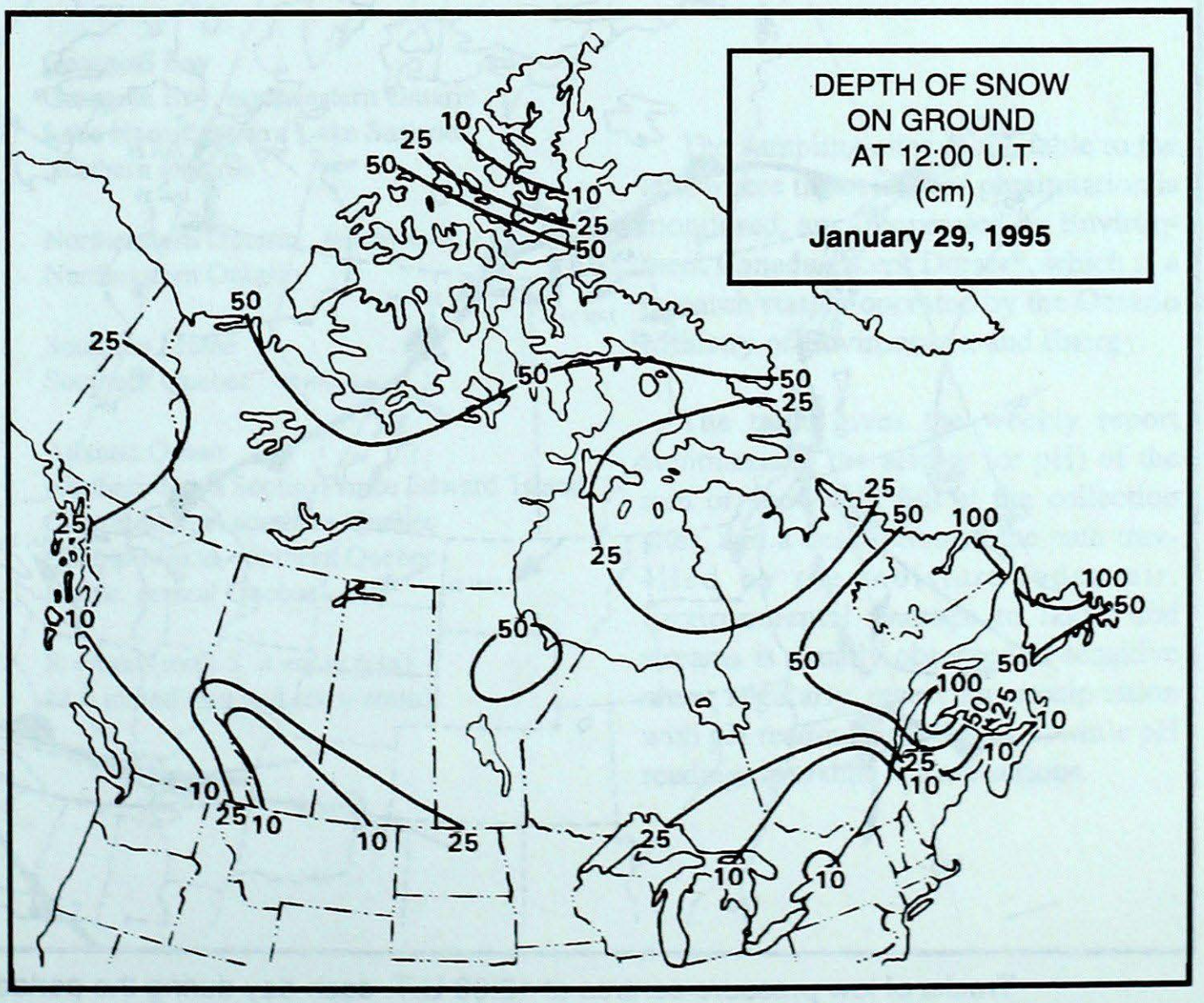
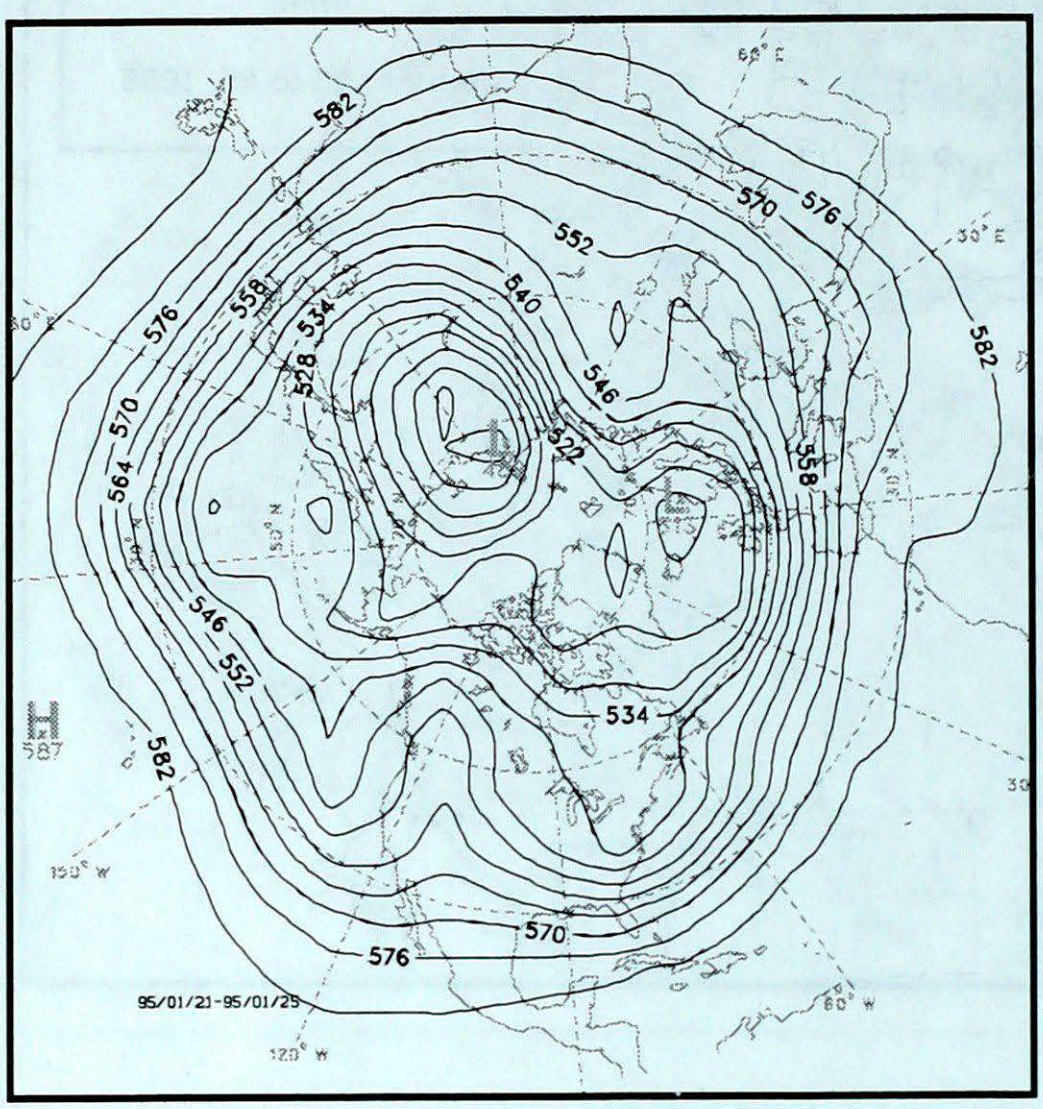
The purpose of the publication is to make topical information available to the public concerning the Canadian climate and its socio-economic impact.

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.

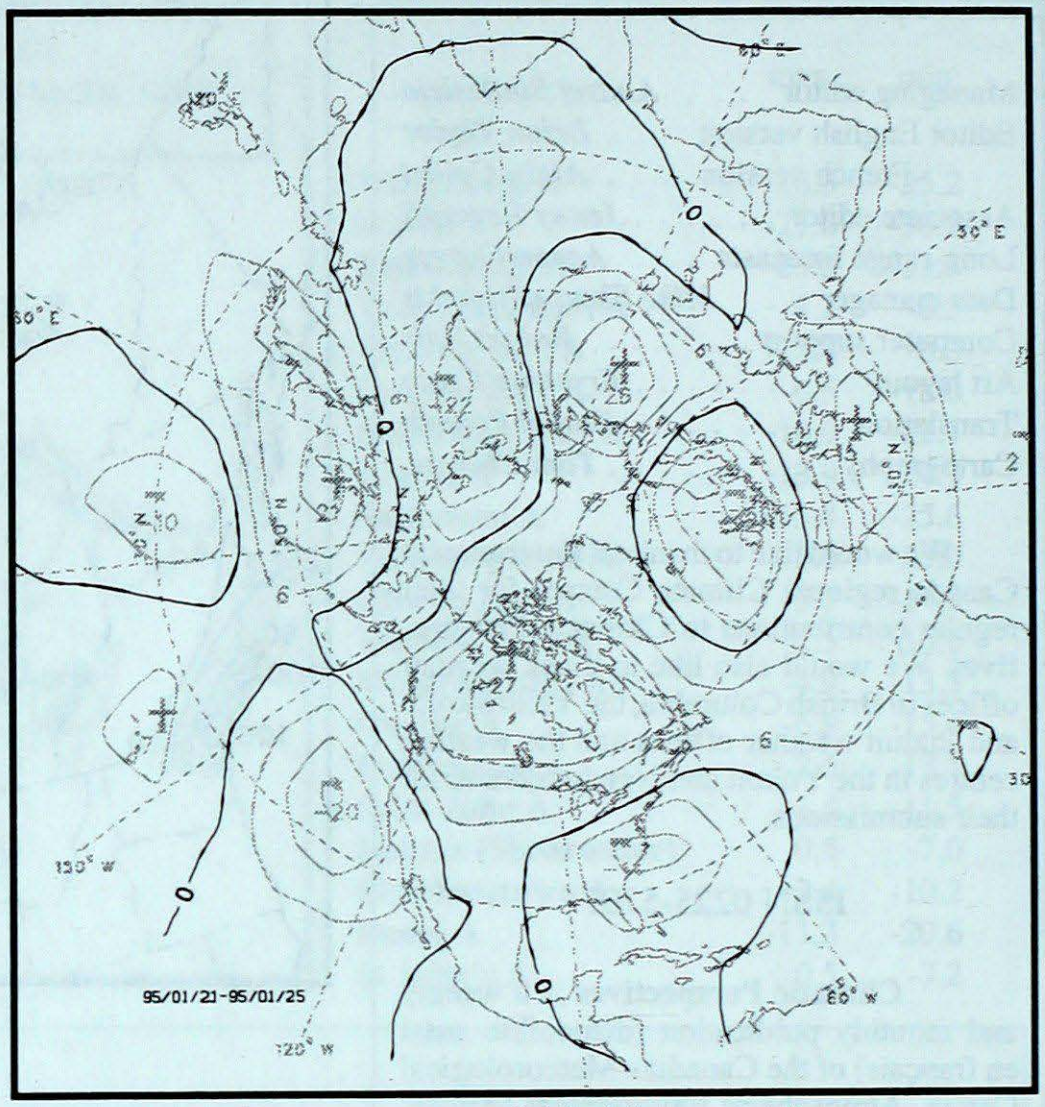




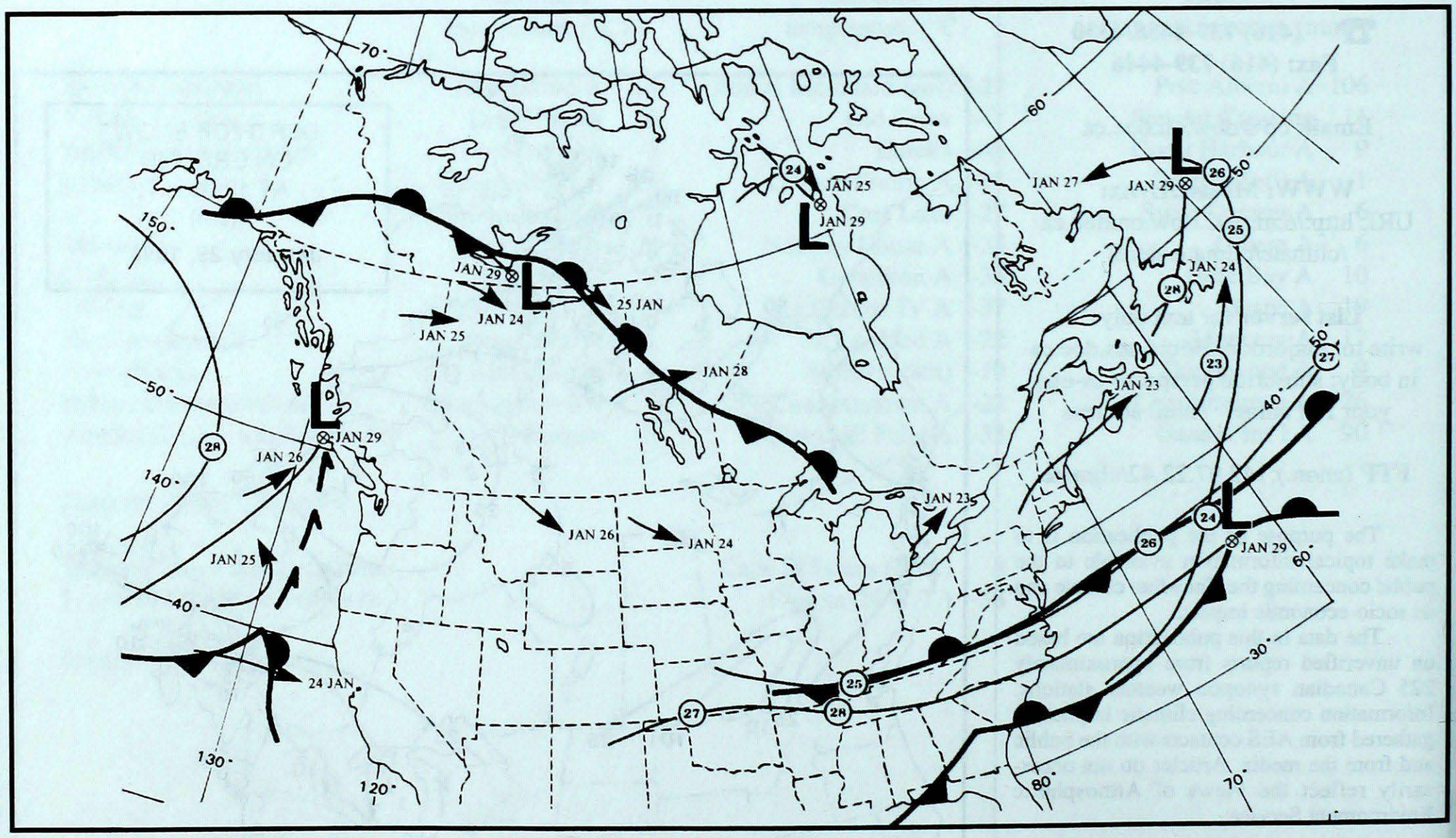
50-kPa ATMOSPHERIC CIRCULATION



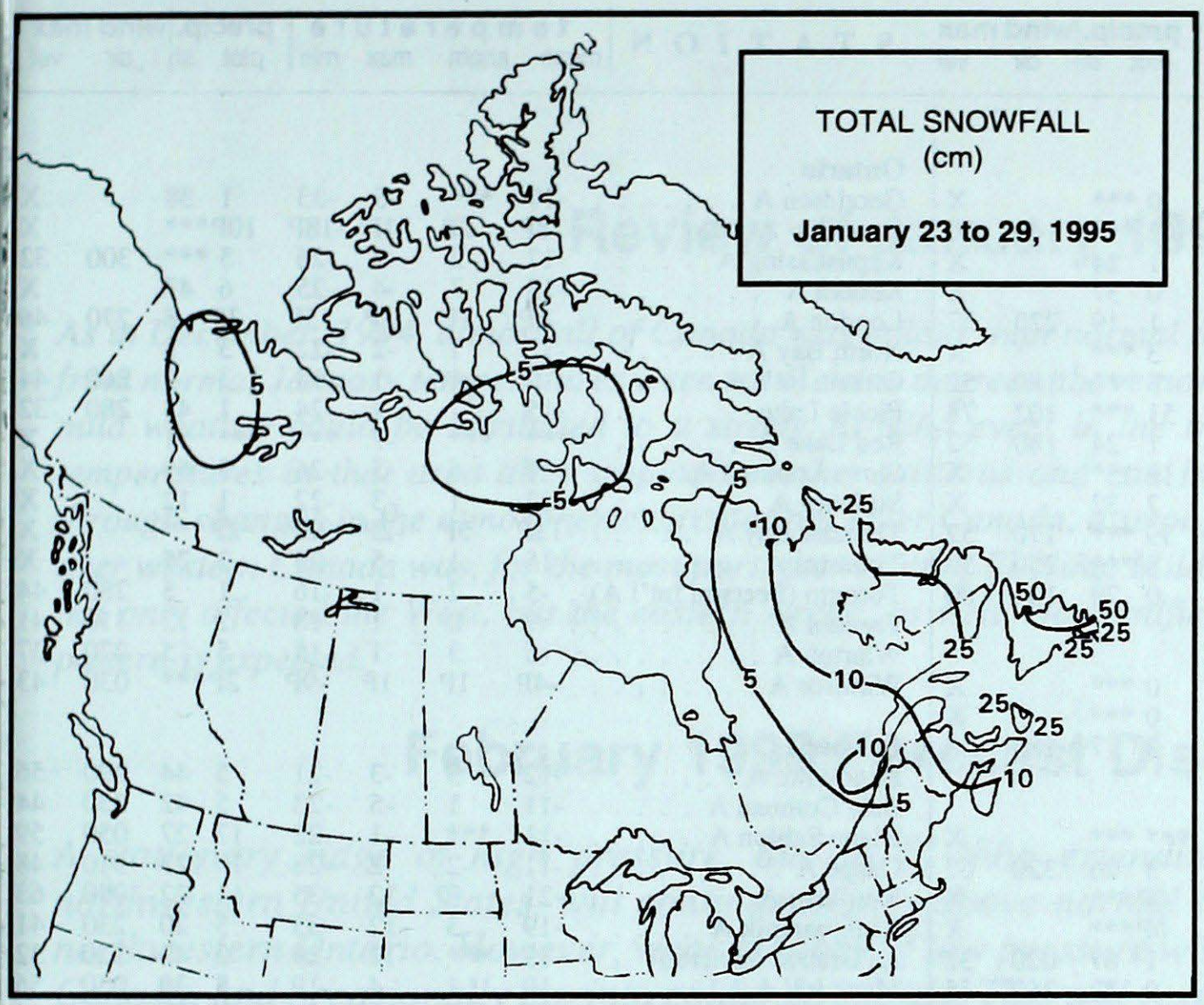
Mean geopotential height
50-kPa level (6-decametre intervals)



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.	..... Terrace	11
Yukon	..... Stewart Crossing	11
N.W.T.	..... Coral Harbour	9
Alta.	..... Jasper	1
Sask.	..... La Ronge	2
Man.	..... Gillam	9
Ont.	..... Wiarton	10
Que.	..... Gaspé	20
N.B.	..... Moncton	23
N.S.	..... Greenwood	13
P.E.I.	..... Charlottetown	33
Nfld. and Lab.	..... Gander	93

P=Less than 7 days data available
Tr=Trace

ACID RAIN REPORT

January 22 to 28, 1995

Site	Day	pH	Amount		Air Path To Site
Egbert, Ont.	22	5.5	1	S	Georgian Bay
	24	4.6	1	S	Georgian Bay, northeastern Ontario
	25	4.6	1	S	Lake Huron, eastern Lake Superior
	26	4.7	1	S	Northern Ontario
Dorset*, Ont.	22	4.7	1	S	Northeastern Ontario, northwestern Quebec
	23	4.3	1	S	Northeastern Ontario
Sutton, Que.	22	4.7	4	S	Southern Maine
	24	4.8	1	S	Southern Quebec
Kejimkujik, N.S.	22	4.5	1	S	Atlantic Ocean
	24	4.5	1	S	Northern Nova Scotia, Prince Edward Island
	26	4.1	1	S	Central Maine, southern Quebec
	27	4.8	10	S	Central Maine, southern Quebec
	28	4.6	2	S	Maine, central Quebec

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

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.

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.

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
British Columbia								
Blue River A	-8	0	0	-25	0	***		X
Comox A	5	3	12	-2	62	***	140	70
Cranbrook A	-6	3	2	-15	1	24		X
Fort Nelson A	-14	9	-7	-22	0	37		X
Fort St John A	-11	7	4	-19	1	19	220	37
Kamloops A	-1	6	10	-7	3	***		X
Penticton A	1	4	7	-4	3	***	180	52
Port Hardy A	5	3	11	-2	51	***	102	78
Prince George A	-9	3	7	-21	1	24	180	52
Prince Rupert A	3	4	12	-5	18	***		X
Smithers A	-7	4	2	-15	7	32		X
Vancouver Int'l A	6	4	12	-1	39	***	170	52
Victoria Int'l A	6	3	13	0	8	***	250	57
Williams Lake A	-7	3	6	-19	0	29	130	80
Yukon Territory								
Teslin (aut)	-12	***	0	-19	0	***		X
Watson Lake A	-18	9	-12	-27	0	***		X
Whitehorse A	-11	10	1	-24	3	17	180	48
Northwest Territories								
Alert	***	***	***	***	***	***		X
Baker Lake A	-26	8	-15	-33	3	26	320	67
Cambridge Bay A	-30P	4P	-23P	-34P	0P	***		X
Clyde A	-24P	2P	-20P	-31P	0P	***		X
Coppermine A	-23	3	-18	-32	1	67	020	32
Coral Harbour A	-22	8	-15	-33	9	22	360	35
Eureka	-38	-2	-23	-45	0	9		X
Fort Smith A	-11P	17P	-3P	-20P	2P	***		X
Hall Beach A	-20	12	-13	-31	4	40	190	39
Inuvik A	-24	3	-8	-38	4	40	360	35
Iqaluit A	-16	10	-9	-24	2	21	070	59
Mould Bay A	-30P	3P	-25P	-36P	0P	***	080	41
Norman Wells A	-21	7	-13	-28	4	27		X
Resolute A	-30	2	-21	-40	1	51	050	67
Yellowknife A	-15	15	-10	-20	1	27		X
Alberta								
Calgary Int'l A	-4	9	11	-16	1	3	250	41
Cold Lake A	-13	7	0	-23	0	26		X
Edmonton Namao A	-9	7	7	-20	1	16		X
Fort McMurray A	-12P	11P	-5P	-22P	1P	***		X
Grande Prairie A	-14	4	6	-27	1	39	230	50
High Level A	-15	7	-2	-23	0	26		X
Lethbridge A	-3	8	11	-16	0	***		X
Medicine Hat A	-9	5	7	-23	1	6	230	46
Peace River A	-13P	9P	4P	-20P	1P	***		X
Saskatchewan								
Estevan A	-17	1	-4	-27	0	21	210	46
La Ronge A	-15	8	-1	-23	1	40		X
Regina A	-15	4	-4	-23	0	20	120	41
Saskatoon A	-15	6	0	-24	1	***	180	48
Swift Current A	-10	6	2	-18	6	***	***	X
Yorkton A	-17	4	-5	-26	1	42	190	41
Manitoba								
Brandon A	-18	2	-11	-27	0	***		X
Churchill A	-21	7	-13	-31	2	***	340	50
Lynn Lake A	-16	11	-2	-31	1	24		X
The Pas A	-16	8	-4	-23	1	36	170	37
Thompson A	-18	9	-3	-32	4	43		X
Winnipeg Int'l A	-17	3	-7	-33	1	25	190	37

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
Ontario								
Geraldton A	-17	***	-5	-33	1	38		X
Gore Bay A	-8P	2P	-1P	-18P	10P	***		X
Kapuskasing A	-17	2	-4	-26	5	***	300	32
Kenora A	-13	7	-4	-25	6	47		X
London A	-6P	1P	1P	-15P	3P	8	270	46
North Bay A	-12	1	-2	-22	3	8		X
Ottawa Int'l A	-9	1	-1	-18	3	7	260	44
Pickle Lake	-15	7	-7	-24	1	43	280	32
Red Lake A	***	***	-7	***	***	51		X
Sioux Lookout A	-14	6	-5	-26	5	69		X
Sudbury A	-12	1	-3	-22	1	12		X
Thunder Bay A	-11P	5P	-2P	-22P	2P	***		X
Timmins A	-15	1	-5	-25	2	25		X
Toronto (Pearson Int'l A)	-5	2	1	-16	1	5	280	44
Trenton A	-7	0	1	-18	2	13	310	41
Wiarton A	-5	3	1	-15	5	5	270	37
Windsor A	-4P	1P	1P	-9P	2P	***	030	43
Quebec								
Bagotville A	-12	3	-3	-21	5	44	290	56
Baie Comeau A	-11	1	-5	-23	5	42	330	44
Blanc Sablon A	-11	***	-1	-22	17	27	050	59
Gaspé A	-11	-2	-2	-28	19	127	310	48
Kuujjuaq A	-21	3	-12	-35	11	22	040	63
Kuujjuarapik A	-19	3	-12	-33	5	20	230	41
La Grande Rivière A	-19	***	-12	-29	2	40	320	32
Mont Joli A	-10	1	-4	-19	8	30	050	56
Montréal Int'l A	-10	0	-2	-17	0	***	250	44
Natashquan A	-12	-1	-2	-24	7	75	260	48
Québec A	-11	1	-2	-19	2	56	300	57
Schefferville A	-22P	0P	-9P	-36P	1P	***		X
Sept-Îles A	-12	1	-4	-23	4	50	350	43
Sherbrooke A	-16P	***	-14P	-18P	0P	***		X
Val-d'Or A	-15	1	-4	-26	2	6		X
New Brunswick								
Fredericton A	-9	-1	0	-19	5	26	300	54
Miscou Island (aut)	-7P	2P	-2P	-17P	0P	***		X
Moncton A	-10	-3	0	-21	17	22	270	44
Saint John A	-9	-2	1	-18	4	8	310	46
St Leonard A	-11	***	-4	-22	3	51	310	44
Nova Scotia								
Greenwood A	-5	-1	3	-15	9	5	320	61
Shearwater A	-5	-2	2	-16	6	3	340	52
Sydney A	***	***	1	***	***	15	340	57
Yarmouth A	-4	-2	3	-13	3	5	300	59
Prince Edward Island								
Charlottetown A	-8	-2	1	-22	26	36	020	46
East Point (auto)	-6	***	0	-19	5	***		X
Newfoundland and Labrador								
Cartwright	-13	1	-4	-25	29	107	340	43
Churchill Falls A	-19	-1	0	-33	13	***	030	67
Gander Int'l A	-6	0	0	-15	90	133	330	74
Goose A	-17	-1	-7	-29	6	39	240	48
Stephenville A	-6	-1	1	-20	21	76	320	56
St John's A	-5	-1	0	-12	86	81	280	80
St Lawrence	-4	-1	1	-12	32	36		X
Wabush Lake A	-21	0	-9	-31	18	80	010	56

95/01/23-95/01/29

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.

Review of January 1995

As in December, 1994, almost all of Canada was milder than normal this month. The greatest departures from normal January temperatures were ten Celsius degrees above normal, across northern Ontario. The mild weather could be attributed to a strong El-Niño event in the tropical Pacific. Warm sea-surface temperatures in that area alter tropical weather patterns and can influence short-term global climate through changes in the atmospheric circulation. Over Canada, a strong, persistent ridge of high pressure over western Canada was, for the most part, the result of El-Niño. Mild weather associated with this ridge not only affected the West, but the eastern Arctic, as well. No significant change in the current weather pattern is expected.

February 1995 Forecast Discussion

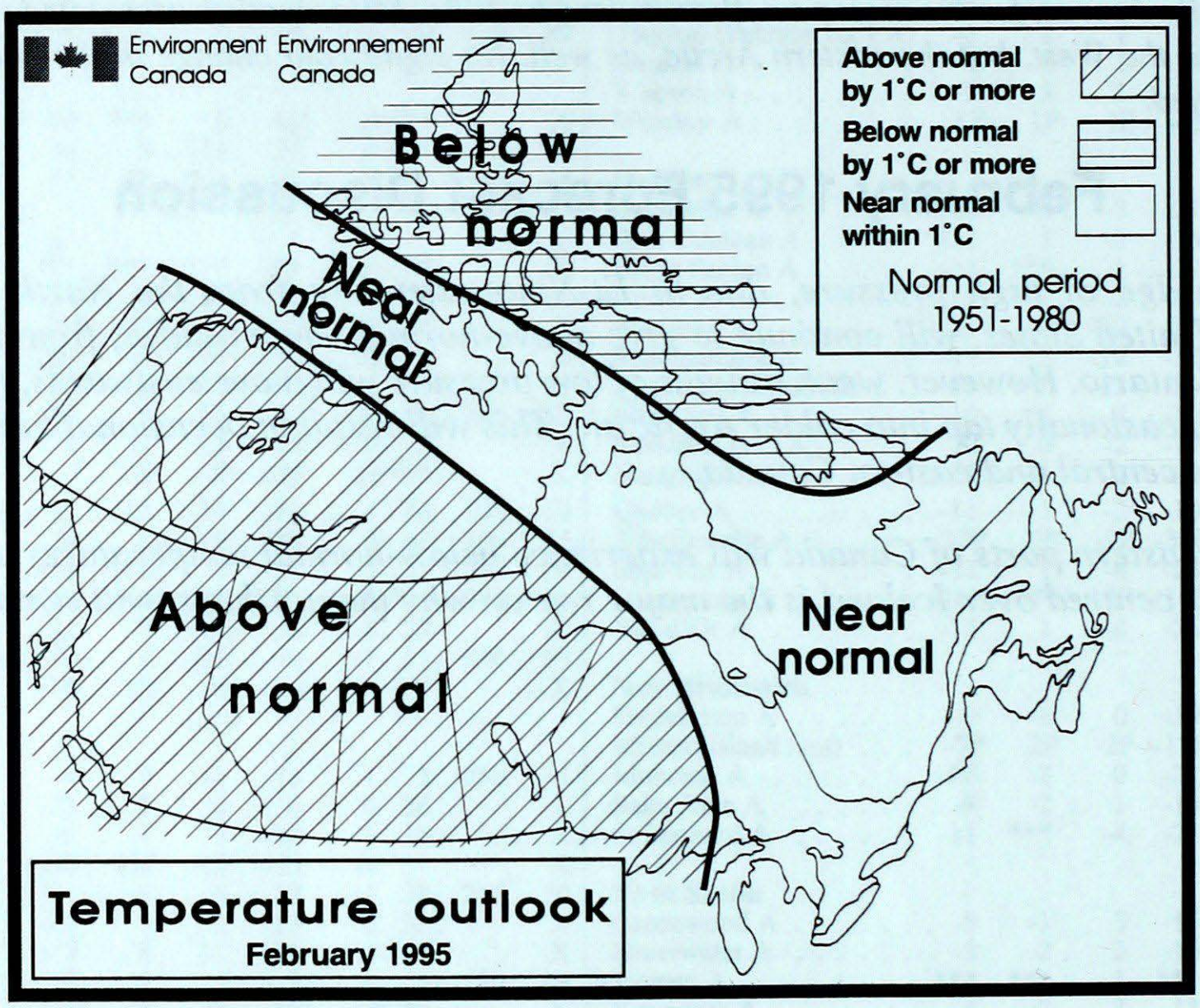
A stationary ridge of high pressure, due to El-Niño extending from the North Pole to the northwestern United States, will continue to give above-normal temperatures, from the Yukon to northwestern Ontario. However, weak troughs of low pressure will move eastwards, from western Canada, and occasionally tap into colder Arctic air. This will result in occasional bursts of colder weather across central and eastern Canada.

Only the northeastern parts of Canada will experience below-normal temperatures. An extensive pool of cold air centred over Iceland is the major reason why the northeast will remain cold.

Outlook

Climatic Perspectives

Monthly Outlook - February 1995



Normal temperatures (°C) February 1995

	Max	Min		Max	Min
Whitehorse	-8	-18	**Toronto**	-2	-11
Yellowknife	-21	-30	**Ottawa**	-5	-14
Iqaluit	-22	-30	**Montréal**	-4	-14
Vancouver	8	1	**Québec**	-6	-16
Victoria	8	1	**Halifax**	-2	-11
Calgary	-2	-13	**Fredericton**	-3	-14
Edmonton	-6	-17	**Charlottetown**	-3	-12
Regina	-8	-19	**Goose Bay**	-9	-20
Winnipeg	-10	-21	**St. John's**	0	-8

Normal Temperatures (1951-1980)

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