Environment Canada Environnement Canada

Climatic Perspectives

Jan. 27 to Feb. 2, 1992 **A weekly review of Canadian climate and water** *Vol. 14 No. 05*

Both coasts pummelled by winter storms

While much of southern Canada basked under a continued warm spell, residents of the Atlantic Provinces and western British Columbia were reminded of winter's ferocious nature.

A low pressure system which originated east of Florida on Thursday, the 30th, deepened quickly as it moved northeastwards. By Friday evening, moderate to heavy snow was falling over the Maritimes and storm force winds developed over the region. As well, a mixed bag of precipitation moved over the southern coast of Nova Scotia. The centre of the low stalled just south of Halifax on Saturday evening with hurricane force winds being reported. Blizzard conditions were widespread throughout the Maritimes. Heaviest amounts of snow fell in areas bordering the Gulf of St. Lawrence, where northeasterly winds blew onshore. Moncton set a new one-day snowfall record, receiving 83 cm on February 1. Snow drifts in excess of six metres were reported in many areas.

Virtually all transportation in the Maritimes was shut down on Saturday, as people were stranded at airports, sleeping in the lobbies and meeting rooms. Bus and ferry services were all disrupted, and even taxis were taken off the road as snowplough companies were unable to keep the roads passable.

Winds gusting over 120 km/h caused significant damage to the roofs of a furniture store in New Brunswick and at a fish plant in Newfoundland, where the winds reached 150 km/h. The local RCMP, near the Nova Scotia-New Brunswick border, recruited 20 snowmobilers to help move over 100 stranded motorists to shelter, and provided transportation for local hospital workers. At the height of the blizzard, fire fighters in Charlottetown battled a major blaze which destroyed at least three buildings in the downtown area.

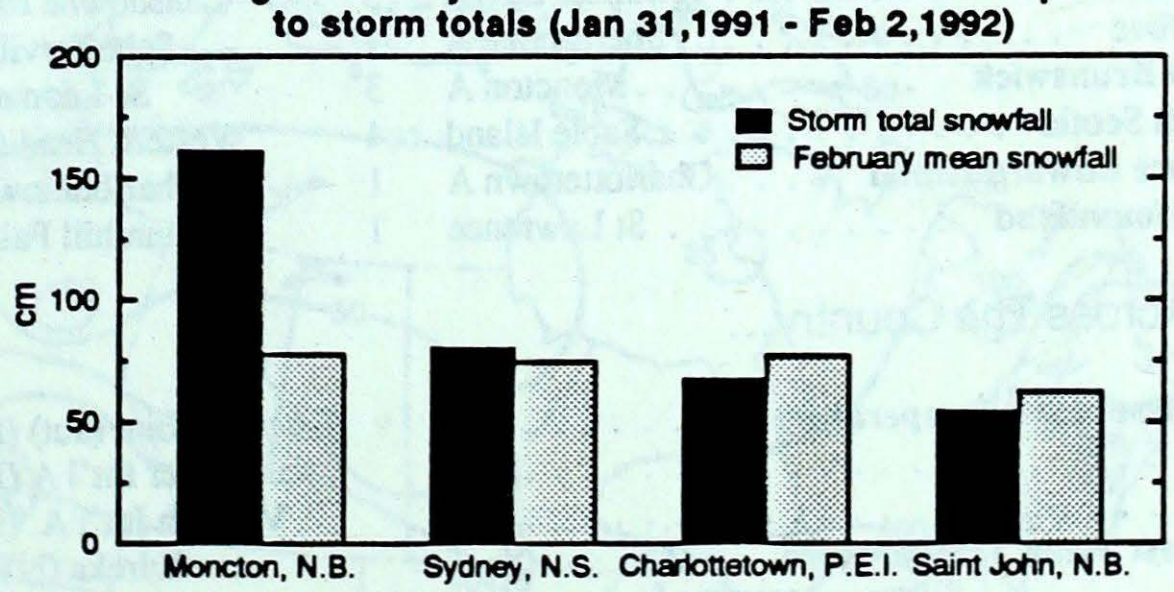
This storm was one of the most severe on record, but as it was well forecasted, and since it occurred on the weekend, its impact and potential hazards were reduced.

A severe storm also enveloped most of southern British Columbia this week. On February 1, strong winds knocked out traffic lights in Surrey, and when combined with reduced visibility due to heavy rain, contributed to the death of a woman and her son when their car was hit broadside by a truck. Victoria, received 100.2 mm of rain this week compared to the normal 25.8 mm. In the south Delta area, a mudslide shifted a clubhouse off its foundations by a metre, and 90 km/h winds knocked trees and branches down onto hydro lines along the coast, leaving 65,000 homes without power. In the area around Burnaby, thirteen cars were damaged when the storm ripped a 30-metre section of aluminum facade off of a bingo hall roof.

A look ahead...

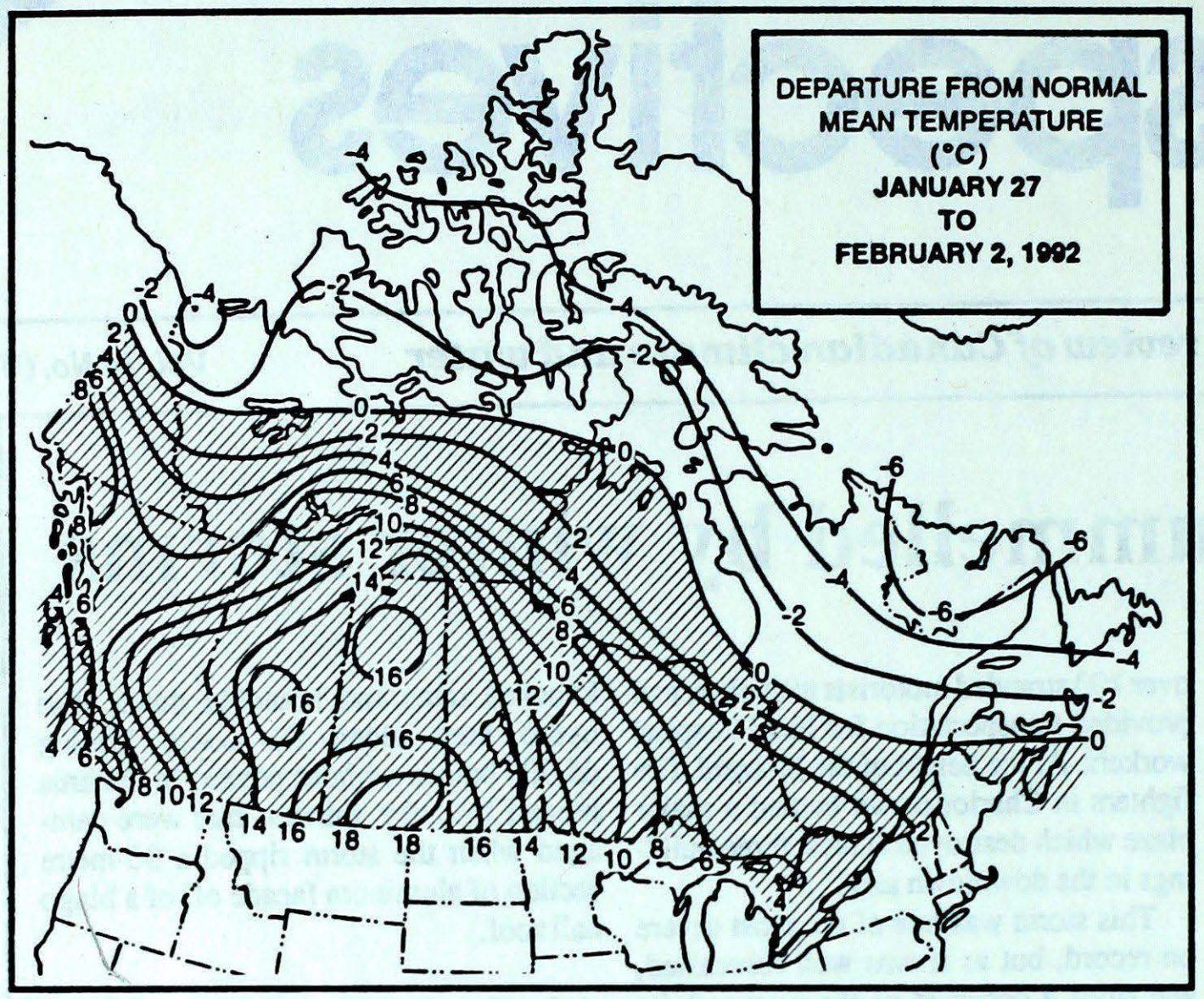
For the week of February 10, temperatures are expected to be near to below-normal across the Yukon, British Columbia, the Prairies, the Mackenzie, Keewatin and the western Franklin Districts of the Northwest Territories, and northern Ontario. Near to above-normal temperatures will occur across the southern parts of Ontario and Quebec, and all of the Atlantic provinces. Below-normal temperatures will persist across northern Quebec, Baffin Island and the eastern Arctic Islands.

Average February snowfalls in the Maritimes compared to storm totals (Jan 31,1991 - Feb 2,1992)



In Moncton the snowfall of 161 cm exceedeed the previous one-month record of 151 cm, in 1944

Canada



Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	-13.6	-23.1
Iqaluit A	-22.7	-30.9
Yellowknife A	-24.8	-33.4
Vancouver Int'l A	5.8	-0.3
Victoria Int'l A	6.3	0.1
Calgary Int'l A	-4.2	-16.8
Edmonton Int'l A	-10.9	-22.1
Regina A	-12.7	-23.4
Saskatoon A	-13.9	-24.4
Winnipeg Int'l A	-14.8	-25.4
Ottawa Int'l A	-7.5	-16.3
Toronto (Pearson Int'l A)	-3.8	-11.8
Montréal Int'l A	-6.7	-15.3
Québec A	-8.4	-17.5
Fredericton A	-4.4	-15.9
Saint John A	-3.6	-14.0
Halifax (Shearwater)	-1.2	-9.4
Charlottetown A	-4.3	-12.9
Goose A	-11.8	-21.6
St John's A	-1.4	-8.4

Weekly temperature and precipitation extremes

	Maximum temperature (°C)		Minimum temperature (°C)		Heaviest precipitation (mm)	
British Columbia	Abbotsford A	16	Fort Nelson A	-29	Port Alberni A	205
Yukon Territory	Teslin (aut)	1	Komakuk Beach A	-39	Watson Lake A	5
Northwest Territories	Fort Smith A	1	Shepherd Bay A	-48	Yellowknife A	9
Alberta	Medicine Hat A	18	High Level A	-29	Jasper	18
Saskatchewan	Swift Current A	15	Meadow Lake A	-26	Cree Lake	3
Manitoba	Dauphin A	8	Churchill A	-37	Churchill A	9
Ontario	Thunder Bay A	3	Lansdowne House	-36	Geraldton A	22
Québec	Sherbrooke A	1	Schefferville A	-43	Mont Joli A	27
New Brunswick	Moncton A	3	St-Léonard A	-30	Moncton A	145
Nova Scotia	Sable Island	4	Western Head (aut)	-20	Sydney A	76
Prince Edward Island	Charlottetown A	1	Charlottetown A	-20	Charlottetown A	68
Newfoundland	St Lawrence	1	Churchill Falls A	-41	St John's A	31

Across The Country...

Highest Mean Temperature	Estevan Point (aut) (BC)	9
	Vancouver Int'l A (BC)	9
	Victoria Int'l A (BC)	9
Lowest Mean Temperature	Eureka (NWT)	-42

92/01/27-92/02/02

CLIMATIC PERSPECTIVES
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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 the Atmospheric Environment Service.

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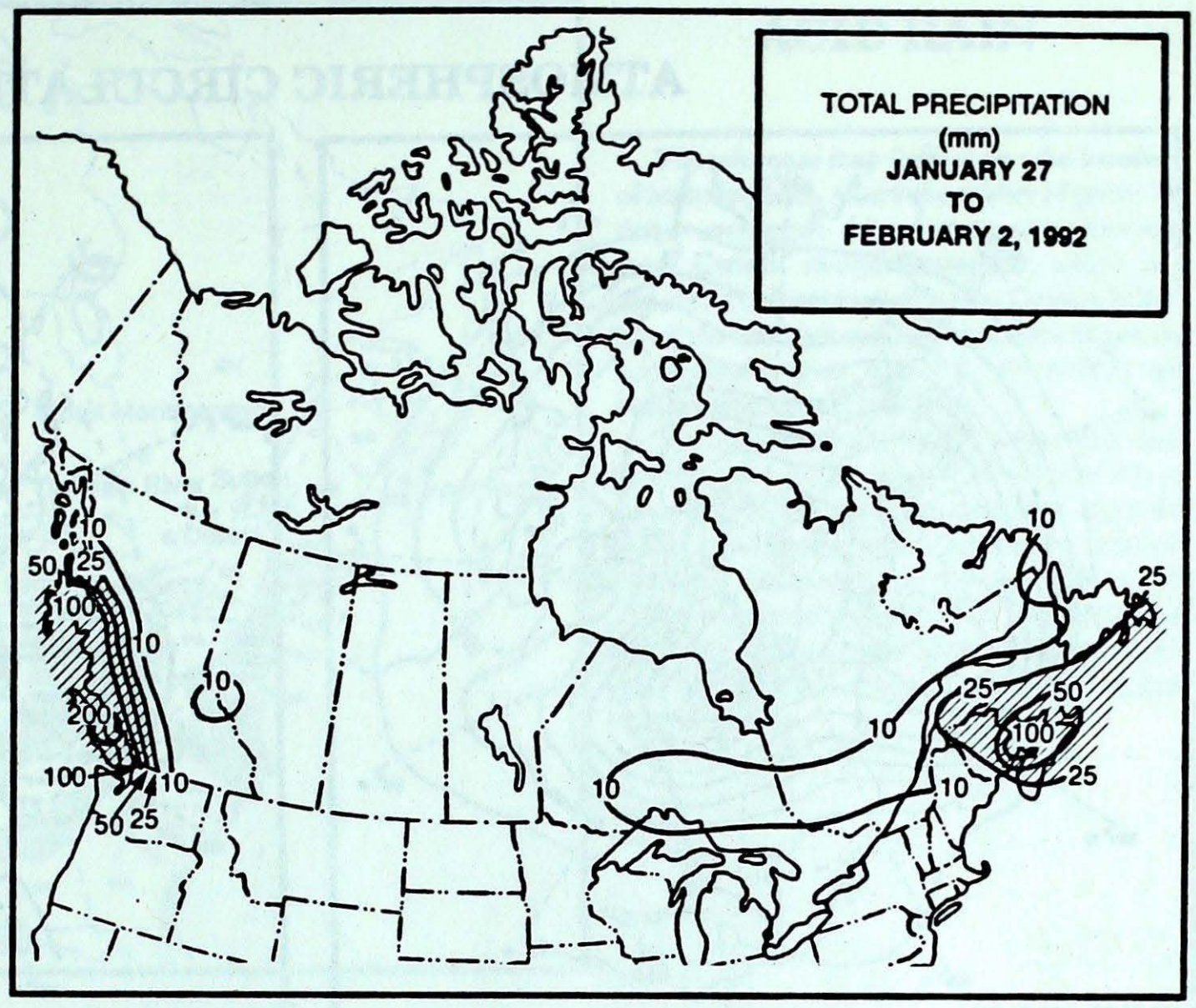
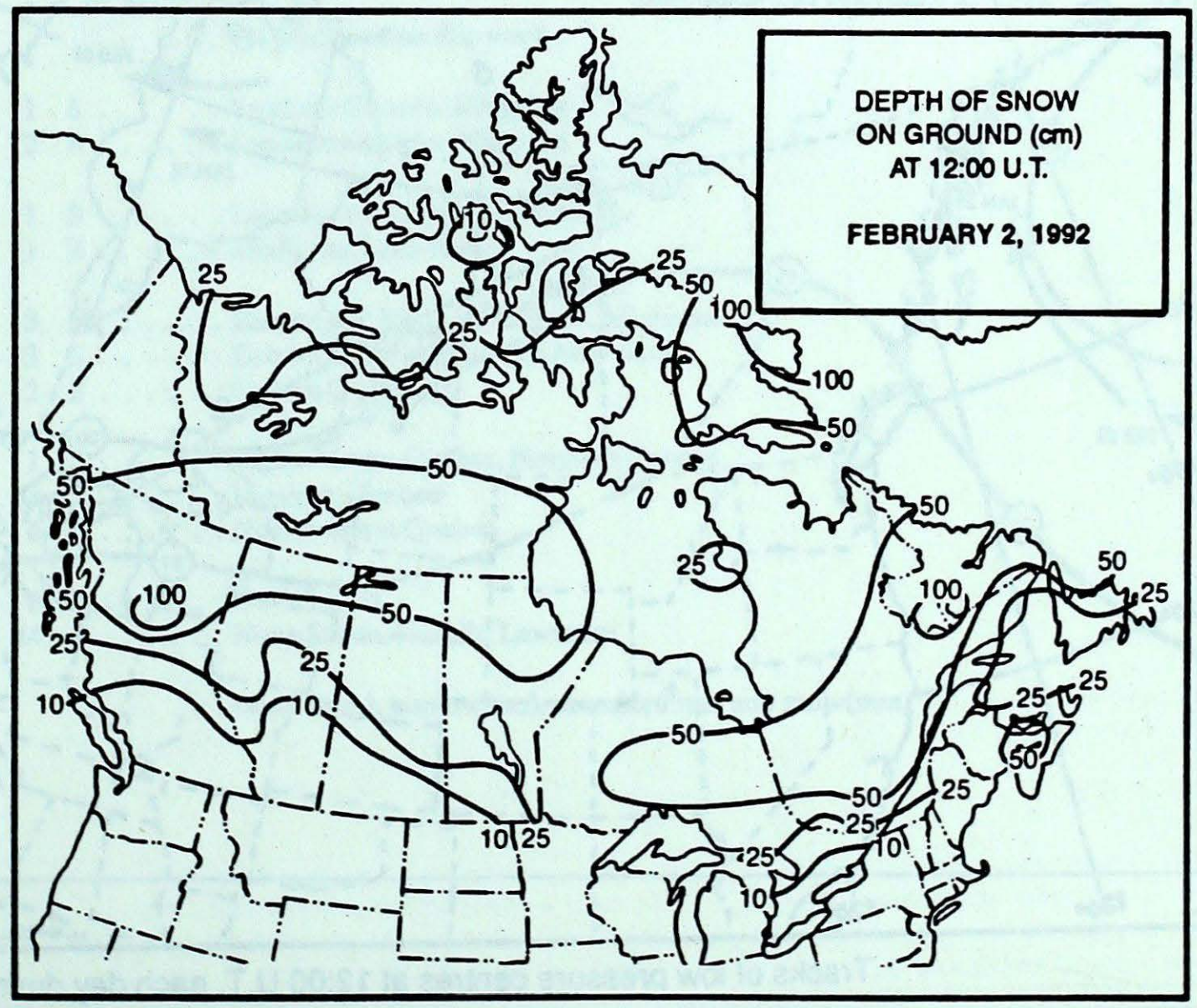
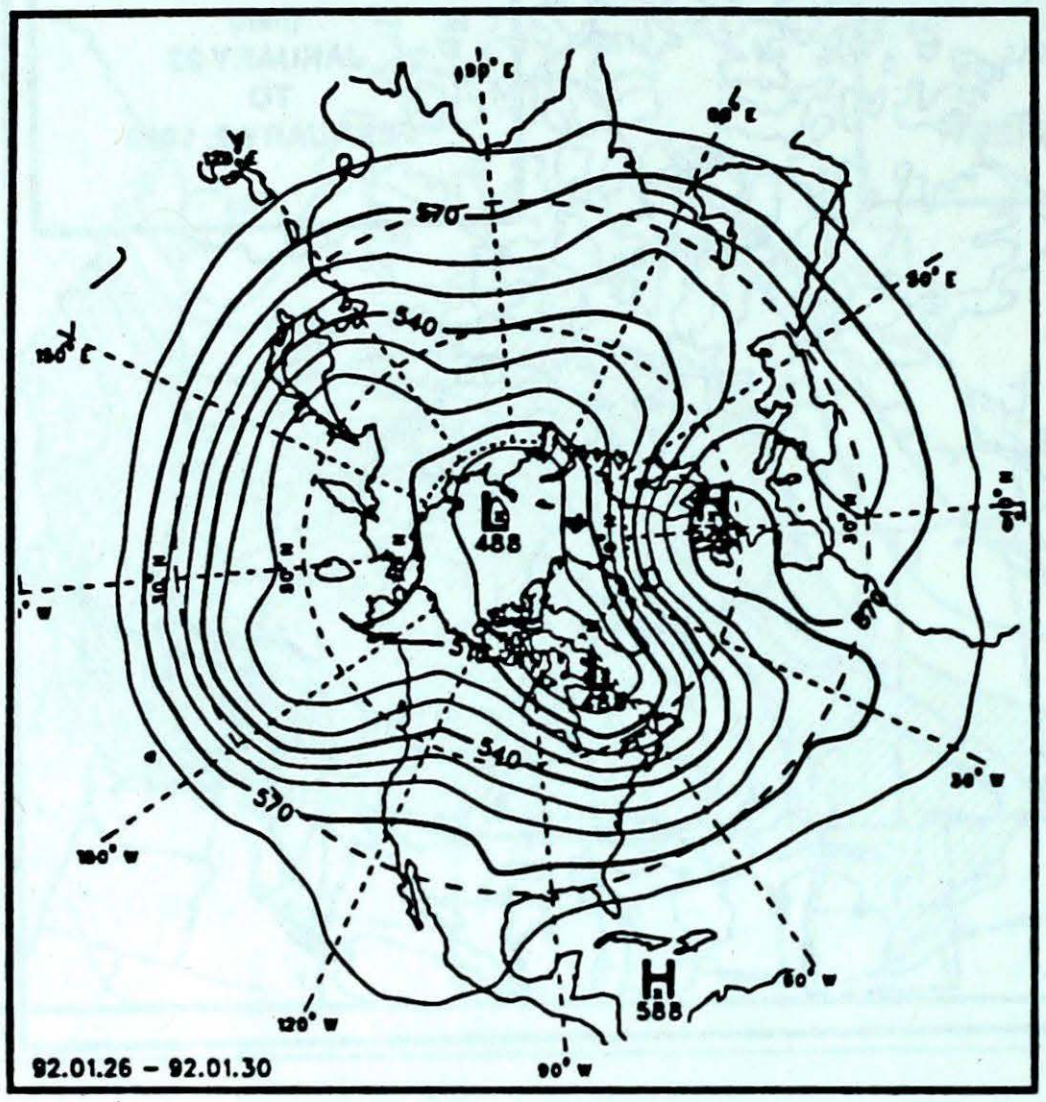
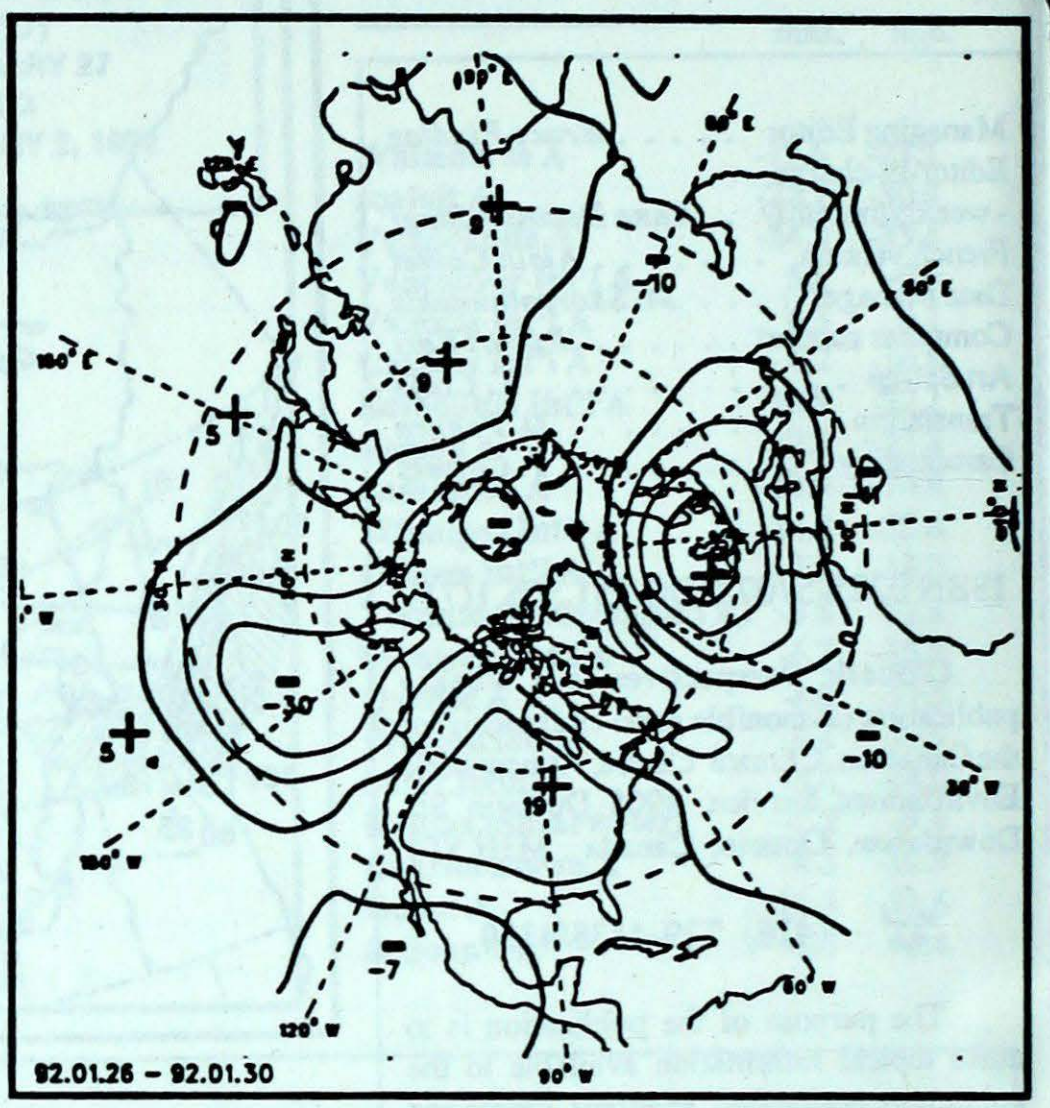




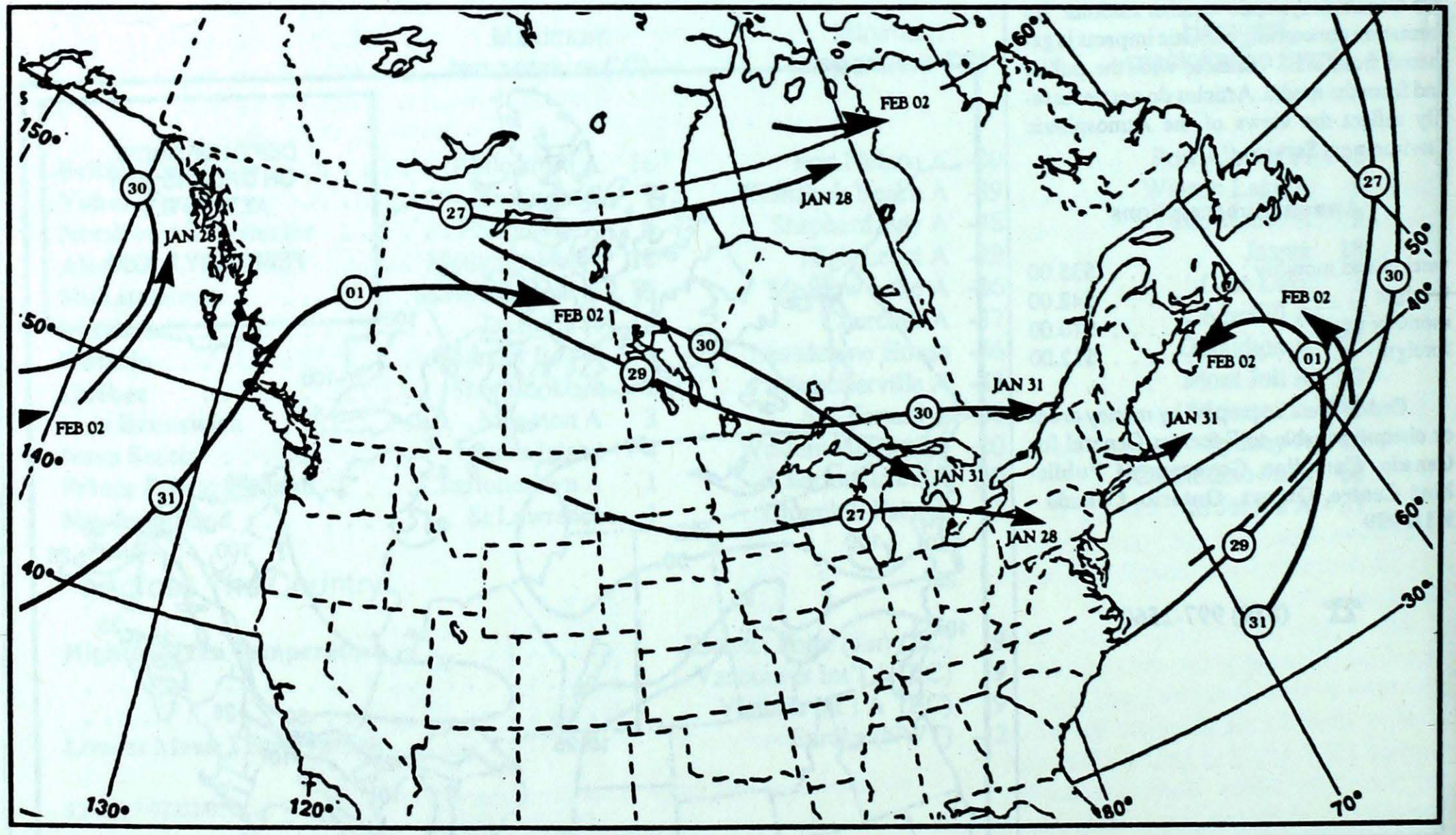
ATMOSPHERIC CIRCULATION



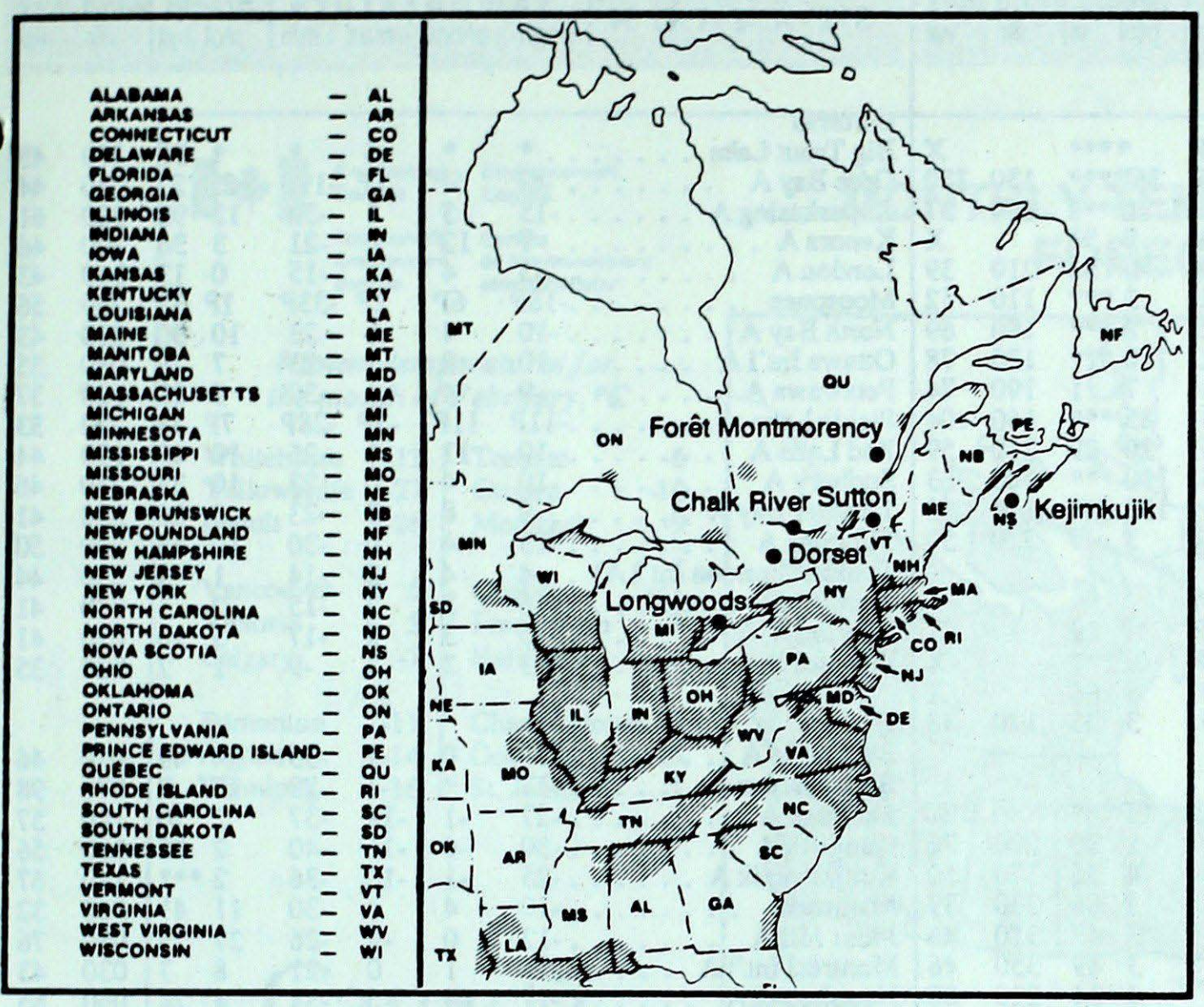
Mean geopotential height
50-kPa level (10-decametre intervals)



Mean geopotential height anomaly
50-kPa level (10-decametre intervals)



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



ACID RAIN

The reference map (left) shows the locations of sampling sites, where the acidity of precipitation is monitored. All are operated by Environment Canada except Dorset (*), which is a research station operated by the Ontario Ministry of the Environment. The map also shows the approximate areas (shaded), where SO_2 and NO_x emissions are greatest.

The table below gives the weekly report summarizing the acidity (or pH) of the acid 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.

January 26 to February 1, 1992

Site	day	pH	amount		air path to site
Longwoods					. . . . . No precipitation this week
Dorset*	26	4.3	1	S	. . . . . Southern Ontario, Michigan
	27	4.0	2	S	. . . . . Southern Ontario, Michigan
Chalk River	27	4.2	1	S	. . . . . Lake Huron, Northern Michigan
	29	4.0	1	S	. . . . . Michigan, Lake Huron
Sutton	30	3.9	3	M	. . . . . Eastern and Southern Ontario, Michigan
	31	3.9	3	S	. . . . . Eastern Ontario, Northern New York
	01	4.5	2	S	. . . . . Eastern Quebec
Montmorency	28	4.4	1	S	. . . . . Northwestern Quebec, Northern Ontario
	29	4.9	3	S	. . . . . Northern Quebec
	30	4.4	6	S	. . . . . Northwestern Quebec
Kejimkujik	31	4.4	6	S	. . . . . Nova Scotia
	01	5.0	24	S	. . . . . Nova Scotia, Gulf St. Lawrence

. . . . . r=rain(mm), s=snow(cm), m=mixed rain and snow(mm)

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
British Columbia								
Blue River A	0P	10P	1P	0P	****			X
Cape St James	7P	3P	10P	5P	36P	***	130	130
Cranbrook A	4	14	9	-2	8	***	200	37
Fort Nelson A	-19	3	-3	-29	0	53		X
Fort St John A	-2P	15P	3P	-7P	4P	36	210	39
Kamloops A	7	13	16	2	3	***	110	52
Penticton A	8	11	13	2	2	***	180	69
Port Hardy A	7	4	12	2	170	***	120	78
Prince George A	3	13	8	-4	7	1	190	74
Prince Rupert A	6	6	10	-3	85	***	160	104
Smithers A	0	9	5	-5	20	29	210	59
Vancouver Int'l A	9	7	15	5	130	***	160	63
Victoria Int'l A	9	6	13	5	100	***	140	63
Williams Lake A	4	13	9	-1	3	7	220	59
Yukon Territory								
Komakuk Beach A	-33P	-7P	-30P	-39P	1P	19		X
Teslin (aut)	-10P	*	1P	-20P	0P	***		X
Watson Lake A	-19	5	-6	-29	5	66		X
Whitehorse A	-9	9	1	-20	3	26	170	48
Northwest Territories								
Alert	-35P	-3P	-31P	-40P	0P	***		X
Baker Lake A	-31	3	-10	-40	1	30	200	78
Cambridge Bay A	-36	-2	-21	-42	4	36	170	50
Cape Dyer A	-27	-5	-17	-37	3	206	330	39
Clyde A	-33	-6	-22	-42	3	47	310	46
Coppermine A	-29	-2	-20	-37	3	49	350	46
Coral Harbour A	-31	1	-14	-41	4	34	220	80
Eureka	-42P	-5P	-33P	-48P	0P	18		X
Fort Smith A	-17	10	1	-29	7	69	310	59
Hall Beach A	-32	0	-19	-41	5	33	301	39
Inuvik A	-32	-3	-26	-42	8	41		X
Iqaluit A	-33	-6	-14	-45	1	24	330	82
Mould Bay A	-38	-5	-30	-44	1	13		X
Norman Wells A	-30	-2	-21	-38	3	12		X
Resolute A	-36	-3	-27	-40	2	9	060	61
Yellowknife A	-19	10	-6	-30	9	54	130	50
Alberta								
Calgary Int'l A	4	15	14	-5	0	***		X
Cold Lake A	-6	13	5	-21	0	24		X
Edmonton Namao A	0	15	9	-8	0	17	150	33
Fort McMurray A	-7	14	5	-18	0	31		X
High Level A	-15	7	0	-29	10	52	360	44
Jasper	2	12	6	-4	18	10		X
Lethbridge A	6	15	17	-5	0	***		X
Medicine Hat A	6	18	18	-7	0	***	220	65
Peace River A	-6	13	5	-15	0	26	250	41
Saskatchewan								
Cree Lake	-7	18	1	-22	3	41	220	43
Estevan A	0	17	12	-22	0	1	290	61
La Ronge A	-7	16	2	-19	0	47	110	39
Regina A	-2	16	6	-18	0	***	290	50
Saskatoon A	-5	14	6	-18	0	13	230	44
Swift Current A	4	18	15	-8	0	***	270	57
Yorkton A	-5	15	5	-24	1	28	150	43
Manitoba								
Brandon A	-6	14	3	-27	0	22	310	59
Churchill A	-22	6	-4	-37	9	55	190	61
Lynn Lake A	-11	16	-2	-22	4	40	160	33
The Pas A	-7	15	-3	-17	1	27	140	50
Thompson A	-14	13	-5	-28	2	45	210	33
Winnipeg Int'l A	-5	15	4	-24	0	11	180	63

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
Ontario								
Big Trout Lake	*	*	-6	*	*	30	200	43
Gore Bay A	-6P	5P	1P	-19P	2P	27	030	44
Kapuskasing A	-15	5	1	-32	12	90	220	61
Kenora A	-7	12	0	-21	3	36	200	46
London A	-5	4	1	-15	0	13	340	43
Moosonee	-16P	6P	2P	-33P	1P	33	250	56
North Bay A	-10	4	-1	-23	10	30	230	43
Ottawa Int'l A	-10	2	-1	-23	7	26	030	35
Petawawa A	-9	4	1	-30	6	20	320	37
Pickle Lake	-11P	11P	-3P	-28P	7P	38	220	33
Red Lake A	-10	11	-1	-25	10	40	190	44
Sudbury A	-10	4	0	-23	10	33	230	46
Thunder Bay A	-9	8	3	-23	3	26	330	41
Timmins A	-13	4	0	-30	10	55	240	50
Toronto(Pearson Int'l A)	-4	4	2	-14	1	3	350	44
Trenton A	-6	3	2	-15	2	1	010	41
Wiarton A	-5	3	2	-17	3	10	020	41
Windsor A	-3	3	3	-9	1	2	220	35
Québec								
Bagotville A	-17	0	-2	-35	14	49	070	46
Blanc Sablon A	-17	*	-1	-29	16	7	070	98
Inukjuak A	-27	-1	-14	-37	2	20	180	57
Kuujjuaq A	-30	-6	-16	-40	2	28	250	56
Kuujjuarapik A	-25	-1	-10	-36	2	***	140	67
Maniwaki	-10	4	1	-30	11	41	360	32
Mont Joli A	-12	0	-2	-26	27	35	050	76
Montréal Int'l A	-10	1	0	-21	8	7	030	43
Natashquan A	-17	-4	-5	-34	4	28	060	65
Québec A	-13	0	-2	-29	11	***	060	52
Schefferville A	-30	-7	-14	-43	3	73	250	50
Sept-Îles A	-17	-2	-4	-33	5	54	010	57
Sherbrooke A	-11	1	1	-27	6	13		X
Val-d'Or A	-13	4	-1	-28	18	54	200	52
New Brunswick								
Chatham A	*	*	*	*	*	***		X
Fredericton A	-9P	1P	1P	-23P	26P	28	010	80
Miscou Island (aut)	-12P	-2P	-4P	-21P	0P	***		
Moncton A	-9	1	3	-22	145	86	020	111
Saint John A	-7	2	3	-21	42	37	010	89
Nova Scotia								
Greenwood A	-6	0	3	-17	40	33	020	100
Shearwater A	-6	0	1	-19	54	40	360	74
Sydney A	-8	-1	-1	-19	76	55	070	106
Yarmouth A	-5	-1	3	-15	14	20	010	67
Prince Edward Island								
Charlottetown A	-9	0	1	-20	68	44	030	111
East Point (auto)	-5P	*	-2P	-11P	0P	***		
Newfoundland								
Cartwright	-21	-7	-4	-32	5	90	330	67
Churchill Falls A	-28	-8	-12	-41	3	101	300	39
Gander Int'l A	-12	-5	-2	-21	20	20	040	61
Goose A	-24	-8	-9	-35	0	40		X
Port Aux Basques	*	*	1	*	*	20	070	102
St John's A	-10	-5	0	-19	31	20	010	80
St Lawrence	-8	-4	1	-18	27	2		X
Wabush Lake A	-27	-6	-10	-37	1	69	180	48

92/01/27-92/02/02

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.

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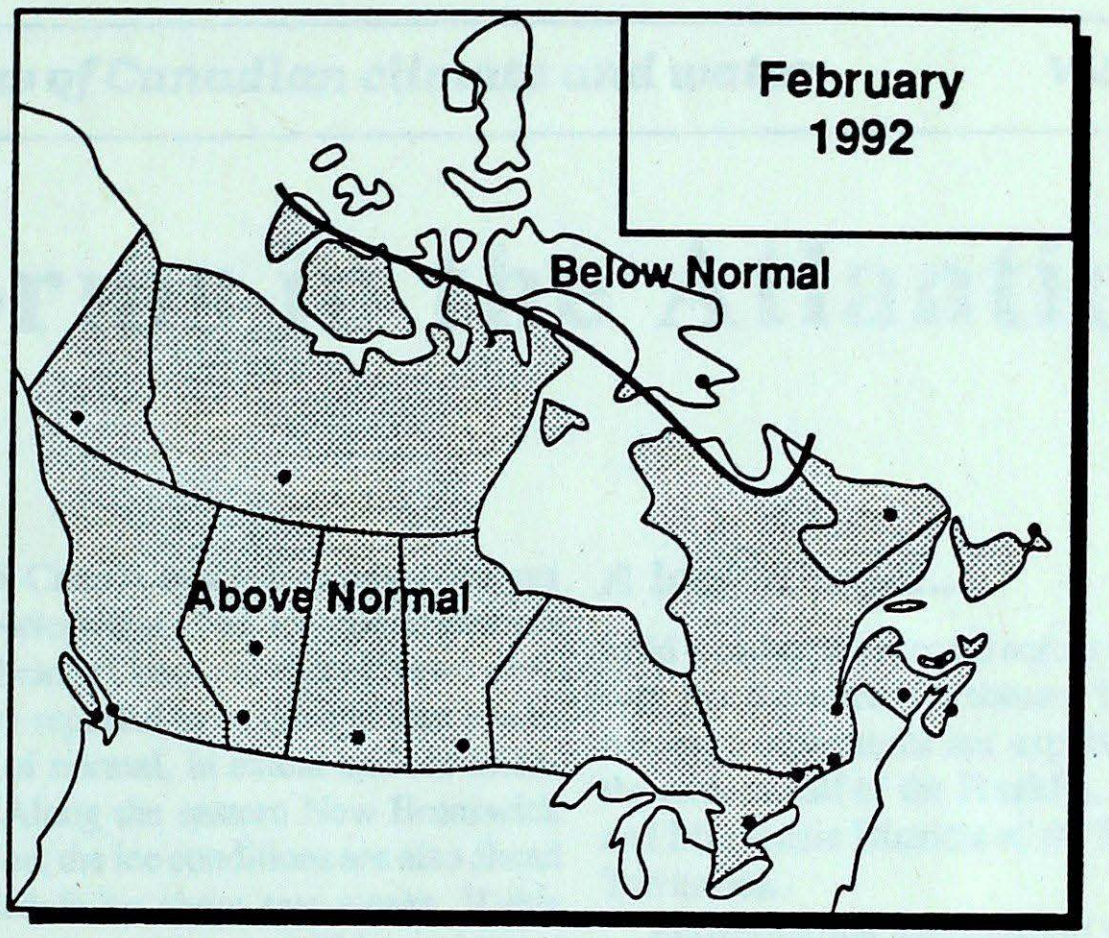
MONTHLY TEMPERATURE FORECAST



Normal temperatures for the month of February, °C

Whitehorse	-13	Toronto	-6
Yellowknife	-27	Ottawa	-10
Iqaluit	-26	Montreal	-9
Vancouver	5	Quebec	-11
Victoria	5	Fredericton	-8
Calgary	-7	Halifax	-5
Edmonton	-11	Charlottetown	-8
Regina	-14	Goose Bay	-15
Winnipeg	-16	St. John's	-5

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