Environment Canada Environnement Canada

Climatic Perspectives

MONTHLY SUPPLEMENT INCLUDED

June 11 to 17, 1990 — A weekly review of Canadian climate and water — Vol.12 No.24

Mountain snowmelt adds to flooding concerns in the West

. . . but hot, dry weather fuels forest fires in New Brunswick

Although the rain has abated somewhat, lake levels in the B.C. southern interior continue to rise, as warmer weather over the past week starts to melt snow in the mountains that accumulated the week before. The water level of Lake Okanagan on June 18 was at a height of 342.868 metres above sea level. This is well above the normal full level of 342.540 metres. The 1972 flood level of 342.812 metres has been surpassed, and with the present rate of increase, the all time record of 343.135 metres set in 1948 could be broken. The level is expected to peak in about 10 days.

The June precipitation total to-date, at Kelowna is 96.2 mm. This is well above the old June precipitation record of 62.2 mm set in 1982, and ranks as the 2nd wettest month ever for the entire period of record at Kelowna. Only August 1976 had a greater amount, 123.7 mm. The total amount of precipitation that has fallen since May 1 of this year is 185.2 mm, as compared to a normal of only 54.9 mm for the same period.

In Alberta, flooding has shifted to the Peace and Athabasca River Districts. In the first 14 days of June, Grande Prairie and Beaverlodge received 100.8 and 160.2 millimetres of rain, compared to a June normal of 70.0 and 68.4 millimetres, respectively. The normally tranquil Peace River peaked 6 metres above normal on June 15. The last time there was major flooding to this extent was in 1972. In the Spirit River area, 80% of the farm land has been damaged by heavy rains and flooding. Although spared this time around, flooding to Edmontonians is nothing new. There have been floods on the North Saskatchewan River in 1986, 1978, 1972, 1970, 1952, 1948 and 1944, but nothing has come close to the disaster suffered in 1915.

For more information contact:
B.C. A. Nourse (604) 765-3792
Alta. W. Prusak (403) 466-7721

New Brunswick's dry forests

A lack of rain is attributed as the main reason for two major forest fires. These fires have been burning out of control in the northern part of the province since last week. The fires have already burned 5,660 hectares of prime timber, and unless there are several days of rain, they will continue to burn for several weeks yet. From March to May inclusive, Charlo has received only 184.6 mm of precipitation compared to a normal of 253.7 mm, and from June 1 to 17, only 7.2 mm of rain has fallen, well below the monthly normal of 83.9 mm.

For more information contact:
F. Amirault (902) 426-9226

Warm, dry weather for the west...

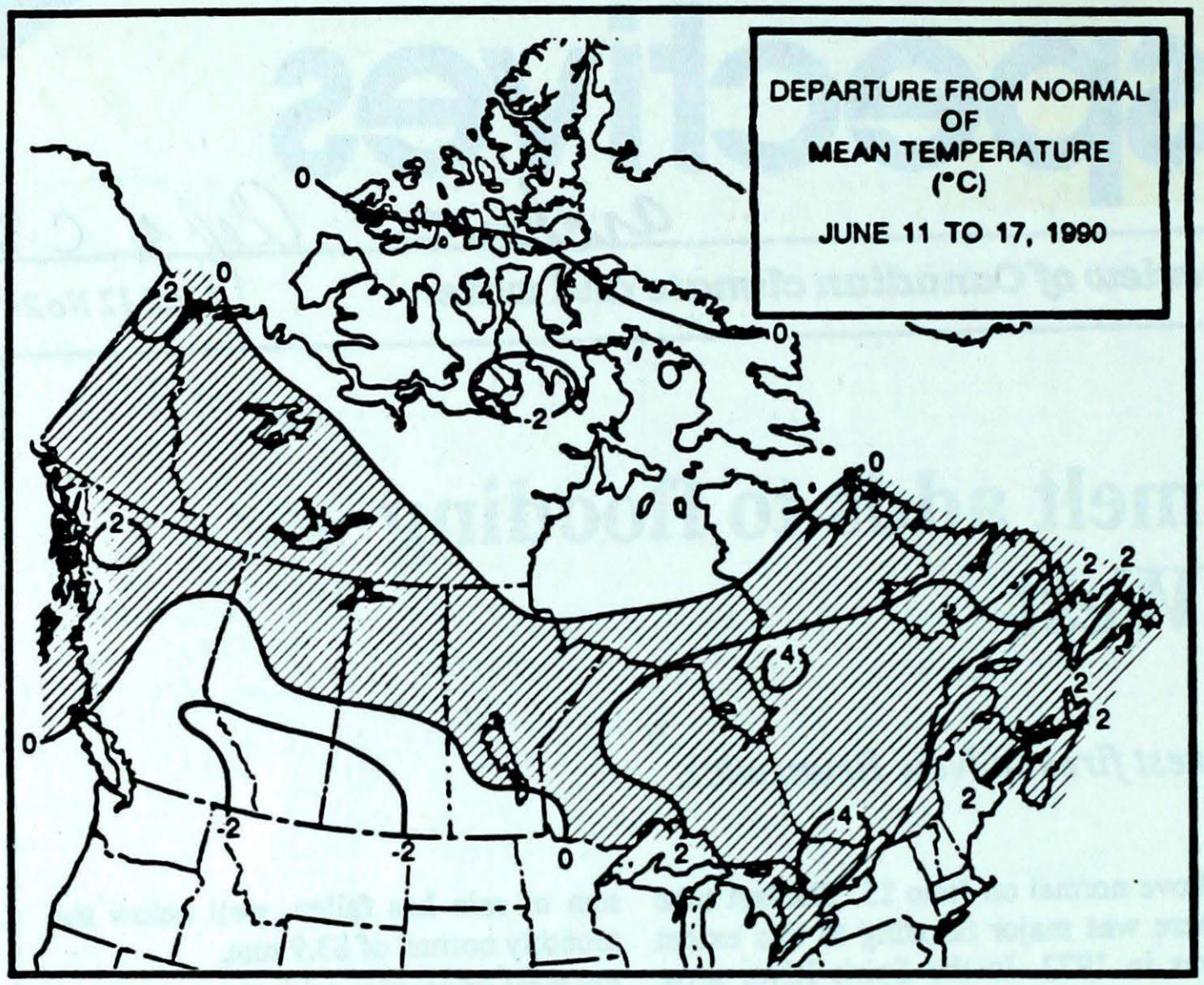
For the week of June 25, above-normal temperatures are expected across most of the country except Ontario, northern Quebec and the Atlantic provinces. The Prairies, Northwest Territories and Arctic Islands can expect temperatures of 3 to 6 degrees above normal. Southern Ontario will be about 3°C below normal. Precipitation is likely across coastal B.C., Quebec and the Atlantic region.

Peak river flow values in the Peace River District

	1990 peak flow	Rank of 1990 peak flow	Record & date
Kakwa River	1200	2nd	2700/1982
Beaverlodge River	65	2nd	104/1974
Wapiti River	5500	2nd	6300/1982
Smoky River	10000	1st	9200/1972
Peace River	19000	1st	15600/1972

River flow in cubic metres per second.

Canada



Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	18.6	5.2
Iqaluit A	6.7	0.2
Yellowknife A	17.5	7.7
Vancouver Int'l A	19.1	10.9
Victoria Int'l A	19.1	9.3
Calgary Int'l A	19.7	6.8
Edmonton Int'l A	20.3	7.5
Regina A	22.6	9.0
Saskatoon A	22.2	8.9
Winnipeg Int'l A	23.0	10.2
Ottawa Int'l A	23.3	11.6
Toronto (Pearson Int'l A)	23.5	11.4
Montréal Int'l A	23.3	12.4
Québec A	22.5	10.2
Fredericton A	22.6	9.0
Saint John A	19.2	7.8
Halifax (Shearwater)	18.1	8.7
Charlottetown A	19.0	8.7
Goose A	16.7	5.2
St John's A	15.3	5.6

Weekly temperature and precipitation extremes

	Maximum temperature (°C)		Minimum temperature (°C)		Heaviest precipitation (mm)	
British Columbia	Kamloops A	29	Puntzi Mountain (aut)	1	Fort St John A	38
Yukon Territory	Teslin (aut)	24	Shingle Point A	-3	Whitehorse A	8
Northwest Territories	Fort Simpson A	29	MacKar Inlet	-7	Cape Dorset A	28
Alberta	Fort McMurray A	28	Pincher Creek (aut)	0	Grande Prairie A	81
Saskatchewan	La Ronge A	27	Meadow Lake A	0	Cree Lake	39
Manitoba	Portage La Prairie A	28	Thompson A	-2	Grand Rapids (aut)	34
	Thompson A	28				
Ontario	Petawawa A	32	Moosonee	-2	Geraldton A	58
	Windsor A	32				
Québec	Gaspe A	31	La Grande IV A	-3	La Grande IV A	37
New Brunswick	Chatham A	31	Charlo A	1	Chatham A	35
Nova Scotia	Sydney A	28	Western Head (aut)	-8	Sable Island	120
Prince Edward Island	Summerside A	27	Charlottetown A	6		
Newfoundland	Comfort Cove	29	Badger (aut)	-4	St Lawrence	35

Across The Country...

Highest Mean Temperature	Ottawa Int'l A(ONT)	22
Lowest Mean Temperature	MacKar Inlet(NWT)	-3

90/06/11-90/06/17

CLIMATIC PERSPECTIVES
VOLUME 12

Managing Editor . . . . . *Amir Shabbar*
Editor-in-charge
- weekly/monthly . . . . *Andy Radomski*
French version . . . . . *Alain Caillet*
Data Manager . . . . *M. Skarpathiotakis*
Computer support . . . . . *Tommy Jang*
Art Set-up . . . . . *K. Czaja*
Translation . . . . . *D. Pokorn*
Cartography . . . . . *T. Chivers*

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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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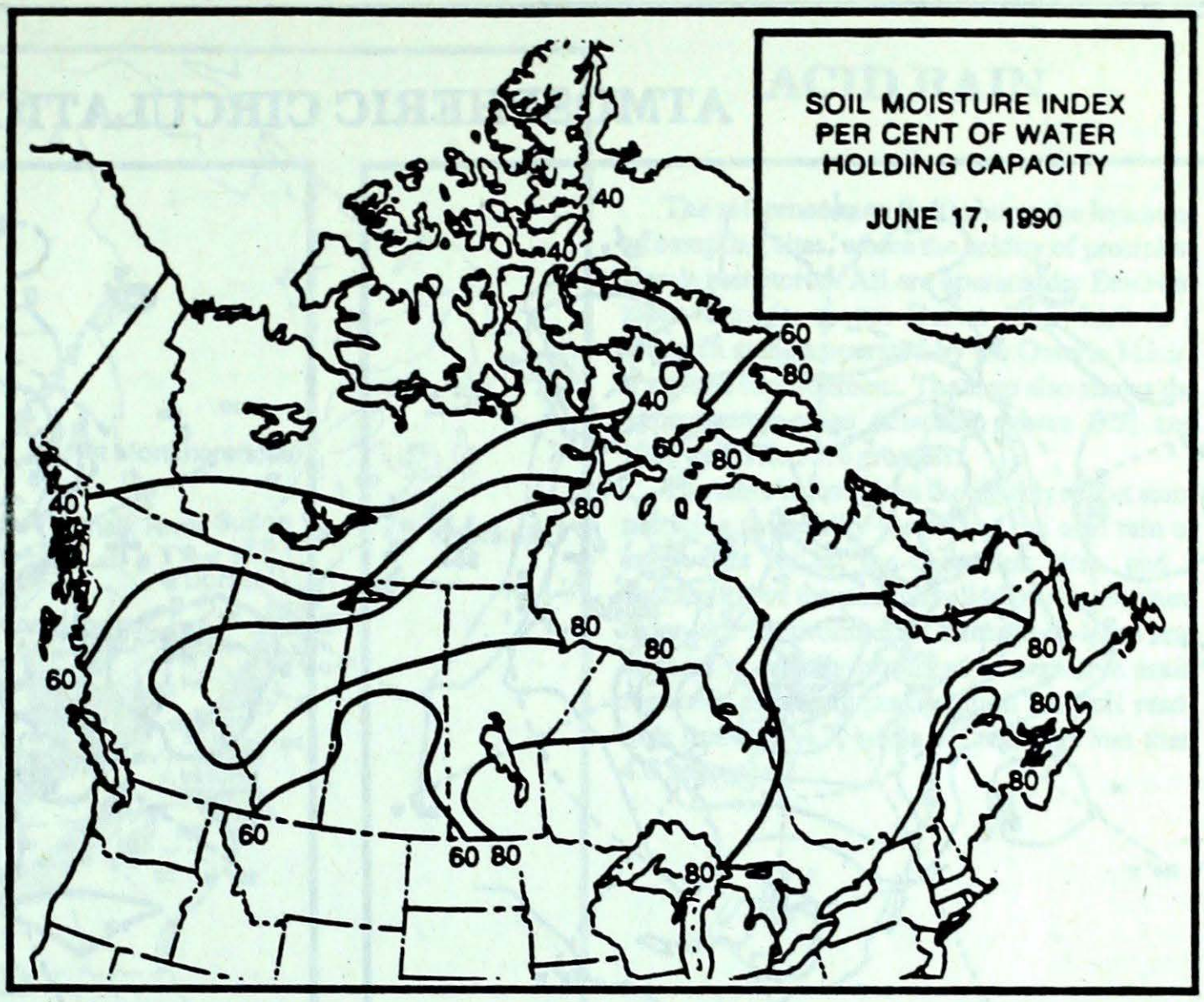
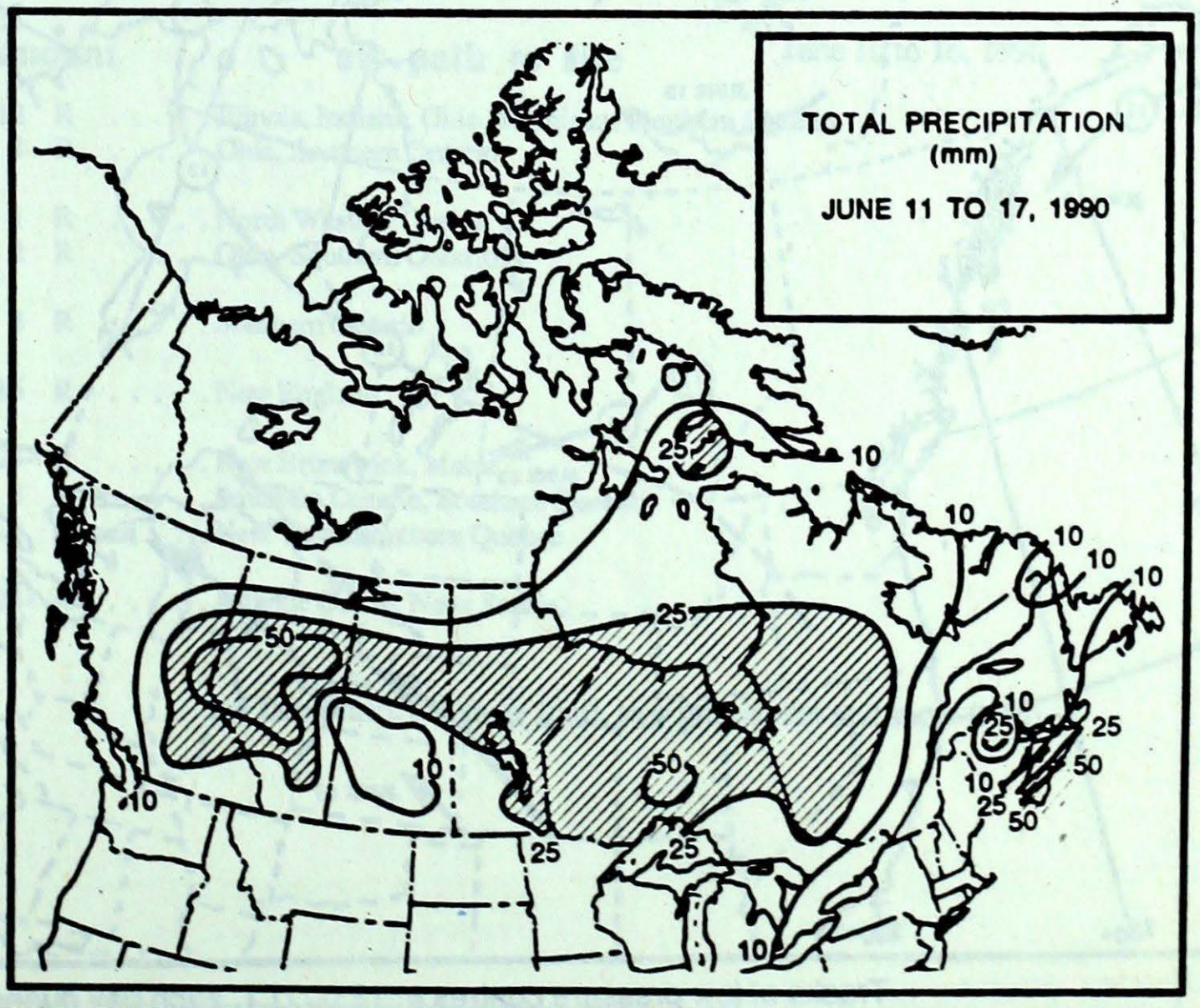
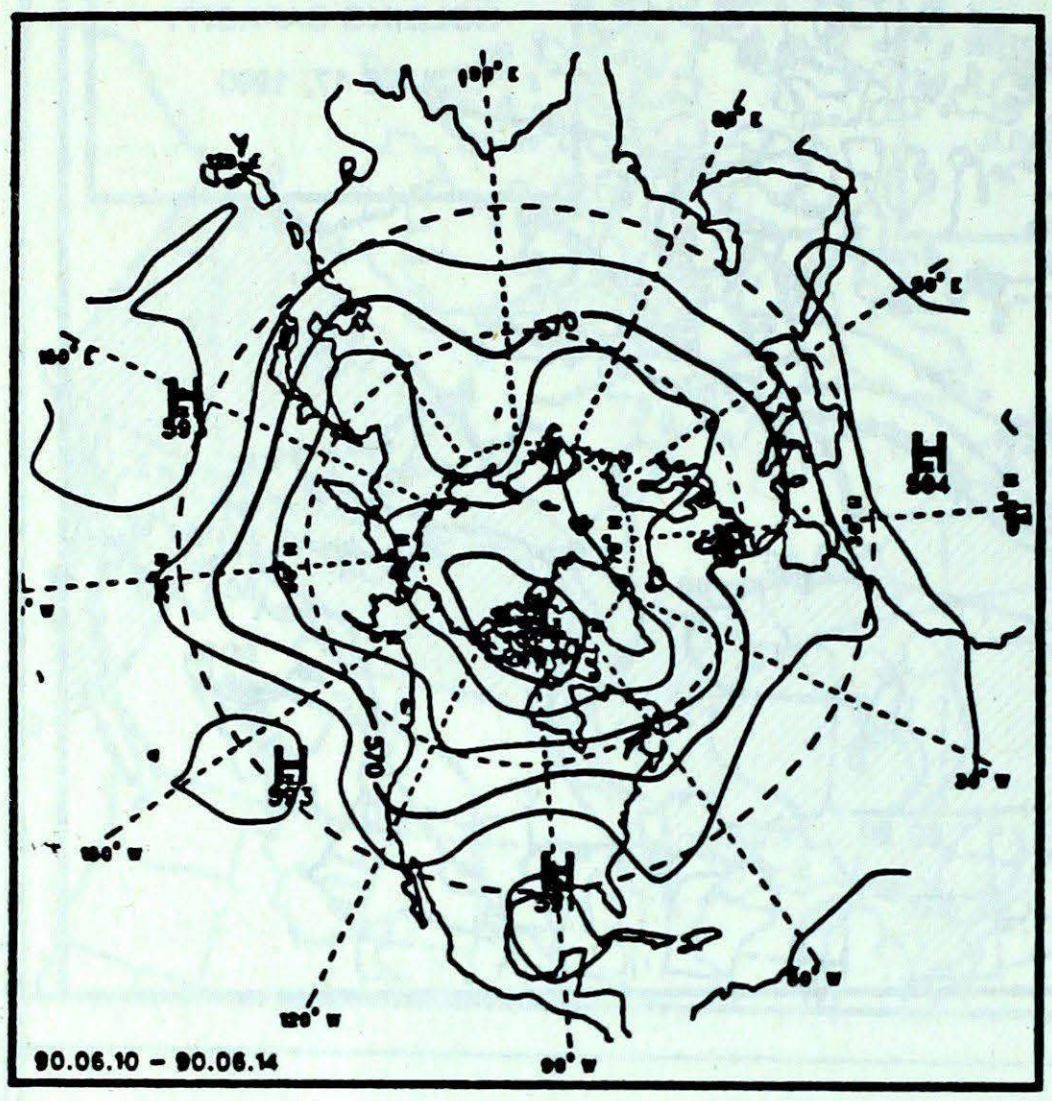
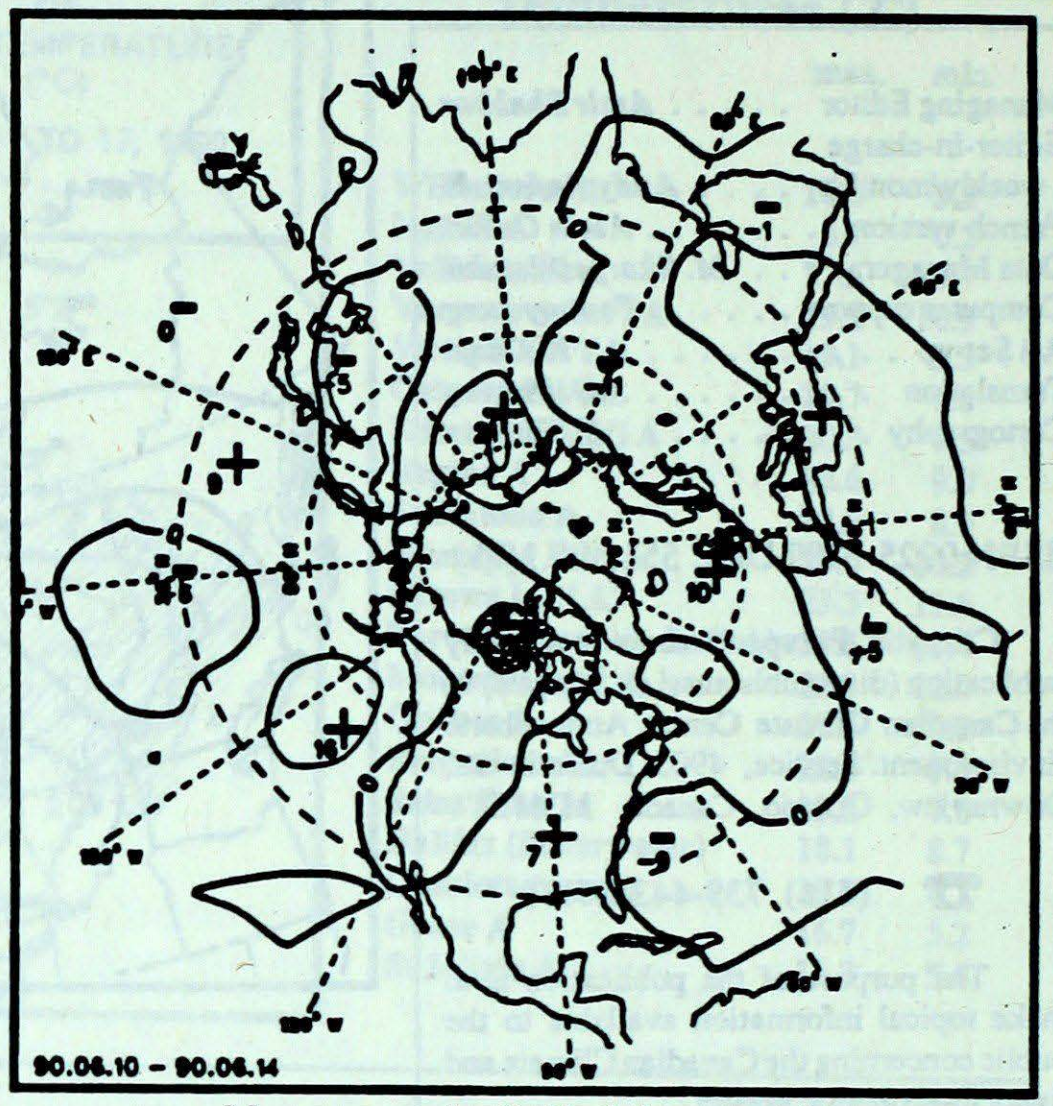




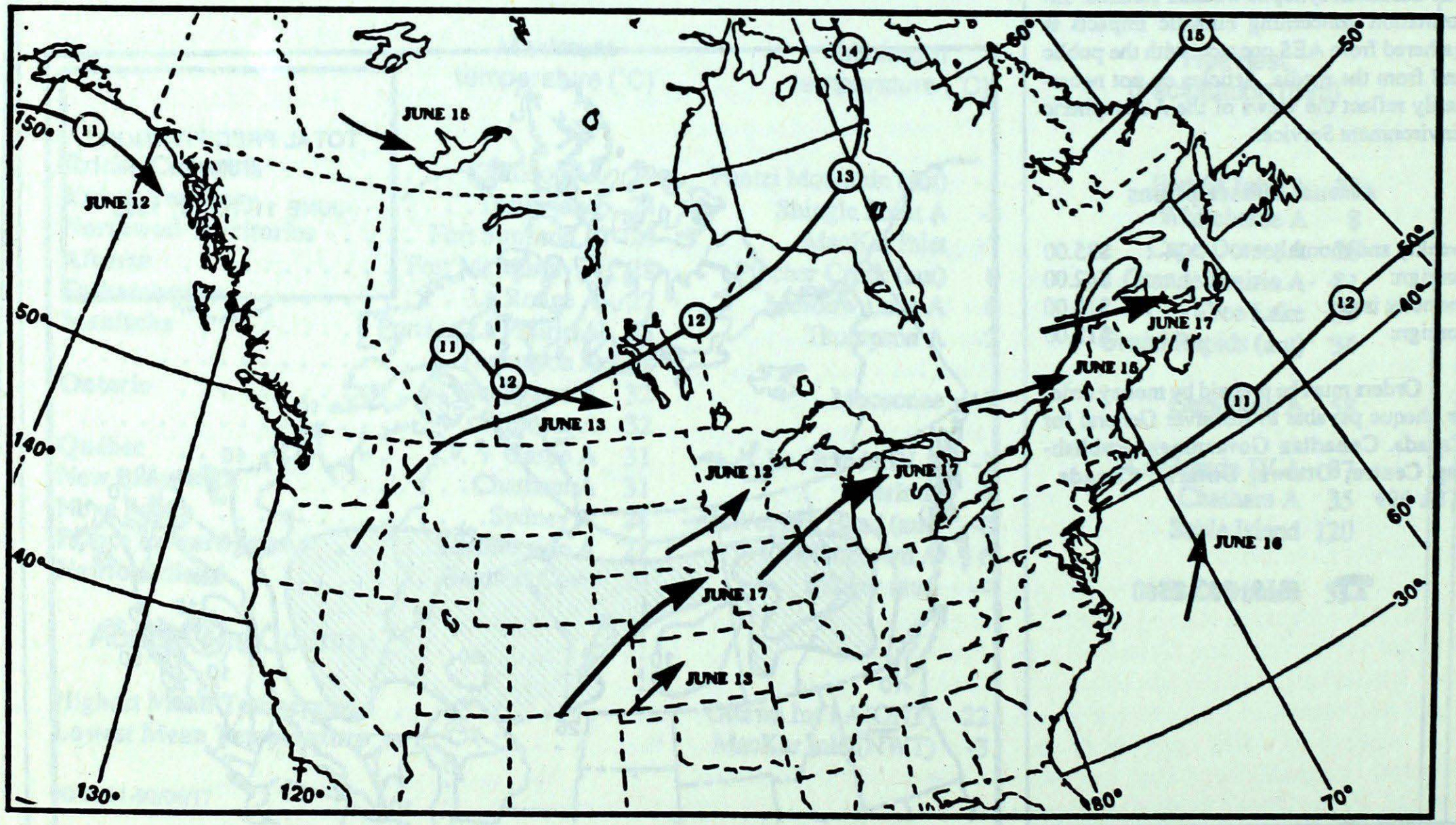
ATMOSPHERIC CIRCULATION



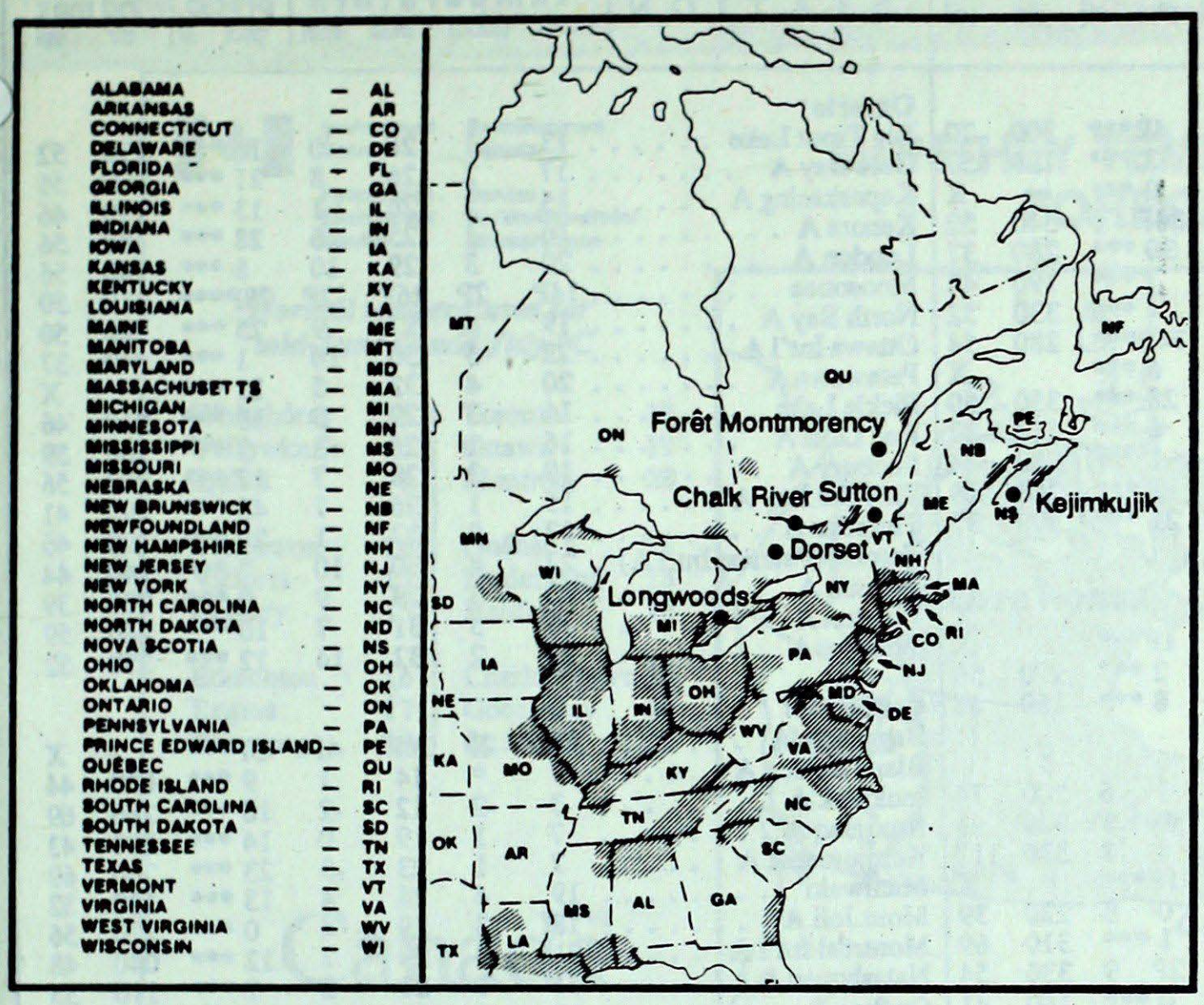
Mean geopotential height
50-kPa level (10-decametre intervals)



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.

June 10 to 16, 1990

Site	day	pH	amount		air path to site
Longwoods	14	4.0	12	R	. . . . . Illinois, Indiana, Ohio, Michigan, Southern Ontario
	16	3.4	4	R	. . . . . Ohio, Southern Ontario
Dorset *	10	4.5	1	R	. . . . . North Western Quebec
	12	4.0	2	R	. . . . . Ohio, Southern Ontario
Chalk River	12	3.8	8	R	. . . . . Southern Ontario
Sutton	10	4.5	15	R	. . . . . New England
Montmorency	10	4.8	7	R	. . . . . New Brunswick, Maine
	14	4.0	5	R	. . . . . Southern Ontario, Southern Quebec
	16	4.4	4	R	. . . . . New York, Southern Quebec
Kejimkujik	11	5.1	28	R	. . . . . Atlantic Ocean, Nova Scotia

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								
Cape St James	11P	0P	15P	9P	4P***		300	70
Cranbrook A	12	-2	24	3	3 ***		190	57
Fort Nelson A	16	2	27	8	2 ***			X
Fort St John A	14P	1P	25P	6P	38P	0	340	52
Kamloops A	16	-2	29	7	30 ***		280	37
Penticton A	16	-1	27	9	7 ***		190	43
Port Hardy A	12	0	18	7	4 ***		330	52
Prince George A	12P	-1P	24P	2P	34P***		280	54
Prince Rupert A	12	2	18	9	6 ***			X
Revelstoke A	14	-1	27	6	28 ***		350	50
Smithers A	13	1	26	5	6 ***		360	37
Vancouver Int'l A	15	0	23	10	1 ***		280	44
Victoria Int'l A	14	0	24	7	2 ***		260	48
Williams Lake A	12	-1	25	4	21 ***		300	37
Yukon Territory								
Komakuk Beach A	5	1	12	-2	5 ***			X
Teslin (aut)	12P	*	24P	3P	1P***			X
Watson Lake A	14	2	23	3	2 ***		270	56
Whitehorse A	12	0	24	2	8 ***		160	48
Northwest Territories								
Alert	1	2	7	-2	1	6	200	74
Baker Lake A	3	-1	11	-2	0	1	330	63
Cambridge Bay A	1	-1	6	-3	4	8	330	111
Cape Dyer A	0P	-1P	9P	-3P	1P***			X
Clyde A	2	1	8	-3	0	3	220	39
Coppermine A	4	1	19	-2	1 ***		310	69
Coral Harbour A	0P	-2P	5P	-5P	2P	9	330	54
Eureka	5	3	12	1	0 ***		160	41
Fort Smith A	15	2	27	1	2 ***		030	48
Hall Beach A	0	0	3	-3	6	38	190	56
Inuvik A	12	1	24	-2	2 ***			X
Iqaluit A	3	-1	10	-1	4 ***		150	85
Mould Bay A	0	0	7	-5	0	1	330	39
Norman Wells A	15	1	24	3	4 ***		130	48
Resolute A	-1	0	4	-5	0	7	030	82
Yellowknife A	13P	0P	21P	4P	4P***		360	59
Alberta								
Calgary Int'l A	11	-2	21	4	15 ***		270	93
Cold Lake A	15	1	25	1	3 ***		020	57
Edmonton Namao A	13	-1	24	4	13 ***		350	67
Fort McMurray A	15	1	28	0	62 ***		220	44
High Level A	14	0	27	2	24 ***		010	57
Jasper	11	-2	23	2	60 ***			X
Lethbridge A	11	-4	22	3	28 ***		250	100
Medicine Hat A	13	-3	26	4	15 ***		230	96
Peace River A	13	0	26	5	42 ***		010	70
Saskatchewan								
Cree Lake	13	0	27	1	39 ***		240	56
Estevan A	15	-2	25	5	17 ***		150	50
La Ronge A	16	2	27	4	24 ***		040	37
Regina A	15	-1	26	5	1 ***		230	56
Saskatoon A	15	-1	26	5	1 ***		250	59
Swift Current A	13	-2	24	3	6 ***		230	74
Yorkton A	15	0	24	2	15 ***		280	54
Manitoba								
Brandon A	15P	-1P	27P	3P	14P***		250	43
Churchill A	5	-1	15	0	20 ***		350	57
Lynn Lake A	12	1	27	0	18 ***		250	56
The Pas A	15	0	25	2	20 ***		230	59
Thompson A	12	1	28	-2	25 ***		250	57
Winnipeg Int'l A	16P	-1P	25P	3P	8P***		210	59

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
Ontario								
Big Trout Lake	13	1	26	0	16 ***		270	52
Gore Bay A	17	2	26	8	21 ***		190	56
Kapuskasing A	15	2	26	1	13 ***		190	46
Kenora A	16	1	25	6	28 ***		180	56
London A	20	3	29	10	6 ***		180	56
Moosonee	14P	2P	26P	-2P	28P***		210	50
North Bay A	19	4	27	9	25 ***		240	50
Ottawa Int'l A	22	5	30	10	1 ***		040	37
Petawawa A	20	4	32	5	11 ***			X
Pickle Lake	16	3	29	3	13 ***		210	46
Red Lake A	16	1	26	3	9 ***		180	59
Sudbury A	19	3	28	7	17 ***		210	56
Thunder Bay A	15	1	26	7	43 ***		290	41
Timmins A	17	2	27	1	20 ***		190	46
Toronto(Pearson Int'l A)	22	4	30	10	7 ***		240	44
Trenton A	20	3	29	9	0 ***		200	39
Wiarton A	18	3	31	7	10 ***		240	59
Windsor A	22	2	32	14	12 ***		250	52
Québec								
Bagotville A	17P	2P	30P	4P	5P***			X
Blanc Sablon A	7	*	14	1	9 ***		030	44
Inukjuak A	3	-2	12	-2	18 ***		280	69
Kuujjuaq A	7	1	19	0	14 ***		290	43
Kuujjuarapik A	7	1	23	-3	23 ***		200	69
Maniwaki	19	4	28	4	13 ***		130	32
Mont Joli A	18	3	29	4	0 ***		220	56
Montréal Int'l A	21	3	29	7	12 ***		040	48
Natashquan A	11	1	21	2	2 ***		110	35
Québec A	19	3	27	7	4 ***			X
Schefferville A	8	0	16	-1	18	211	300	54
Sept-Îles A	14	3	23	3	1 ***		210	52
Sherbrooke A	17	2	28	3	10 ***			X
Val-d'Or A	17	3	27	6	25 ***		340	35
New Brunswick								
Charlo A	18	3	30	1	2 ***		230	35
Chatham A	19	4	31	2	35 ***		080	46
Fredericton A	18	2	30	5	0 ***		170	43
Moncton A	17	2	28	5	0 ***		170	48
Saint John A	15	1	25	6	0 ***		040	44
Nova Scotia								
Greenwood A	17	1	27	4	2 ***		040	46
Shearwater A	14	0	22	6	17 ***		060	46
Sydney A	15	2	28	4	15 ***		240	44
Yarmouth A	15	2	24	6	79 ***		040	37
Prince Edward Island								
Charlottetown A	17	3	27	6	0 ***		230	44
Summerside A	17	3	27	8	0 ***		190	54
Newfoundland								
Cartwright	10	3	25	1	3 ***		230	52
Churchill Falls A	11	3	19	1	14 ***		240	54
Gander Int'l A	15	4	28	1	13 ***		240	44
Goose A	12	1	27	1	1 ***		240	69
Port Aux Basques	10	2	19	5	5 ***		280	33
St John's A	12	1	24	0	24 ***		240	56
St Lawrence	10	2	22	2	35 ***			X
Wabush Lake A	12	3	23	2	11 ***		310	67

90/06/11-90/06/17

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.

Environment Canada / Environnement Canada

Atmospheric Environment Service / Service de l'environnement atmosphérique

Normal temperatures for mid-June to mid July, °C

Whitehórse	13	Toronto	19
Yellowknife	15	Ottawa	19
Iqaluit	6	Montréal	20
Vancouver	16	Québec	18
Victoria	15	Fredericton	18
Calgary	15	Halifax	16
Edmonton	16	Charlottetown	16
Regina	17	Goose Bay	14
Winnipeg	18	St. John's	13

Canada

MONTHLY TEMPERATURE FORECAST