Environment Canada Environnement Canada

Climatic Perspectives

MONTHLY SUPPLEMENT INCLUDED

June 08 to 14, 1992 **A weekly review of Canadian climate and water** *Vol. 14 No. 24*

Welcome rain in the southern Prairies

The mild El-Niño winter has left its mark on the southern parts of Alberta, British Columbia and southwestern Saskatchewan as above-normal temperatures and below-normal precipitation, during winter and spring, have reduced soil moisture and stream flows to extremely low levels. Concern has been growing regarding the possibly of insufficient water supplies, to meet the provincial and international water transfer agreements. Fortunately, significant amounts of rain fell over those regions last week, slightly reducing the drought stress. On the other hand, the dry spell over Ontario and parts of Maritimes continues, increasing the forest fire hazard.

On Thursday, a low pressure system moving across the northwestern states, pushed moisture into southern regions of British Columbia and Alberta. Weekly totals of 150 mm to 175 mm of rain were reported along the foothills of the Rockies, as well as over the area lying west and southwest of Calgary, while Calgary itself received 102 mm.

The dry, southwest corner of Saskatchewan also benefitted from 15 mm to 40 mm of rain. The amounts and nature of the rainfalls were ideal for agriculture, as the precipitation extended over a few days. The soil moisture conditions have been upgraded from low and very low to adequate in the areas west of Lethbridge and Brooks.

In the foothills, the moisture status is now considered high. However, over the areas from Brooks to Milk River and east to the Cypress Hills, soil moisture conditions are still rated as low. Prospects for the wheat crop improved significantly, especially over western half of southern Alberta, where the dryland spring-seeded annual crops will benefit the most. Winter wheat crops are in the heading stage and although the rain will improve yield prospects, it is too late to provide the maximum benefit.

Dry and severe weather

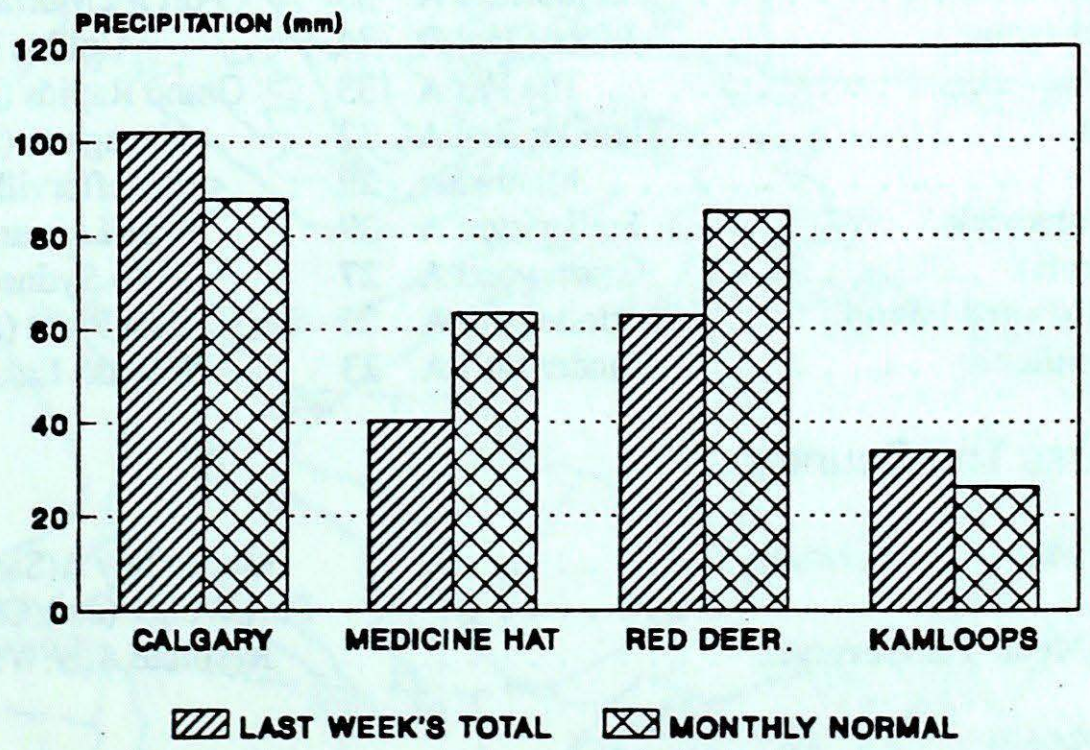
Dry weather over Ontario increased the forest fire potential. The weekend period proved to be very active as 132 new forest fires were reported, some of them exhibiting impressive fire behaviour characteristics. Rates of spread of 40 metres per minute were common, resulting in fire fronts moving 4 km to 8 km until arrested. Two dangerous fires were burning very close to the village of Summer Beaver, near Geraldton, causing authorities to impose a precautionary evacuation.

Another vigorous forest fire raged through an area of rugged wildland near Halifax International Airport over the weekend, consuming more than 520 hectares of woodland; it was still classified as out of control on Sunday, even though 76 firefighters and five helicopters were fully employed.

A raucous thunderstorm startled residents from Yarmouth to Dartmouth, N.S. from their sleep during the early morning hours on the 10th. The lightning, which struck the power substation, left thousands of citizens without power for more than eight hours, disrupting transportation and commercial activities.

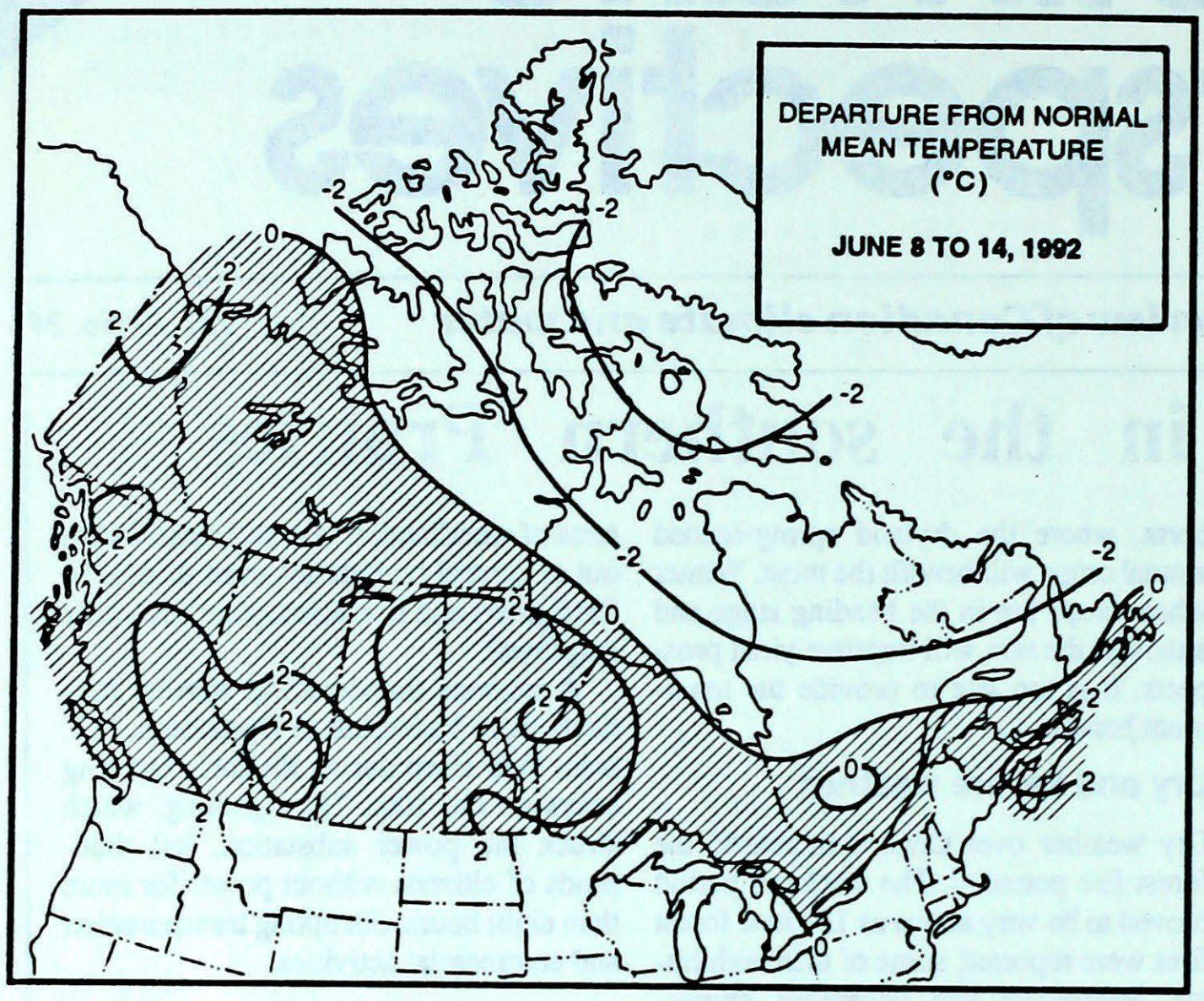
A look ahead...

For the week of June 22, above-normal temperatures are expected over most of the country, except for east of Ontario where below-normal temperatures are likely. Significant precipitation is forecasted over the southern parts of British Columbia and the Prairies. The Atlantic provinces may also experience stormy weather.



A well-timed rainfall, in good quantities, during the week over southern British Columbia and the neighbouring Prairies alleviated parched soils.

Canada



Weekly normal temperatures (°C)

	max.	min.
Whitehorse A	18.5	4.9
Iqaluit A	5.7	-0.5
Yellowknife A	16.6	7.0
Vancouver Int'l A	18.8	10.5
Victoria Int'l A	18.6	9.1
Calgary Int'l A	19.5	6.3
Edmonton Int'l A	20.1	7.1
Regina A	22.4	8.7
Saskatoon A	21.8	8.6
Winnipeg Int'l A	22.3	9.9
Ottawa Int'l A	23.0	11.2
Toronto (Pearson Int'l A)	23.6	11.0
Montréal Int'l A	22.9	11.7
Québec A	21.8	9.2
Fredericton A	21.7	7.9
Saint John A	18.4	7.3
Halifax (Shearwater)	17.5	8.2
Charlottetown A	17.9	7.8
Goose A	15.2	4.3
St John's A	13.8	4.6

Weekly temperature and precipitation extremes

	Maximum temperature (°C)		Minimum temperature (°C)		Heaviest precipitation (mm)	
British Columbia	Revelstoke A	30	Puntzi Mountain (aut)	0	Vancouver Int'l A	48
Yukon Territory	Dawson A	30	Dawson A	-3	Komakuk Beach A	20
Northwest Territories	Fort Simpson A	33	Resolute A	-12	Nicholson Peninsula	14
Alberta	Lethbridge A	33	Fort McMurray A	1	Calgary Int'l A	102
Saskatchewan	Moose Jaw A	34	Collins Bay	3	Eastend Cypress (aut)	36
Manitoba	The Pas A	33	Grand Rapids (aut)	-3	Gimli	14
Ontario	Thunder Bay A	32	Nagagami (aut)	-1	Sudbury A	13
Quebec	Maniwaki	29	Schefferville A	-4	Montréal Int'l A	43
New Brunswick	Fredericton A	29	St-Léonard A	5	Moncton A	26
Nova Scotia	Greenwood A	27	Sydney A	1	Amherst (aut)	26
Prince Edward Island	Charlottetown A	26	East Point (aut)	6	Charlottetown A	16
Newfoundland	Gander Int'l A	23	Wabush Lake A	-4	Gander Int'l A	30

Across The Country...

Highest Mean Temperature	Moose Jaw A(Sask.)	21
	Port Weller (aut)(Ont.)	21
Lowest Mean Temperature	Resolute A(N.W.T.)	-5

92/06/08-92/06/14

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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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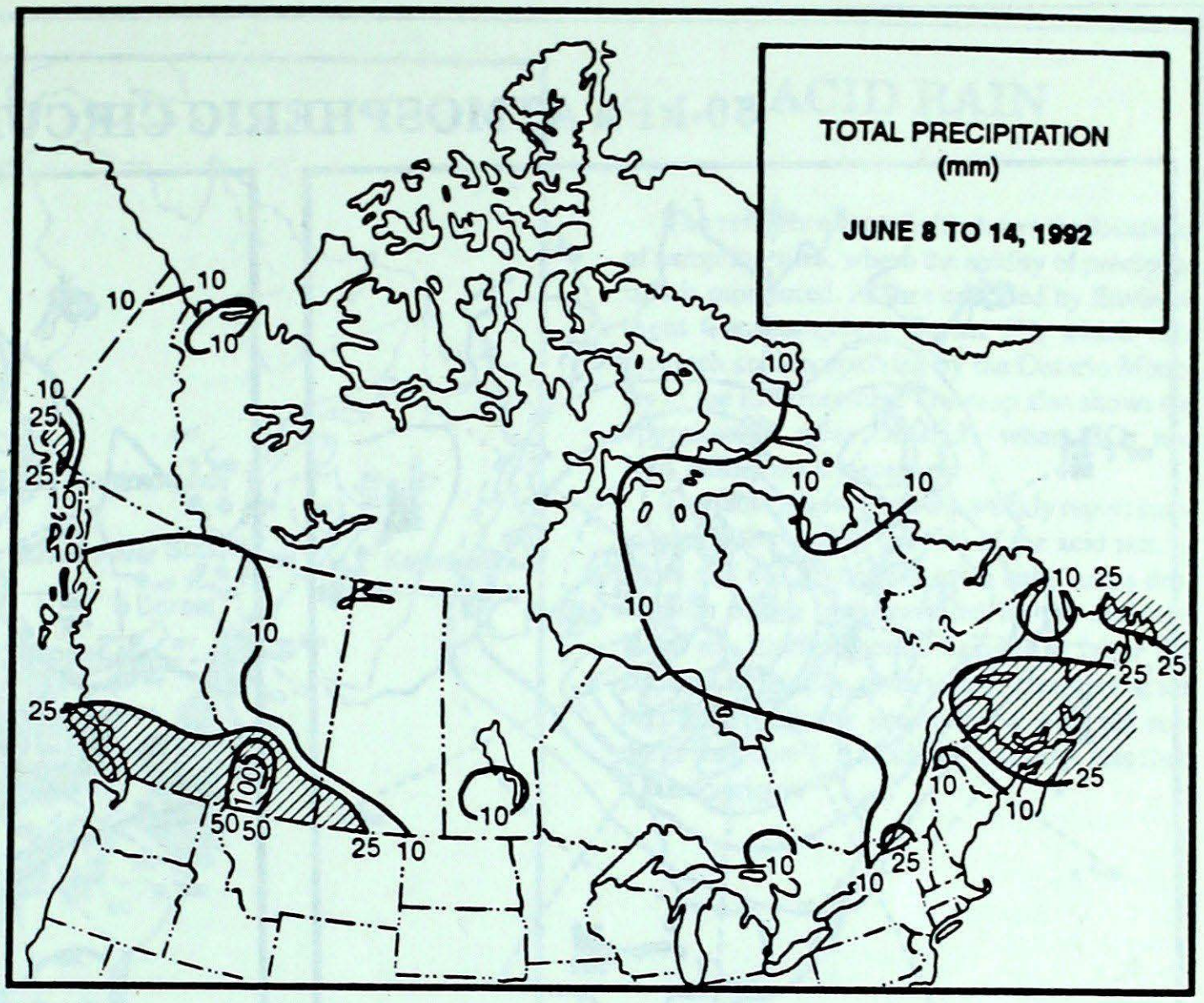
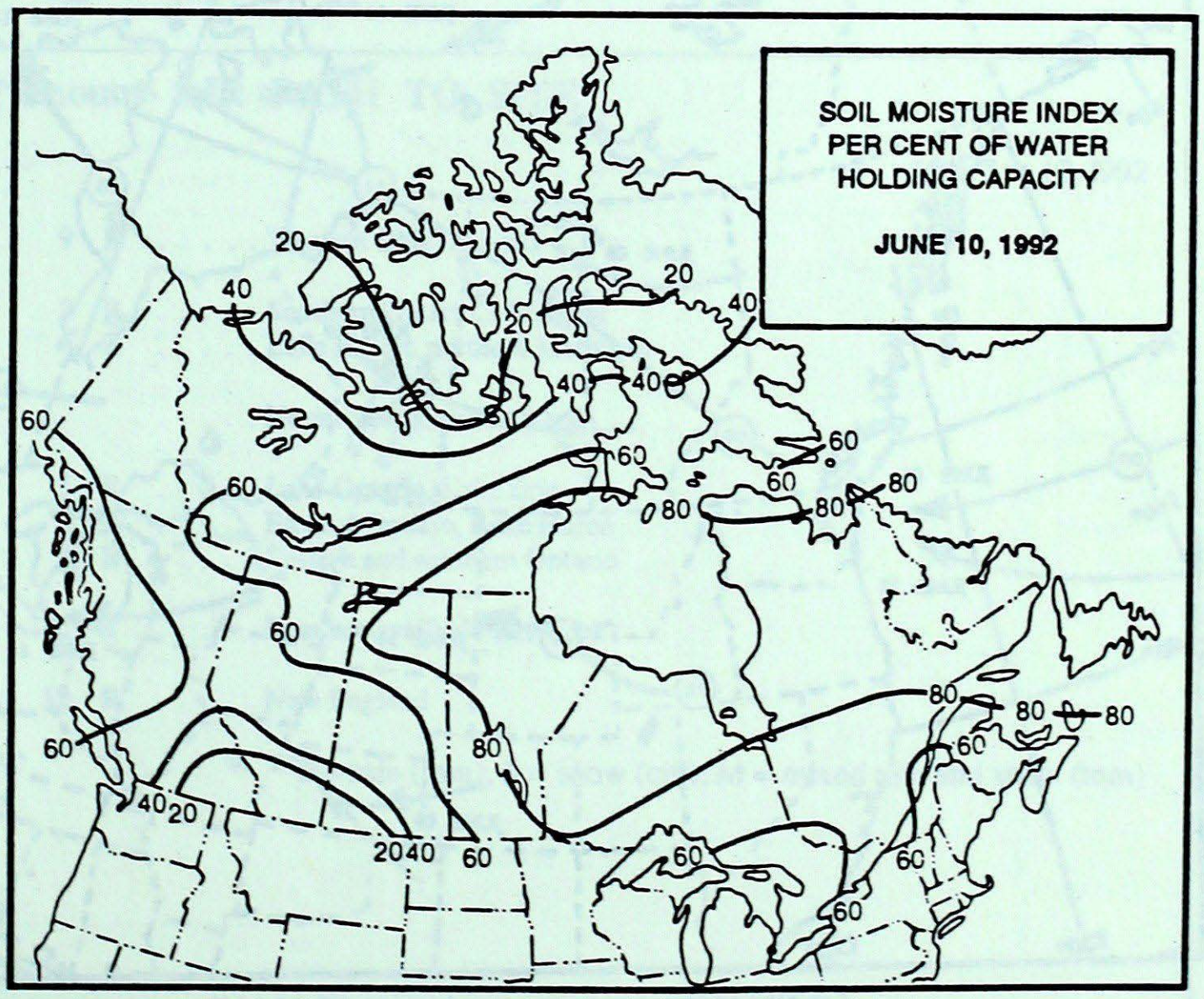
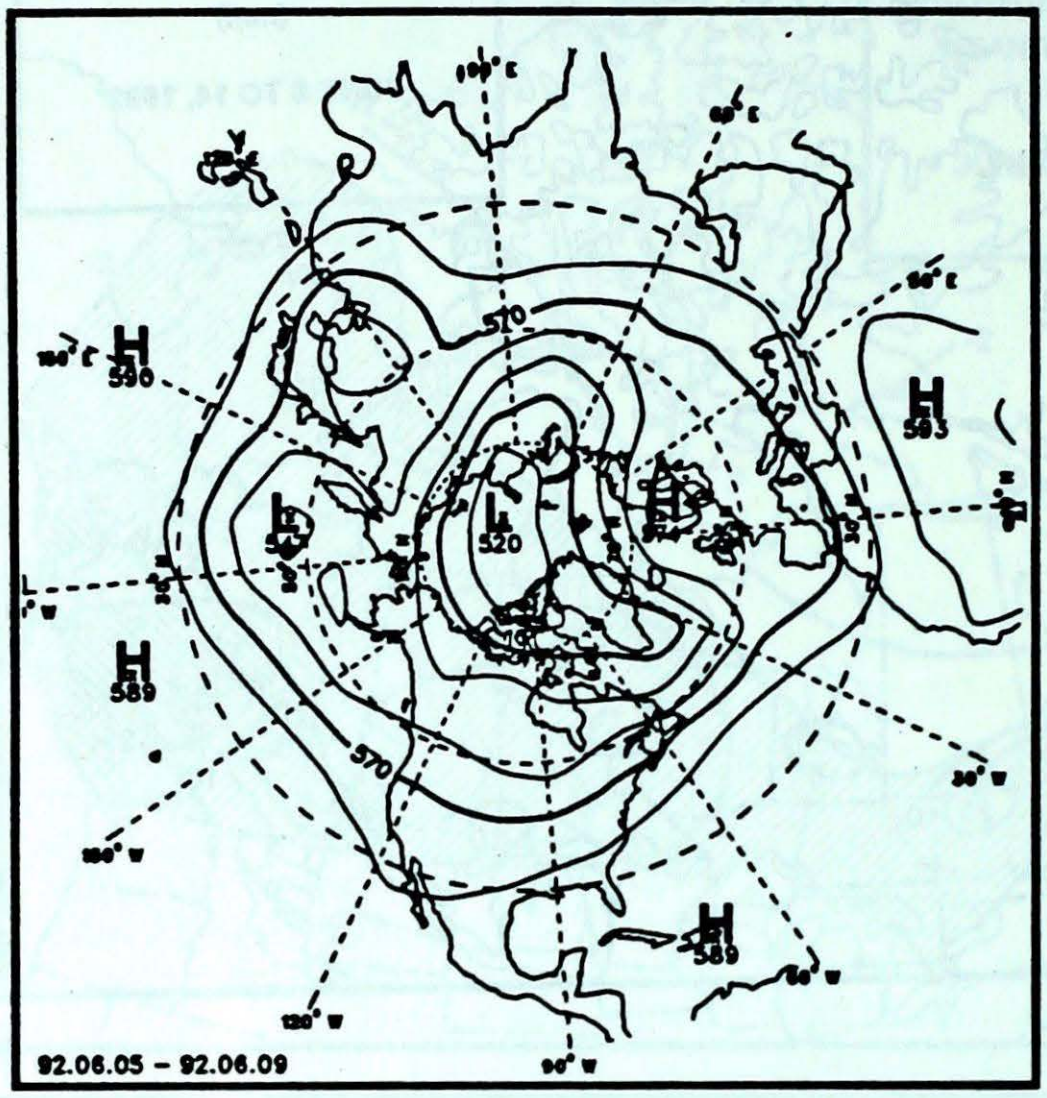
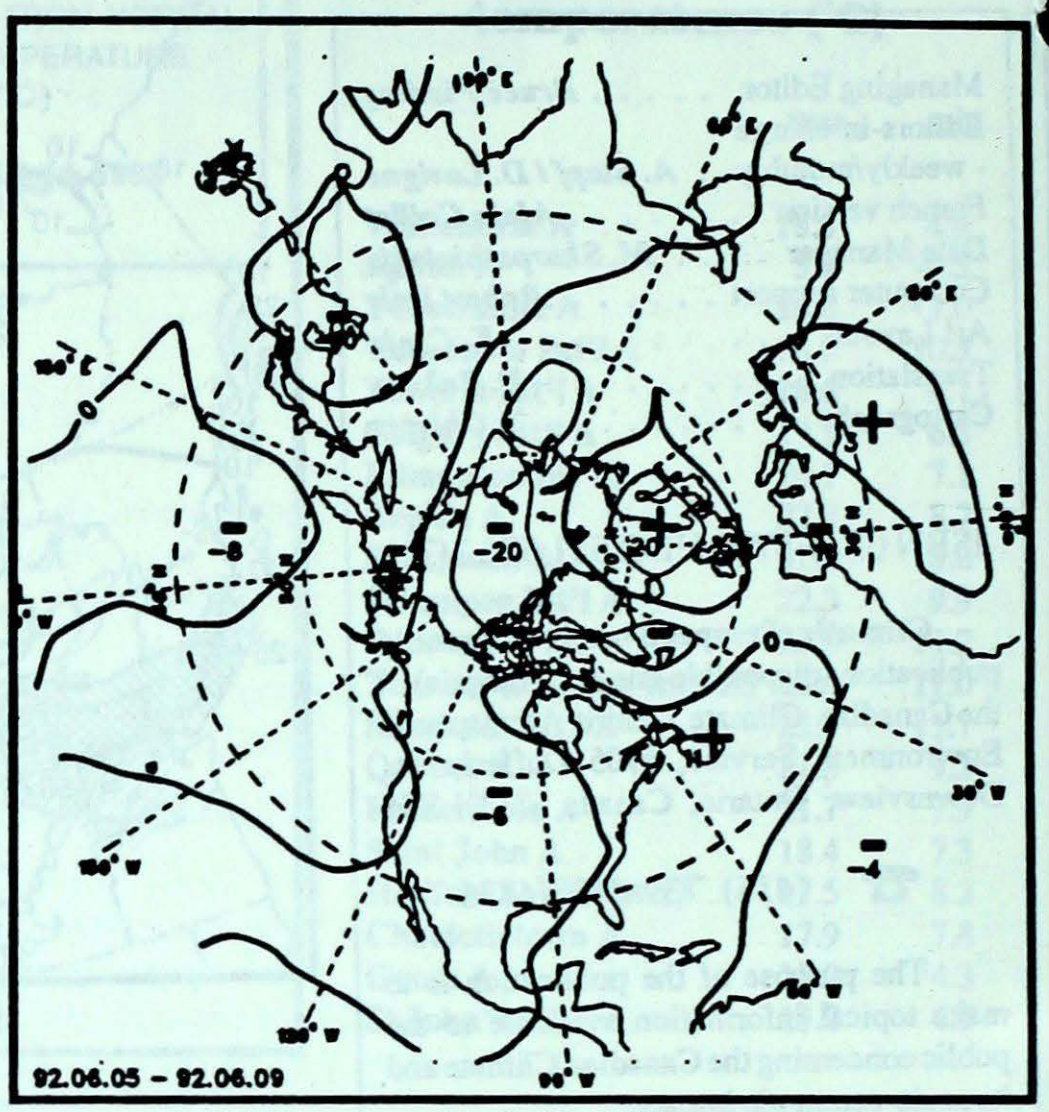




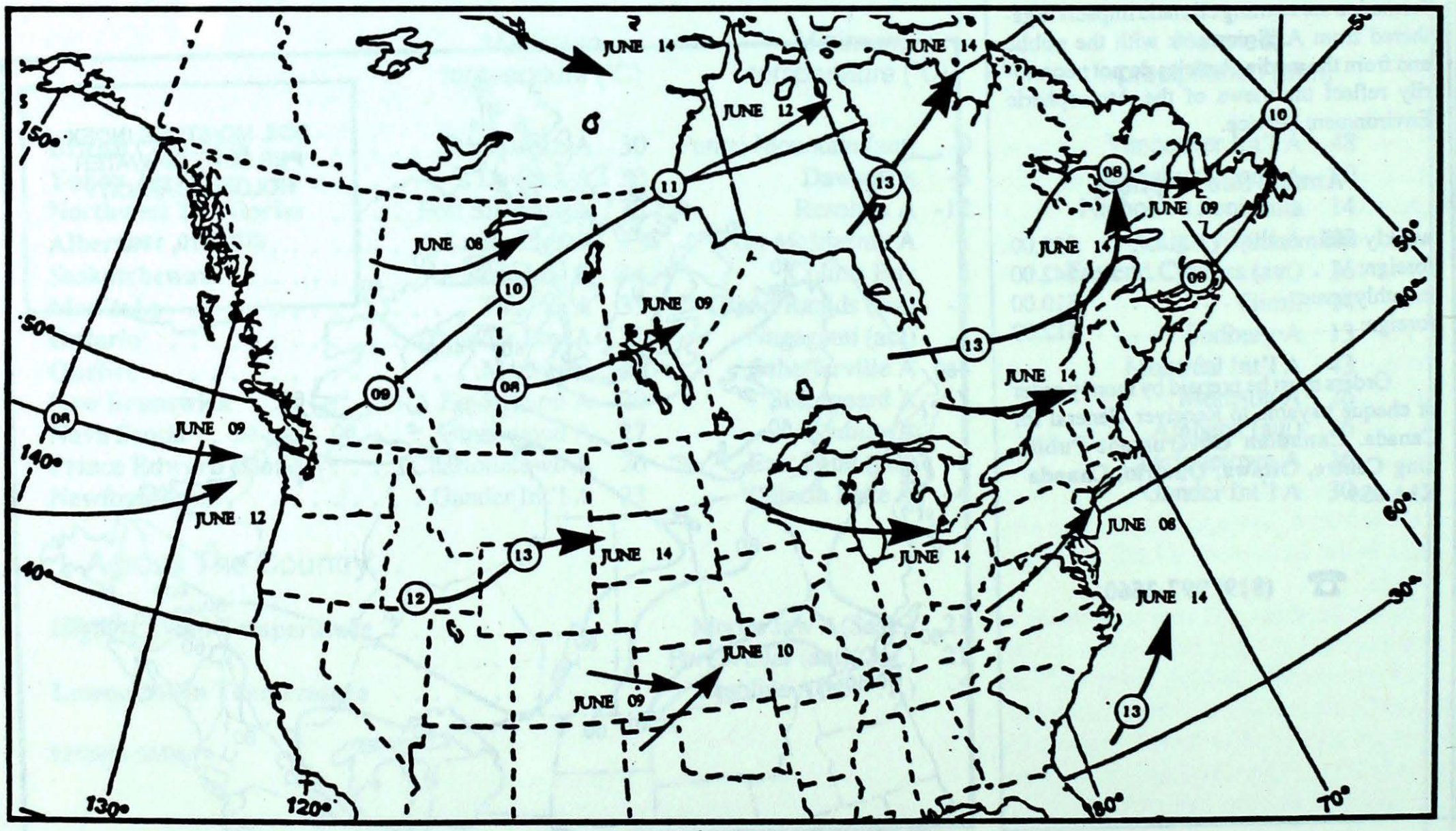
50-kPa ATMOSPHERIC CIRCULATION



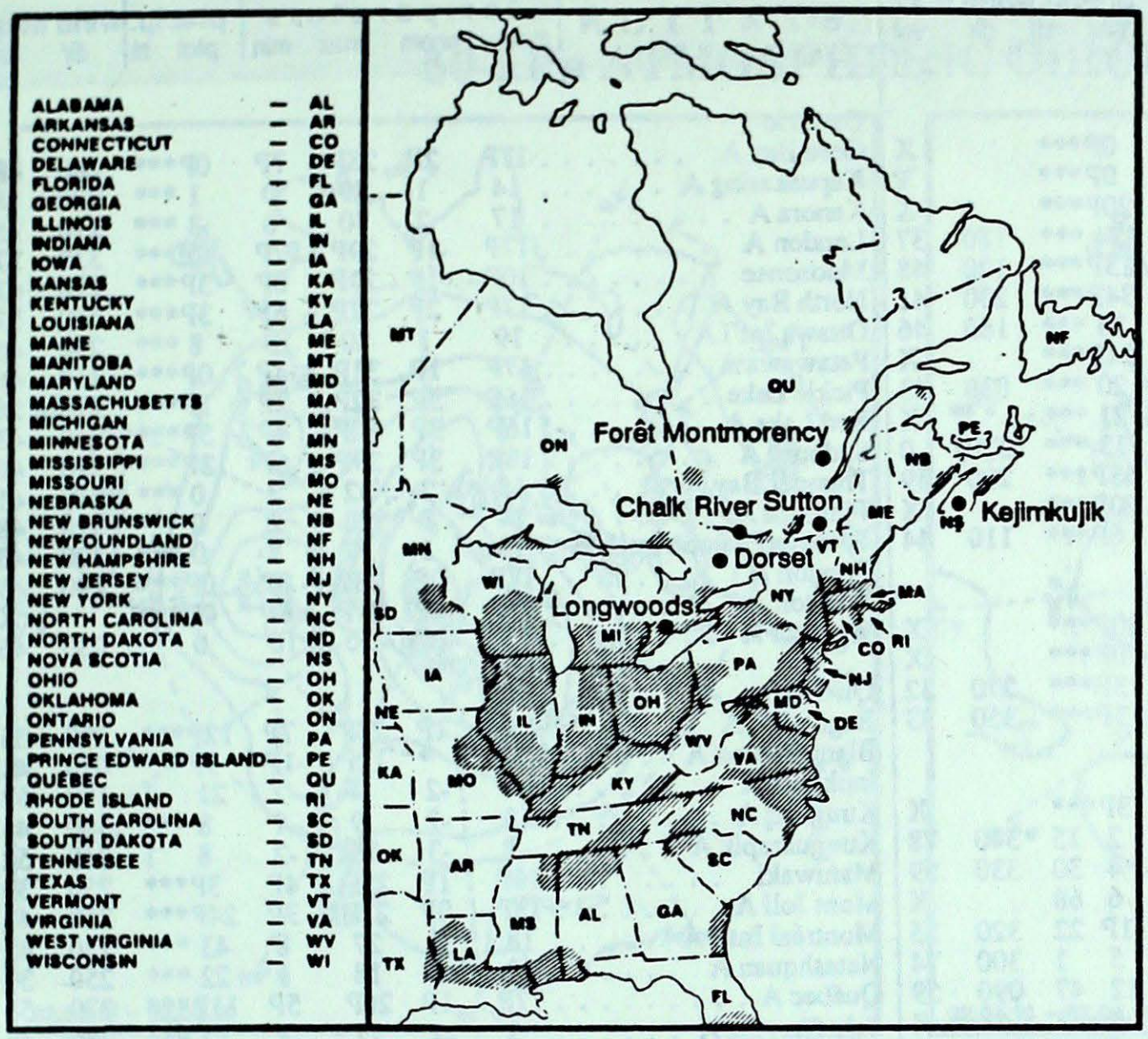
Mean geopotential height
50-kPa level (10 decametre intervals)



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 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.

SITE	day	pH	amount		AIR PATH TO SITE
					June 7 to 13, 1992
Longwoods	07	4.1	9	R	. . . . . Western Ohio, Indiana
Dorset *	07	3.7	2	R	. . . . . Southern Ontario, Michigan
	12	4.4	4	R	. . . . . Lake Huron, northern Michigan
Chalk River					. . . . . No precipitation this week
Sutton	07	4.2	5	R	. . . . . Lake Ontario, Lake Erie
	12	4.3	2	R	. . . . . Eastern Ontario, Lake Huron
	13	4.1	3	R	. . . . . Eastern and southern Ontario
Montmorency					. . . . . Data not available this week
Kejimkujik	08	4.1	12	R	. . . . . New England

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	19P	6P	27P	11P	0P***			X
Cape St James	12P	2P	16P	8P	0P***			X
Cranbrook A	18P	4P	27P	6P	20P***			X
Fort Nelson A	14	0	29	3	24 ***		180	37
Fort St John A	13P	0P	24P	5P	13P***		120	48
Kamloops A	18P	1P	29P	10P	34P***		230	41
Penticton A	18	1	29	10	35 ***		160	46
Port Hardy A	12P	0P	17P	7P	24P***			X
Prince George A	16	3	27	8	20 ***		030	43
Prince Rupert A	12	2	20	8	21 ***			X
Smithers A	15	3	26	6	13 ***		320	0
Vancouver Int'l A	16P	1P	21P	12P	48P***		290	39
Victoria Int'l A	15P	1P	21P	10P	20P***			X
Williams Lake A	14P	2P	24P	5P	6P***		110	44
Yukon Territory								
Komakuk Beach A	8P	5P	19P	-2P	20P***			X
Teslin (aut)	13P	*	26P	-1P	0P***			X
Watson Lake A	14P	2P	28P	0P	3P***		270	52
Whitehorse A	13P	1P	27P	1P	3P***		350	33
Northwest Territories								
Alert	-2P	0P	4P	-5P	3P***			X
Baker Lake A	1	-2	10	-3	2	15	340	78
Cambridge Bay A	-1	-1	4	-4	4	30	330	59
Cape Dyer A	-2	-2	3	-6	6	68		X
Clyde A	-1P	-1P	4P	-5P	1P	22	320	35
Coppermine A	5	3	27	-1	5	1	300	74
Coral Harbour A	-2	-3	5	-6	12	47	090	59
Eureka	-2	-3	2	-7	4	3		X
Fort Smith A	12P	-1P	31P	2P	0P***		300	41
Hall Beach A	-3	-1	1	-9	2	34	310	44
Inuvik A	10P	0P	29P	-1P	11P***		340	41
Iqaluit A	0	-2	4	-4	13	5	050	44
Mould Bay A	-4	-2	0	-8	1	15		X
Norman Wells A	15	1	30	0	2 ***		290	61
Resolute A	-5	-3	-1	-12	6	25	180	54
Yellowknife A	14	2	30	3	0 ***		280	65
Alberta								
Calgary Int'l A	14	1	30	7	102 ***		200	61
Cold Lake A	16P	3P	28P	6P	0P***		100	52
Edmonton Namao A	16	2	28	9	2 ***		300	70
Fort McMurray A	14P	0P	28P	1P	7P***		290	50
High Level A	15	1	28	4	10 ***		180	37
Jasper	15P	3P	24P	5P	6P***			X
Lethbridge A	17	2	33	8	36 ***		210	50
Medicine Hat A	19	3	33	10	40 ***		230	96
Peace River A	14	0	25	2	14 ***		040	50
Saskatchewan								
Cree Lake	14	2	27	6	1 ***		250	78
Estevan A	19	3	32	6	8 ***		080	69
La Ronge A	15P	2P	27P	4P	1P***		310	50
Regina A	20	5	33	8	0 ***		080	65
Saskatoon A	18	3	30	9	2 ***		050	46
Swift Current A	18	4	32	8	10 ***		070	67
Yorkton A	18	3	30	5	6 ***		170	52
Manitoba								
Brandon A	18	3	31	4	0 ***		060	52
Churchill A	8	3	22	0	1 ***		300	78
Lynn Lake A	15P	5P	30P	3P	0P***		140	67
The Pas A	16P	3P	33P	5P	0P***		160	48
Thompson A	14P	3P	26P	3P	1P***		330	52
Winnipeg Int'l A	17P	1P	32P	1P	0P***		200	48

STATION	temperature mean	anom	max	min	precip. ptot	st	wind max dir	vel
Ontario								
Gore Bay A	17P	2P	28P	7P	0P***		280	48
Kapuskasing A	14	1	29	0	1 ***		320	48
Kenora A	17	2	30	6	3 ***		210	35
London A	17P	-1P	29P	7P	0P***		330	37
Moosonee	10P	-1P	29P	0P	3P***		270	61
North Bay A	17P	2P	27P	6P	3P***		240	37
Ottawa Int'l A	19	1	30	10	8 ***		250	46
Petawawa A	17P	1P	31P	4P	0P***		310	46
Pickle Lake	16P	3P	32P	2P	1P***		270	56
Red Lake A	16P	3P	30P	4P	5P***		240	43
Sudbury A	18P	3P	29P	6P	13P***		210	46
Thunder Bay A	15	2	32	3	0 ***		310	41
Timmins A	14	0	28	2	0 ***		310	48
Toronto(Pearson Int'l A)	19	1	32	8	0 ***		300	43
Trenton A	17P	0P	28P	8P	0P***		290	43
Wiarton A	15P	0P	27P	6P	0P***			X
Windsor A	19	0	30	10	0 ***		030	46
Québec								
Bagotville A	15P	1P	27P	7P	12P***		290	56
Blanc Sablon A	5P	*	12P	-1P	9P***		020	41
Inukjuak A	1	-2	4	-2	21	1	150	52
Kuujjuaq A	3	-2	9	-1	8 ***		160	44
Kuujjuarapik A	2	-3	15	-2	8	1	240	52
Maniwaki	16P	1P	29P	4P	3P***		250	39
Mont Joli A	13P	0P	22P	3P	24P***		250	48
Montréal Int'l A	18	1	27	8	43 ***		230	48
Natashquan A	10	0	18	1	22 ***		250	39
Québec A	17P	1P	26P	5P	11P***		270	56
Schefferville A	3	-4	11	-4	17 ***		280	48
Sept-Îles A	10	-1	20	1	8 ***		100	46
Sherbrooke A	16	1	26	4	16 ***		260	56
Val-d'Or A	13	-1	26	4	0 ***		290	48
New Brunswick								
Fredericton A	18	3	29	8	7 ***		270	87
Miscou Island (aut)	11P	-1P	18P	6P	0P***			
Moncton A	16	2	28	7	26 ***		330	46
Saint John A	15	2	25	7	7 ***		220	67
Nova Scotia								
Greenwood A	18	3	27	7	7 ***		250	70
Shearwater A	16	3	25	9	11 ***		220	44
Sydney A	14	2	27	1	7 ***		300	54
Yarmouth A	13P	1P	19P	8P	10P***		230	54
Prince Edward Island								
Charlottetown A	14	1	26	7	16 ***		340	44
East Point (auto)	11P	*	15P	6P	****			
Newfoundland								
Cartwright	4P	-3P	19P	0P	20P***		330	54
Churchill Falls A	6	-2	14	-2	19 ***		290	56
Gander Int'l A	11	1	23	1	30 ***		270	52
Goose A	6P	-4P	21P	-2P	13P***		220	54
St John's A	12	2	23	1	27 ***		260	57
St Lawrence	9	1	15	2	18 ***			X
Wabush Lake A	5	-3	13	-4	11 ***		270	56

92/06/08-92/06/14

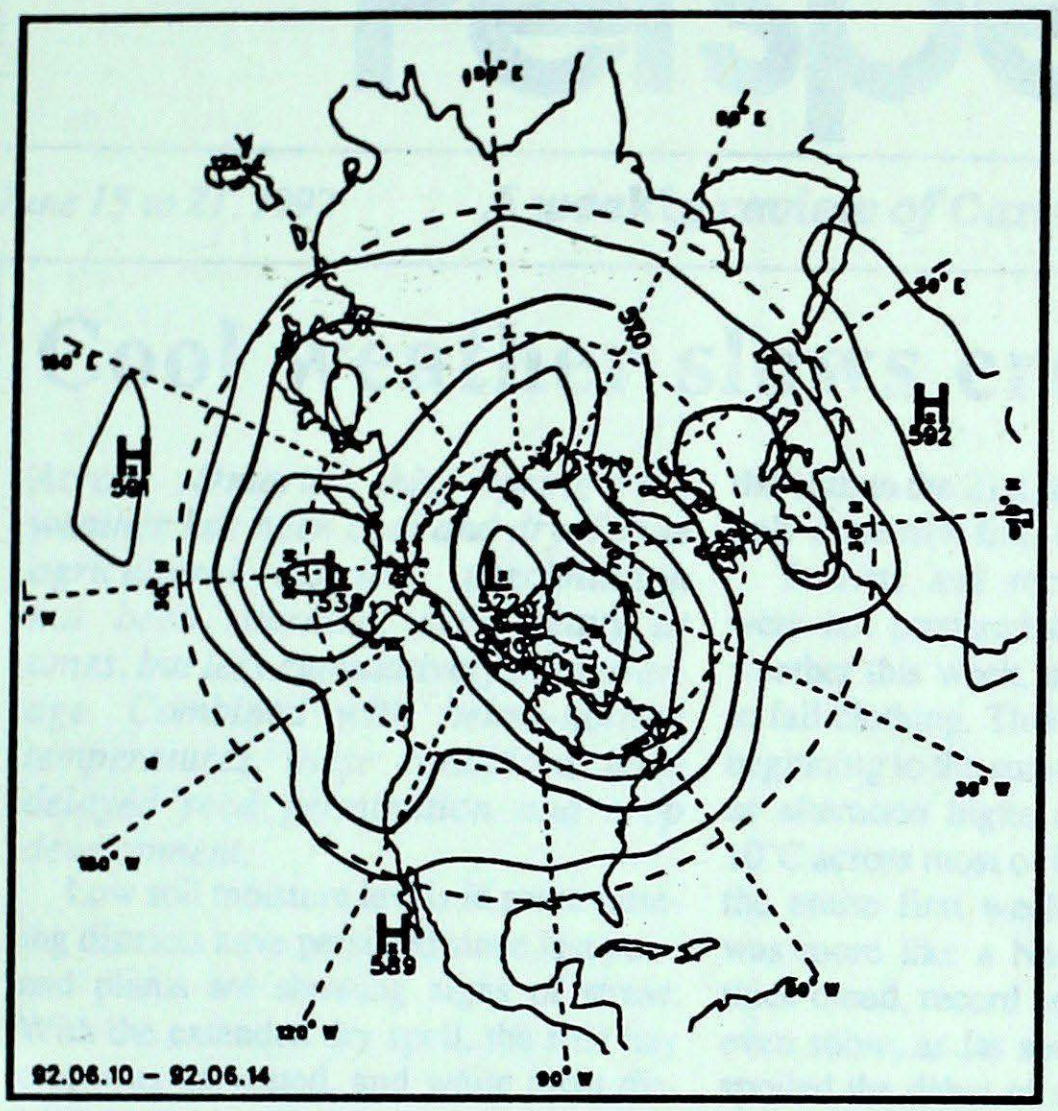
mean = mean weekly temperature, °C
max = maximum weekly temperature, °C
min = minimum weekly temperature, °C
anom = mean temperature anomaly, °C

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.

50-kPa ATMOSPHERIC CIRCULATION



Mean geopotential height
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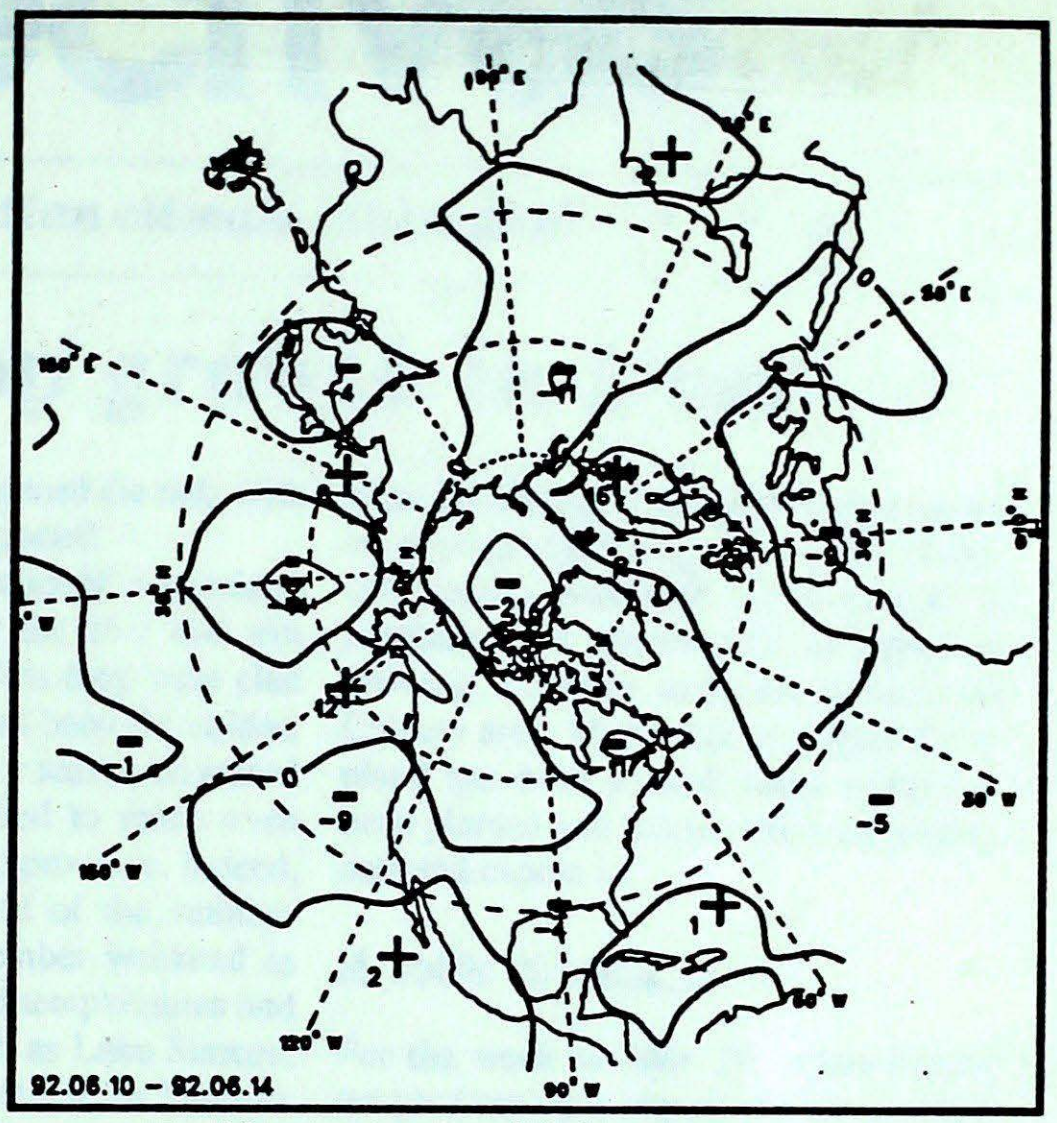


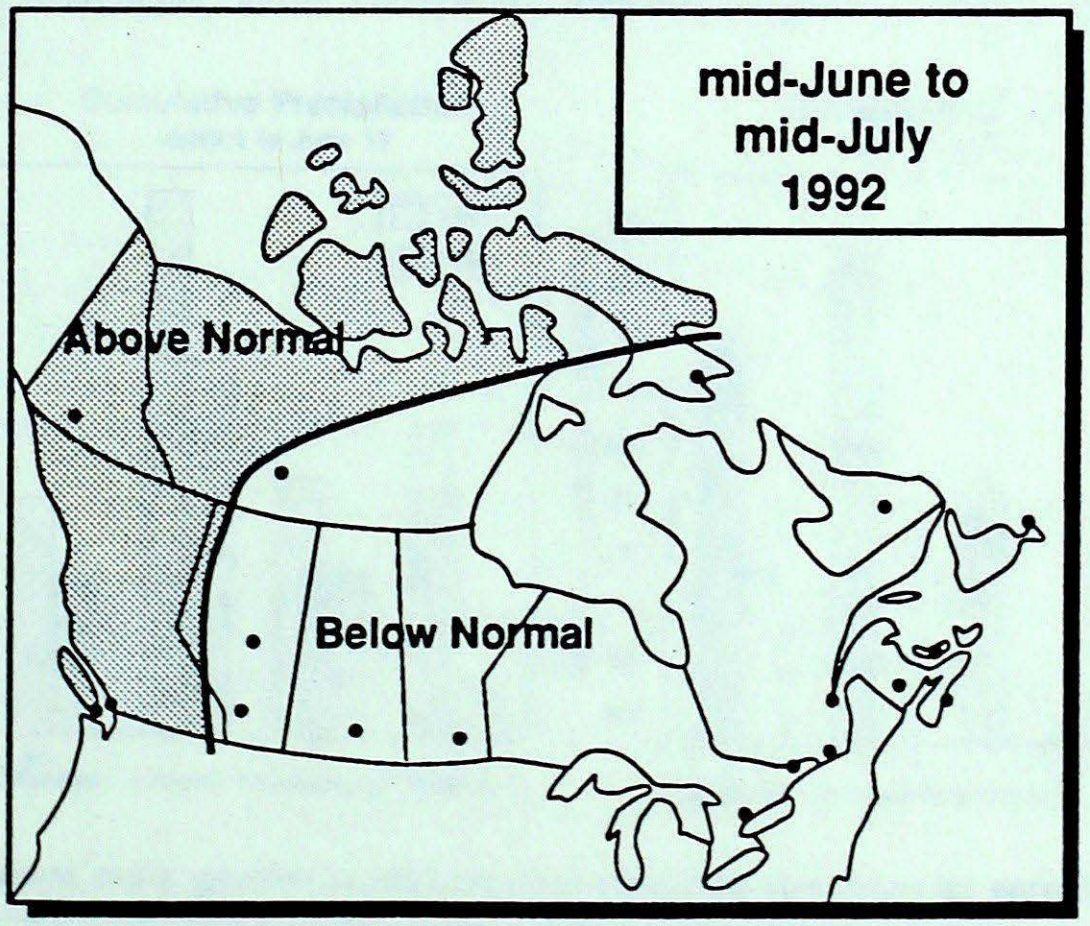
Mean geopotential height anomaly
50 kPa level (10 decametre intervals)

Environment Canada / Environnement Canada
Atmospheric Environment Service / Service de l'environnement atmosphérique

MONTHLY TEMPERATURE FORECAST

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

Whitehorse	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



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