

Climatic Perspectives

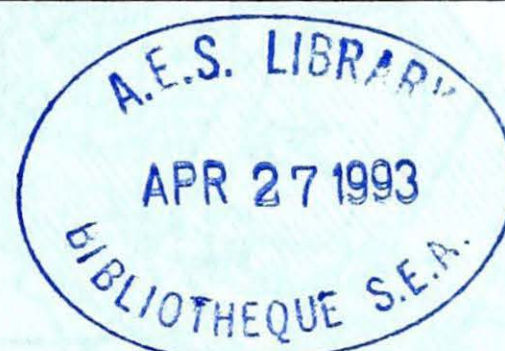
MONTHLY
SUPPLEMENT
INCLUDED

April 12 to 18, 1993

A weekly review of Canadian climate and water

Vol. 15 No. 16

Spring's fickle weather



Just when it seemed safe to put away the winter clothes and snow shovels, winter came back to some parts of the country, as a cold Arctic air mass pushed southwards once again.

In Alberta, thunder was heard in a number of places during the first two days of the period. The thundershowers developed as daytime highs climbed into the mid-teens. The weather over the weekend was a much different story. A developing storm over the northwestern States spread moisture northwards over the Prairies. The interaction of cold air pushing southwards from the Territories produced bands of snow across central Alberta, northern Saskatchewan and central Manitoba. By Sunday morning Drayton Valley, Alta., reported 25 cm of snow, while Edmonton received 10 cm of the wet stuff.

A vigorous low pressure system tracked northeastwards out of the American mid-west on April 16, dumping between 5 and 20 centimetres of snow across northern Ontario. Almost 30 cm of the white stuff fell in northeastern Ontario, while the southern portions of the province escaped with only snow flurries. A flood alert was issued for the Sault Ste. Marie, Sudbury and Ottawa Valley regions, where as much as 30 mm of rain was forecast. In contrast, prior to this cold outbreak, thunderstorms rolled across the southern portions of the province on April 15, accompanying a warm front, which saw the temperature at St. Catharines rise from 7°C at 9 pm to 22°C by 10 pm Thursday evening.

Flood alert continues In New Brunswick

Although floodwater subsided somewhat, from last week, rain and rapid snowmelt due to this week's warmer temperatures have caused water levels in the Saint John River Basin to start climbing once again. Large volumes of water, flowing downstream, filled low lying areas of the lower Saint John River Basin. As such, water levels for the next few days will be sensitive to any precipitation, and will react quickly to additional rainfalls. Regions of concern are Fredericton, Mauterville, Jemseg, Oak Point and the Indiantown areas.

Elsewhere...

In the Yukon, mainly cloudy skies, light showers and flurries gave way to clearing skies for the weekend. Maximum temperatures climbed to the mid-teens in the southern and central portions of the Territory. In the Mackenzie Valley, it was a mostly sunny and mild week. Most winter ice roads north of Yellowknife, and the ice bridge at Fort Providence have closed. Baffin Island saw a fair amount of sunshine during the first half of the week, but cloudy skies and snow moved in thereafter.

Passing disturbances resulted in an unsettled, but mild week across British Columbia. Sunny breaks were interspersed by frequent showers as a moist, unstable air mass dominated. Strong southeast winds

off the coast kept commercial halibut fishermen close to shore, after one boat sank off Cape Scott in 5-metre swells last week. Some fruit tree varieties such as apricots are blooming in the Okanagan.

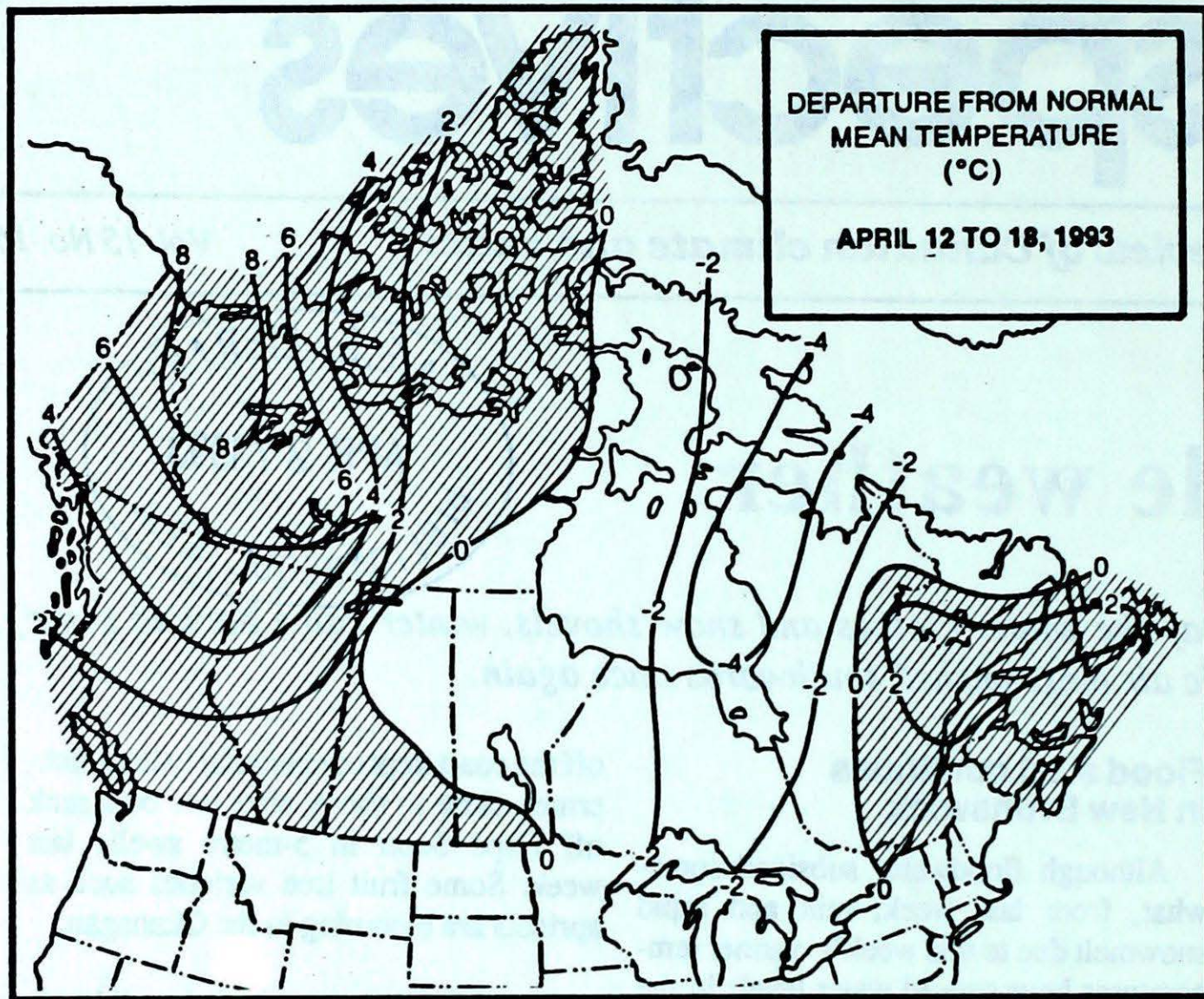
The Maritimes remained mild, although skies were mainly cloudy, producing a mixture of light rain and snow. Accumulations of up to 10 cm were reported in New Brunswick and the Gaspé.

In Newfoundland, last week's sunny and mild weather came to an end. A series of disturbances tracking southeast of the Avalon Peninsula gave unseasonable weather conditions and as much as 25 cm of snow. A cool, northeasterly flow brought freezing precipitation to the eastern portion of the Island.

A cold front swept across Labrador. However, some communities in the southeast still managed to set new record high daytime temperatures, in the double digits, early in the period. Some snow was reported.

A Look Ahead...

For the week of April 26, below-normal temperatures are expected for most of the country, except near to above-normal temperatures are possible west of Manitoba. Precipitation is possible for coastal British Columbia, while unsettled weather will occur over the Atlantic provinces.



Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	4.8	-5.3
Iqaluit A	-10.4	-20.3
Yellowknife A	-1.5	-12.6
Vancouver Int'l A	12.2	4.5
Victoria Int'l A	12.3	3.6
Calgary Int'l A	9.4	-2.8
Edmonton Int'l A	8.2	-2.8
Regina A	10.2	-2.6
Saskatoon A	9.7	-2.0
Winnipeg Int'l A	10.0	-1.2
Ottawa Int'l A	11.9	0.8
Toronto (Pearson Int'l A)	12.6	1.0
Montréal Int'l A	11.7	1.1
Québec A	8.1	-1.1
Fredericton A	9.8	-1.5
Saint John A	8.0	-1.9
Halifax (Shearwater)	8.0	-0.2
Charlottetown A	6.2	-1.7
Goose A	2.5	-6.9
St John's A	4.1	-2.3

Weekly temperature and precipitation extremes

	Maximum temperature (°C)	Minimum temperature (°C)	Heaviest precipitation (mm)
British Columbia	Hope A 20	Dease Lake -6	Abbotsford A 37
Yukon Territory	Watson Lake A 15	Komakuk Beach A -22	Whitehorse A 1
Northwest Territories	Tuktoyaktuk 15	Eureka -32	Fort Smith A 21
Alberta	Medicine Hat A 17	Edson A -6	Red Deer A 15
Saskatchewan	Estevan A 17	Cree Lake -9	Cree Lake 21
Manitoba	Brandon A 18	Churchill A -18	The Pas A 33
	Portage La Prairie A 18		
Ontario	London A 25	Lansdowne House -12	Timmins A 42
Quebec	Montréal Int'l A 21	Kuujuaq A -26	Sept-iles A 51
New Brunswick	Saint John A 16	St Stephen (aut) -4	Saint John A 26
Nova Scotia	Greenwood A 18	Amherst (aut) -4	Truro 14
Prince Edward Island	Charlottetown A 14	Charlottetown A -4	Charlottetown A 23
Newfoundland	Daniels Harbour 15	Churchill Falls A -14	Bonavista 51

Across The Country...

Highest Mean Temperature	Hope A (B.C.) 11
Lowest Mean Temperature	Eureka (N.W.T.) -28

CLIMATIC PERSPECTIVES
VOLUME 15

Managing editor *A.Saulesleja*
Editor English version *Andrew Radomski*
French version *Alain Caillet*
Long-range forecasts *Aaron Gergy*
Data manager *M. Skarpathiotakis*
Computer support *Robert Eals*
Art layout *K. Czaja*
Translation *D. Pokorn*
Cartography *T. Chivers*

ISBN 0225-5707 UDC 551.506.1(71)

Climatic Perspectives is a weekly publication (disponible aussi en français) of the Canadian Climate Centre, Atmospheric Environment Service, 4905 Dufferin St., Downsview, Ontario, Canada M3H 5T4

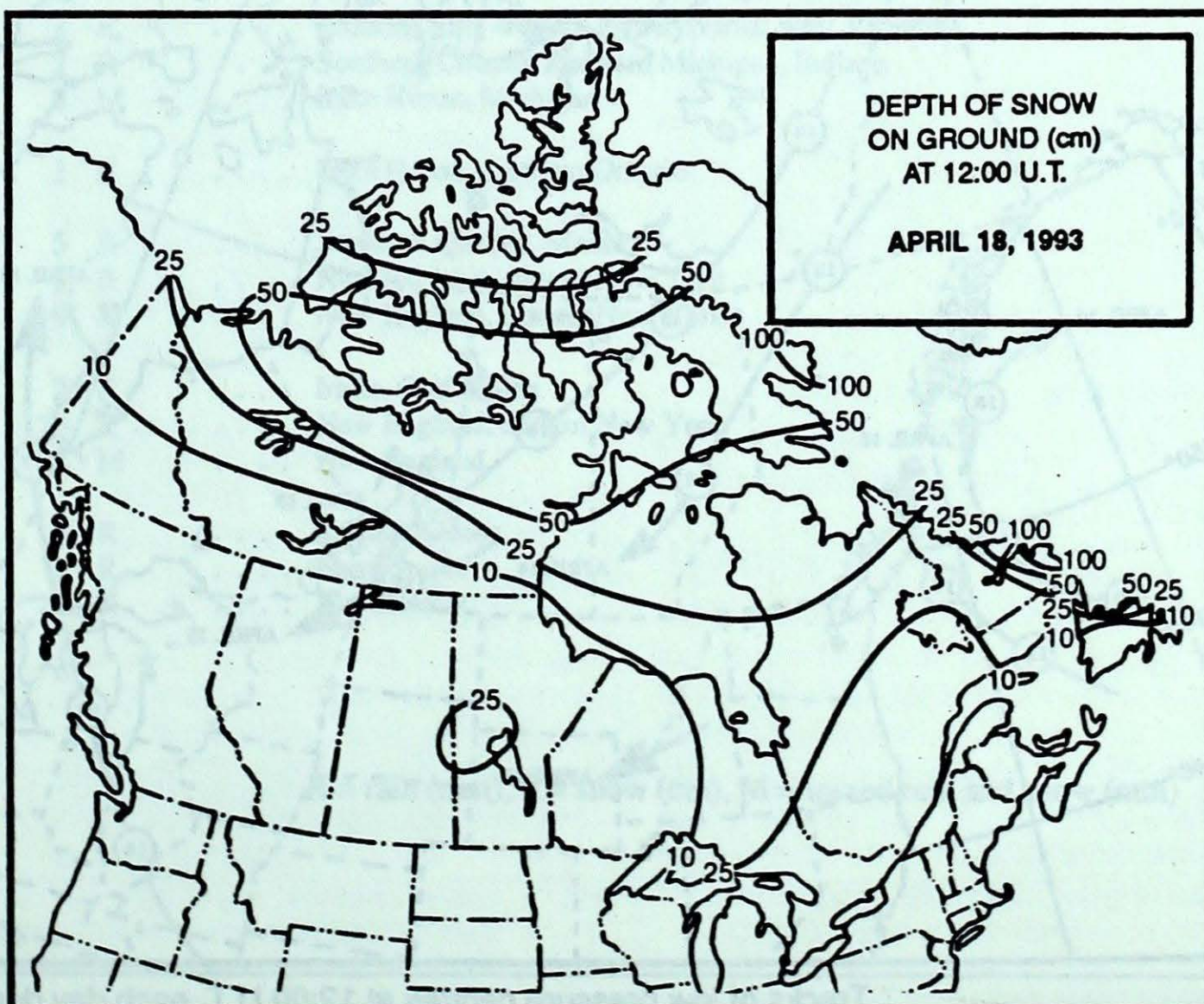
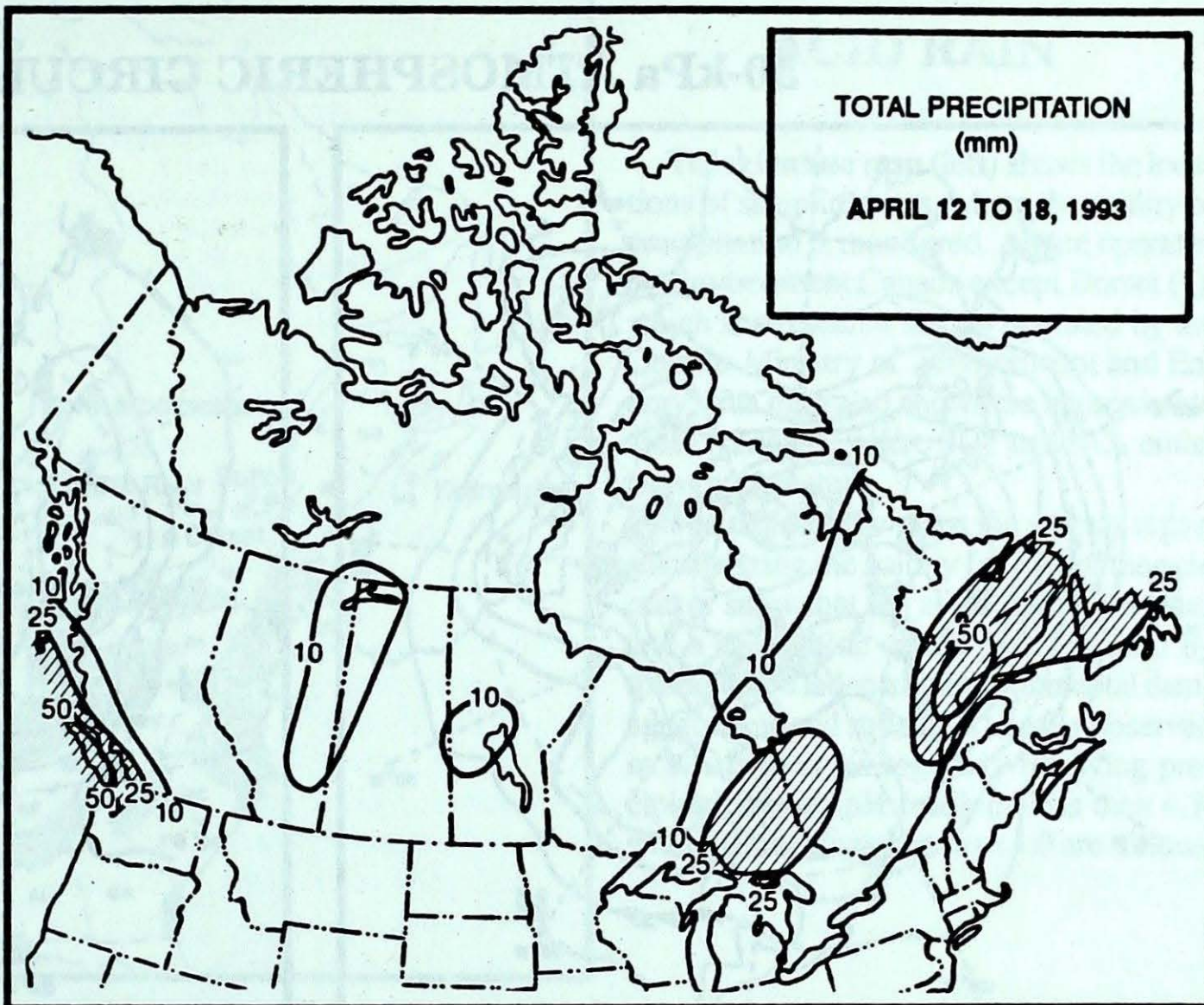
☎ (416) 739-4438/4330
InterNet (Email):
CCCOPS@aestor.dots.doe.CA

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

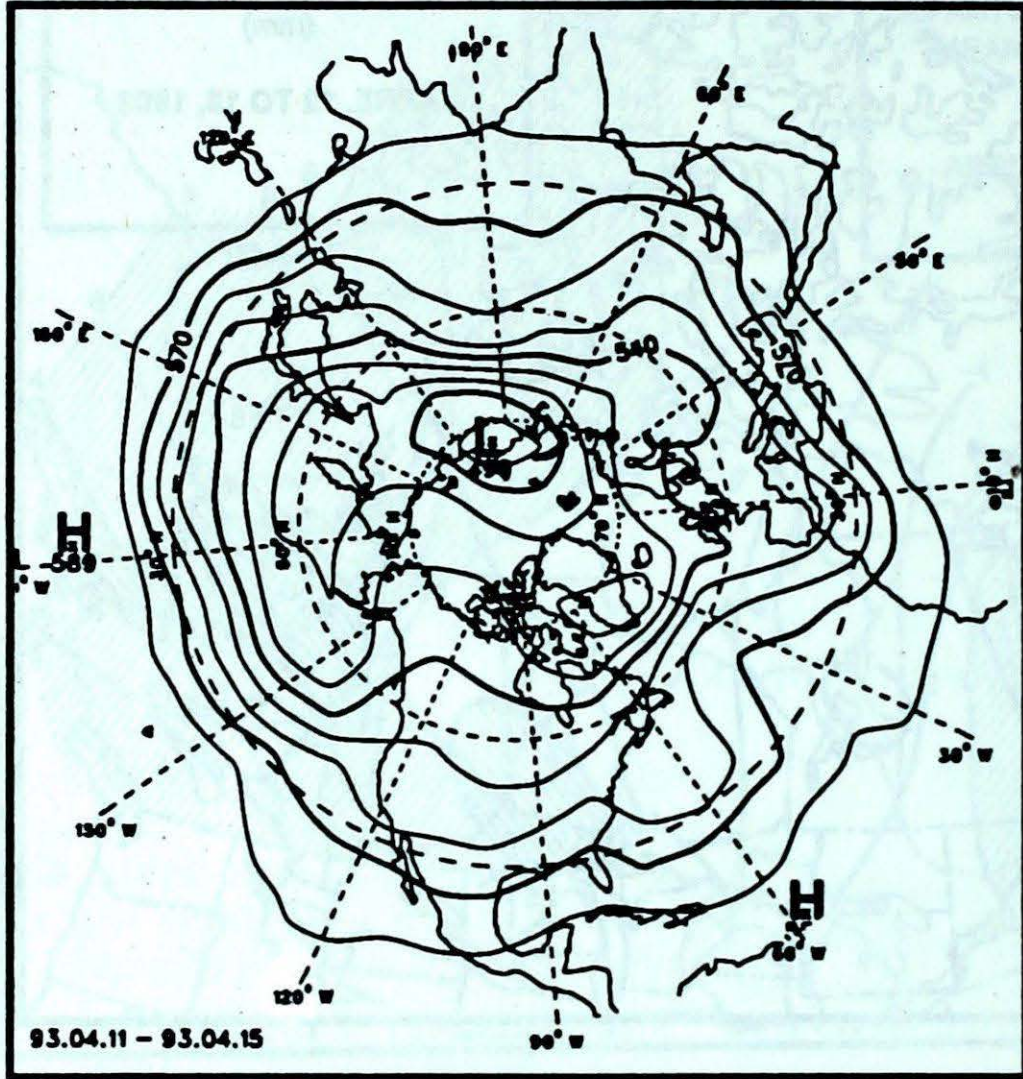
The data in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment Service.

Annual Subscriptions
and changes:

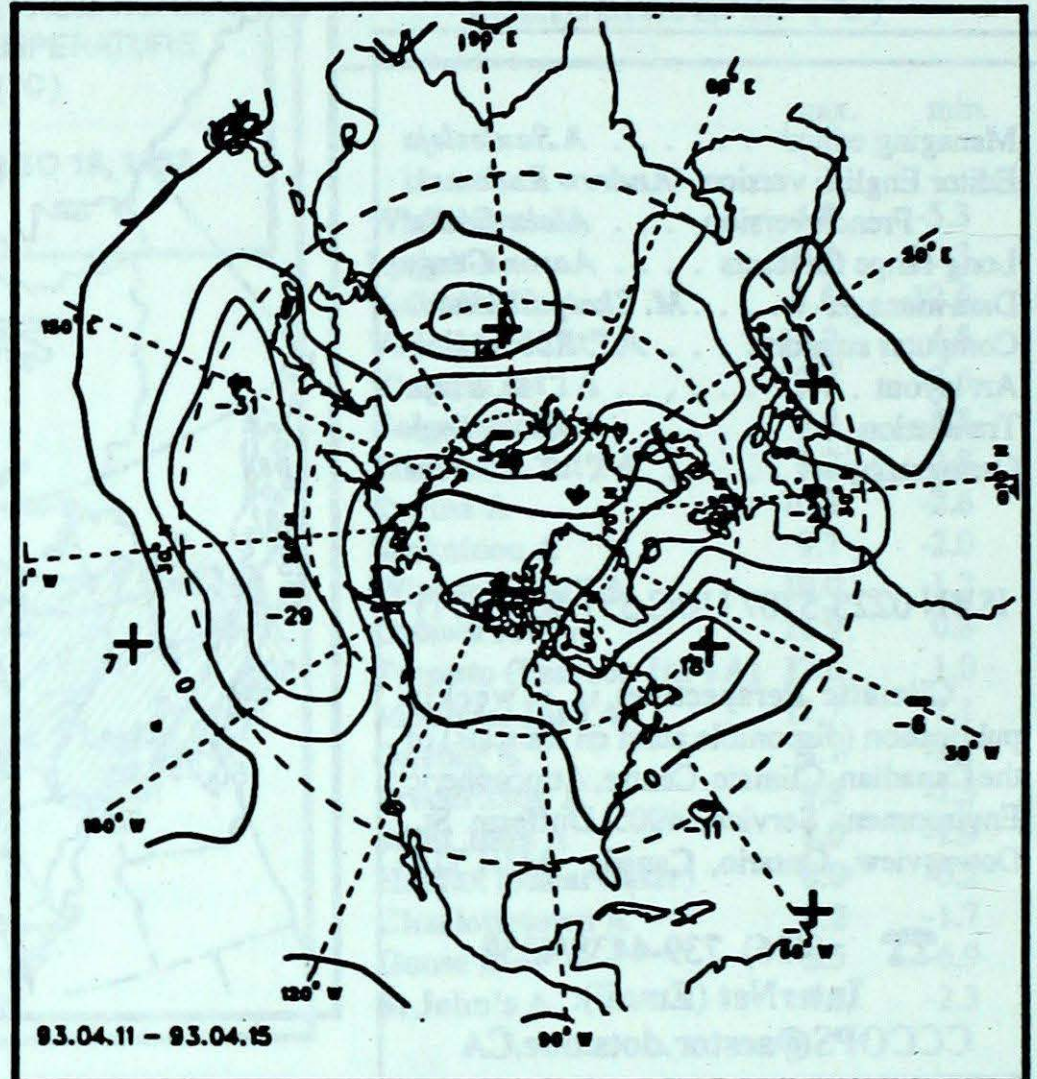
Albert Wright (416) 739-4446



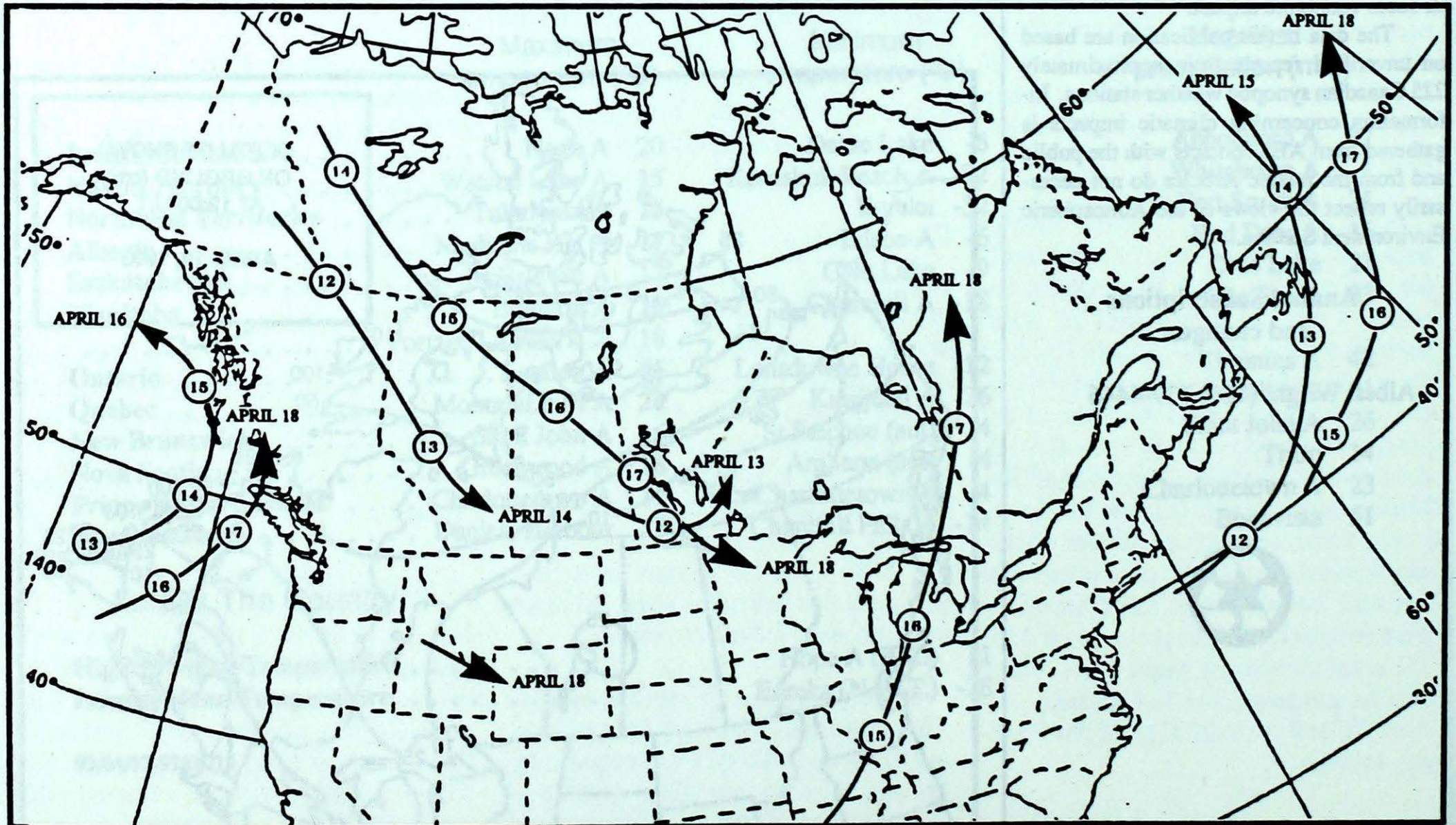
50-kPa ATMOSPHERIC CIRCULATION



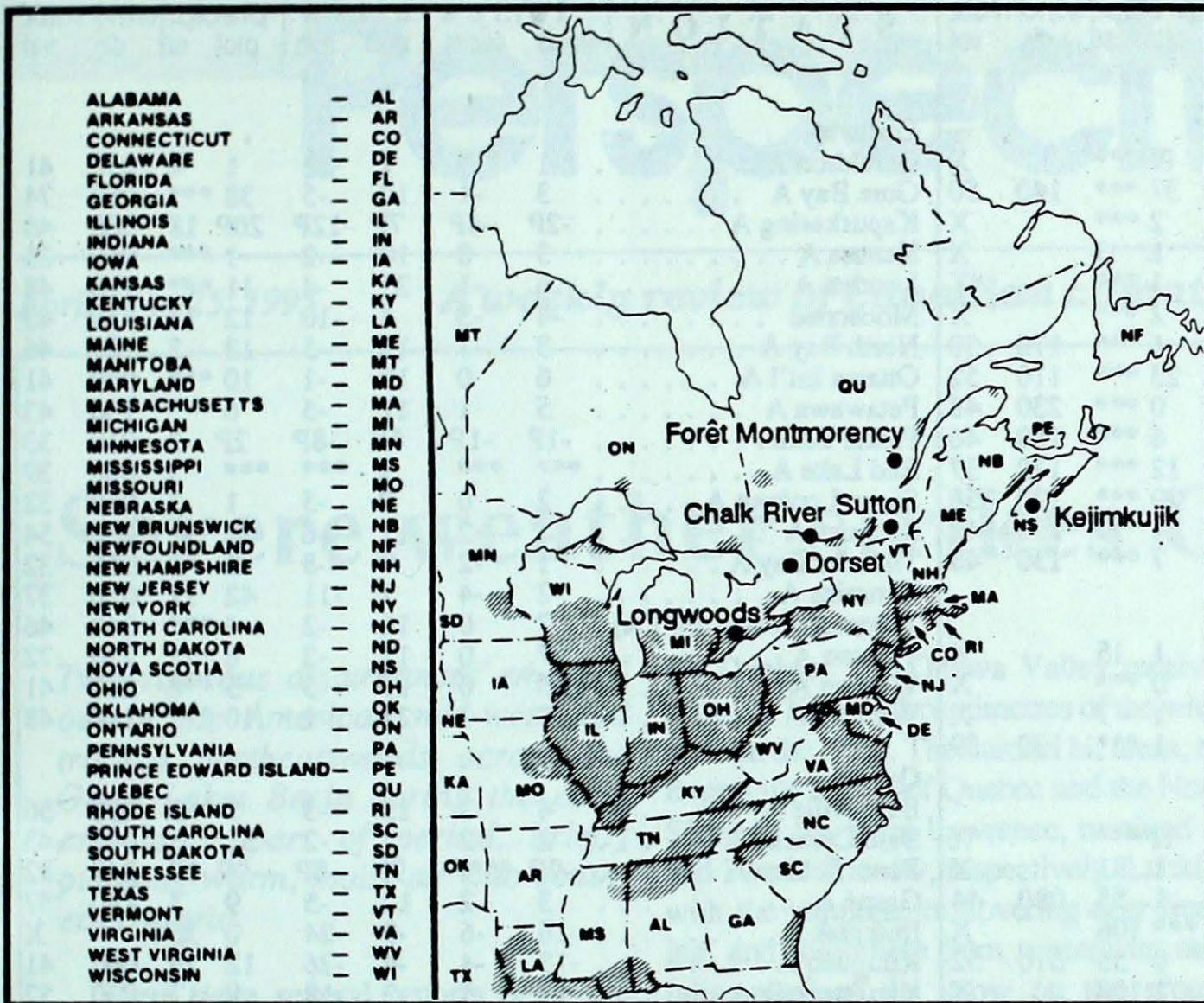
Mean geopotential height
50-kPa level (10 decametre intervals)



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 Environment and Energy. The map also shows the approximate areas (shaded), where SO₂ 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.

SITE	day	pH	amount	AIR PATH TO SITE
------	-----	----	--------	------------------

April 11 to 17, 1993

Longwoods				..... Data not available this week
Dorset *	15	3.8	2 R	..... Eastern Ohio; western Pennsylvania, west Virginia
	16	3.6	2 R	..... Southern Ontario, southern Michigan, Indiana
	17	3.7	2 M	..... Lake Huron, Michigan
Chalk River	17	4.0	3 R	..... Lake Huron, northern Ontario
Sutton	12	4.7	5 R	..... Southern Quebec, Maine
	16	4.9	9 R	..... New England, eastern New York
	17	5.0	19 R	..... New England, eastern New York
Montmorency	11	4.3	2 R	..... Main, Gulf Maine
	16	4.5	23 R	..... New England, eastern New York
	17	4.9	33 M	..... New England
Kejimikujik	11	4.9	6 R	..... Atlantic Ocean
	12	5.0	1 R	..... Nova Scotia
	13	4.8	2 R	..... Nova Scotia

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									Ontario																
Blue River A	7P	4P	16P	-3P	0P***			X	Geraldton A	-1	***	7	-11	1	4	050	41								
Comox A	9	1	14	4	37	***	140	50	Gore Bay A	3	-1	10	-5	38	***	950	74								
Cranbrook A	6	1	14	-2	2	***		X	Kapuskasing A	-2P	-4P	7P	-12P	20P	18	360	46								
Fort Nelson A	7	6	17	-3	1	3		X	Kenora A	3	0	10	-2	1	***	060	35								
Fort St John A	7	4	14	-2	1	***		X	London A	6	-1	25	-4	11	***	210	48								
Kamloops A	10	1	17	0	2	***		X	Moosonee	-4	-3	4	-10	12	13	350	43								
Penticton A	9	0	16	0	6	***	170	50	North Bay A	3	-1	14	-5	13	3	100	46								
Port Hardy A	8	1	14	0	23	***	110	52	Ottawa Int'l A	6	0	18	-1	10	***	080	41								
Prince George A	6	2	16	-3	0	***	230	48	Petawawa A	5	1	17	-5	6	***	130	43								
Prince Rupert A	8	3	14	1	6	***	150	46	Pickle Lake	-1P	-1P	6P	-8P	2P	3	010	33								
Smithers A	7	3	16	-5	12	***	170	37	Red Lake A	***	***	9	***	***	3	060	39								
Vancouver Int'l A	10	1	16	4	29	***	120	56	Sioux Lookout A	2	0	9	-5	1	3	050	32								
Victoria Int'l A	9	1	15	1	11	***	270	41	Sudbury A	2	-2	11	-6	23	***	050	54								
Williams Lake A	5	1	13	-3	7	***	130	46	Thunder Bay A	1	-2	9	-8	2	3	350	32								
Yukon Territory									Québec																
Komakuk Beach A	-13	5	-9	-22	1	15		X	Bagotville A	4	2	15	-3	7	3	090	56								
Teslin (aut)	4	***	14	-5	0	***		X	Baie Comeau A	2	2	7	-2	51	3	090	43								
Watson Lake A	3	4	15	-9	1	7		X	Blanc Sablon A	-2P	***P	9P	-8P	9P	17	040	82								
Whitehorse A	4	4	14	-4	1	***	130	39	Gaspé A	3	2	12	-5	9	3	180	57								
Northwest Territories									New Brunswick																
Alert	-20P	5P	0P	-28P	1P	***		X	Fredericton A	6	2	15	-3	13	3	180	67								
Baker Lake A	-15	2	-4	-29	1	81		X	Miscou Island (aut)	1P	1P	7P	-3P	8P	***		X								
Cambridge Bay A	-21	1	-14	-31	1	55	080	44	Moncton A	3	0	15	-3	18	***	360	57								
Cape Dyer A	***	***	***	***	***	106		X	Saint John A	5	2	16	-3	26	***	020	67								
Clyde A	-21	-2	-12	-29	0	55	310	52	St Leonard A	5	***	12	-1	18	3	170	50								
Coppermine A	-14	4	-6	-22	1	100		X	Nova Scotia																
Coral Harbour A	-18	-1	-4	-29	1	32		X	Greenwood A	5P	0P	18P	-3P	5P	***	160	70								
Eureka	-28P	1P	-22P	-32P	0P	***		X	Shearwater A	4P	0P	13P	-2P	7P	***	020	63								
Fort Smith A	4	6	12	-3	21	3		X	Sydney A	***	***	9	***	***	3	180	56								
Hall Beach A	-23	-1	-14	-32	0	59	280	39	Yarmouth A	6	2	15	-2	5	***	150	65								
Inuvik A	-6	9	6	-15	0	56		X	Prince Edward Island																
Iqaluit A	-20	-5	-12	-28	0	22	340	43	Charlottetown A	2	0	14	-4	23	3	180	65								
Mould Bay A	-19	6	-14	-26	1	14		X	East Point (auto)	2P	***P	7P	-2P	14P	***		X								
Norman Wells A	2P	9P	10P	-7P	1P	3		X	Newfoundland																
Resolute A	-22	1	-13	-29	1	14	330	37	Cartwright	-4	-1	11	-11	22	106	350	59								
Yellowknife A	0	7	7	-10	1	6		X	Churchill Falls A	-8P	-1P	-1P	-14P	10P	***	300	35								
Alberta									Gander Int'l A																
Calgary Int'l A	5	1	16	-5	0	***	350	50	Goose A	-4P	-2P	9P	-10P	26P	4	070	33								
Cold Lake A	5	2	13	-4	4	***		X	Stephenville A	4	2	12	-1	24	3	060	59								
Edmonton Namao A	6	2	15	-3	1	3	070	33	St John's A	2	1	11	-4	39	***	340	65								
Fort McMurray A	5	3	14	-2	11	***		X	St Lawrence	4	3	10	-2	6	***		X								
Grande Prairie A	7	4	16	-4	1	***		X	Wabush Lake A	-3	3	7	-13	19	7	210	41								
High Level A	6P	3P	17P	-4P	0P	***		X	93/04/12-93/04/18																
Lethbridge A	6	1	16	-5	1	***	330	50	<p>mean = mean weekly temperature, °C ptot = weekly precipitation total in mm</p> <p>max = maximum weekly temperature, °C st = snow thickness on the ground in cm</p> <p>min = minimum weekly temperature, °C dir = direction of max wind, deg. from north.</p> <p>anom = mean temperature anomaly, °C vel = wind speed in km/h</p> <p style="text-align: right;">— Annotations —</p> <p>X = no observation</p> <p>P = less than 7 days of data</p> <p>* = missing data when going to printing.</p>																
Medicine Hat A	8	2	17	-2	11	***		X																	
Peace River A	6	4	16	-3	2	***		X																	
Saskatchewan									Manitoba																
Cree Lake	1	0	8	-9	21	4	180	32	Brandon A	5	1	18	-5	2	***	290	59								
Estevan A	6P	2P	17P	-5P	1P	***	160	43	Churchill A	-10	-1	-1	-18	1	6		X								
La Ronge A	1	-1	5	-5	7	***	050	41	Lynn Lake A	0	0	9	-8	2	7	120	33								
Regina A	6	2	14	-4	4	***	100	37	The Pas A	0	-1	8	-16	33	26	160	43								
Saskatoon A	4	1	14	-4	1	***	100	37	Thompson A	0	0	8	-9	1	***	070	39								
Swift Current A	6	2	16	-4	5	***	120	46	Winnipeg Int'l A	5	0	16	-6	6	***	030	48								
Yorkton A	4	1	16	-4	1	***	350	41																	