

Climatic Perspectives

ARCH. C.2.

May 7 to 13, 1990

A weekly review of Canadian climate and water

Vol.12 No.19

Heavy rains help replenish Maritime reservoirs

Since the beginning of April, the Atlantic provinces have received a substantial amount of precipitation, in some cases more than double the normal. This fresh water supply prior to the growing season is a welcome event, recharging lakes, streams, reservoirs and the ground water table.

In Newfoundland, stream flow has increased in all areas, especially the central regions, where it was excessive. In April, however, winter conditions still prevailed in Labrador, and flows were below normal. Stream flow on Prince Edward Island was 33% above normal in April, whereas runoff in March was 11% above normal. In New Brunswick, stream flows in the southern and central areas were near normal, while large increases in surface water availability were experienced in the northern and eastern sections. In Nova Scotia, river flows were all above normal. In the Cape Breton Highlands and the southern and eastern mainland areas, flows were excessive. Flows in the northern areas were also above normal, but not to the same extent. The surface water held in storage in six reservoirs on the Mersey, Bear, Indian, Avon, Black and Ponhook Rivers increased in April by 23 to 81 per cent of the full rated capacity.

Vicious storm batters Ontario

On May 10, a freak snowstorm dumped almost 40 cm of snow on northeastern Ontario, closing down schools and transportation in the Kapuskasing area. At the same time, southern and central Ontario were buffeted by winds gusting to almost

100 km/h, causing widespread damage. Trees and hydro lines were downed, trucks were flipped over, and debris was swept off high rise construction sites.

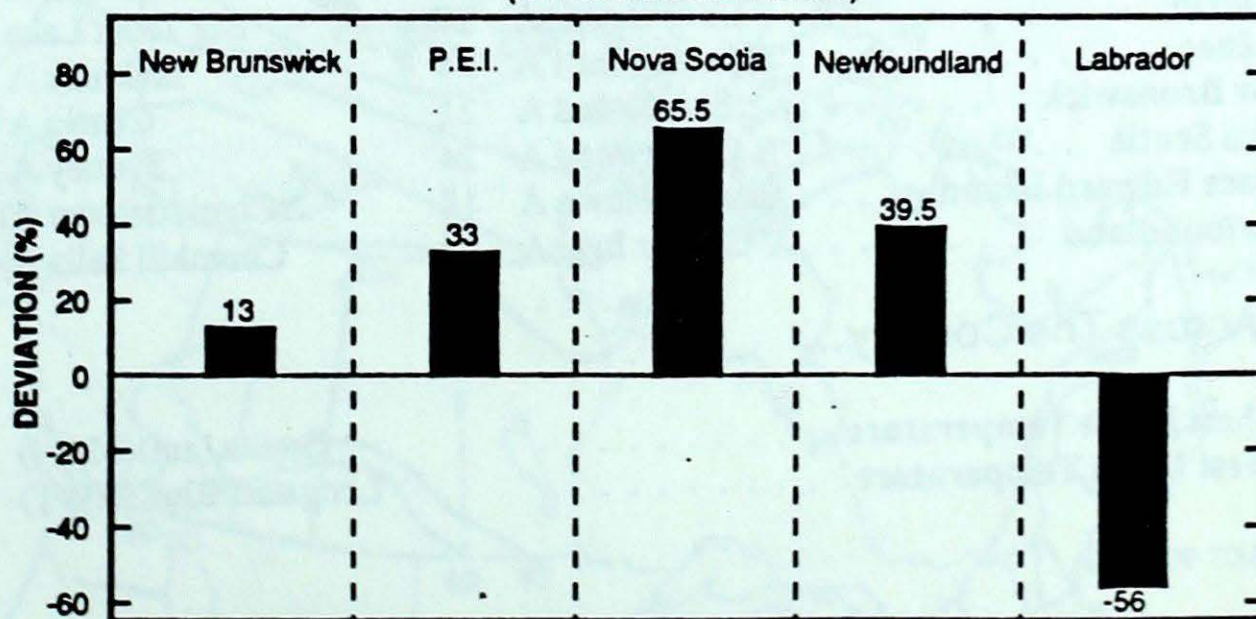
B.C. windstorm update

B.C. hydro confirmed that in the Prince George area the May 5 windstorm brought down more than 350 spans of power lines. This means that there are approximately 35 kilometres of electrical lines to be rebuilt in this area alone. There was additional damage evident in a 200 km radius of Prince George.

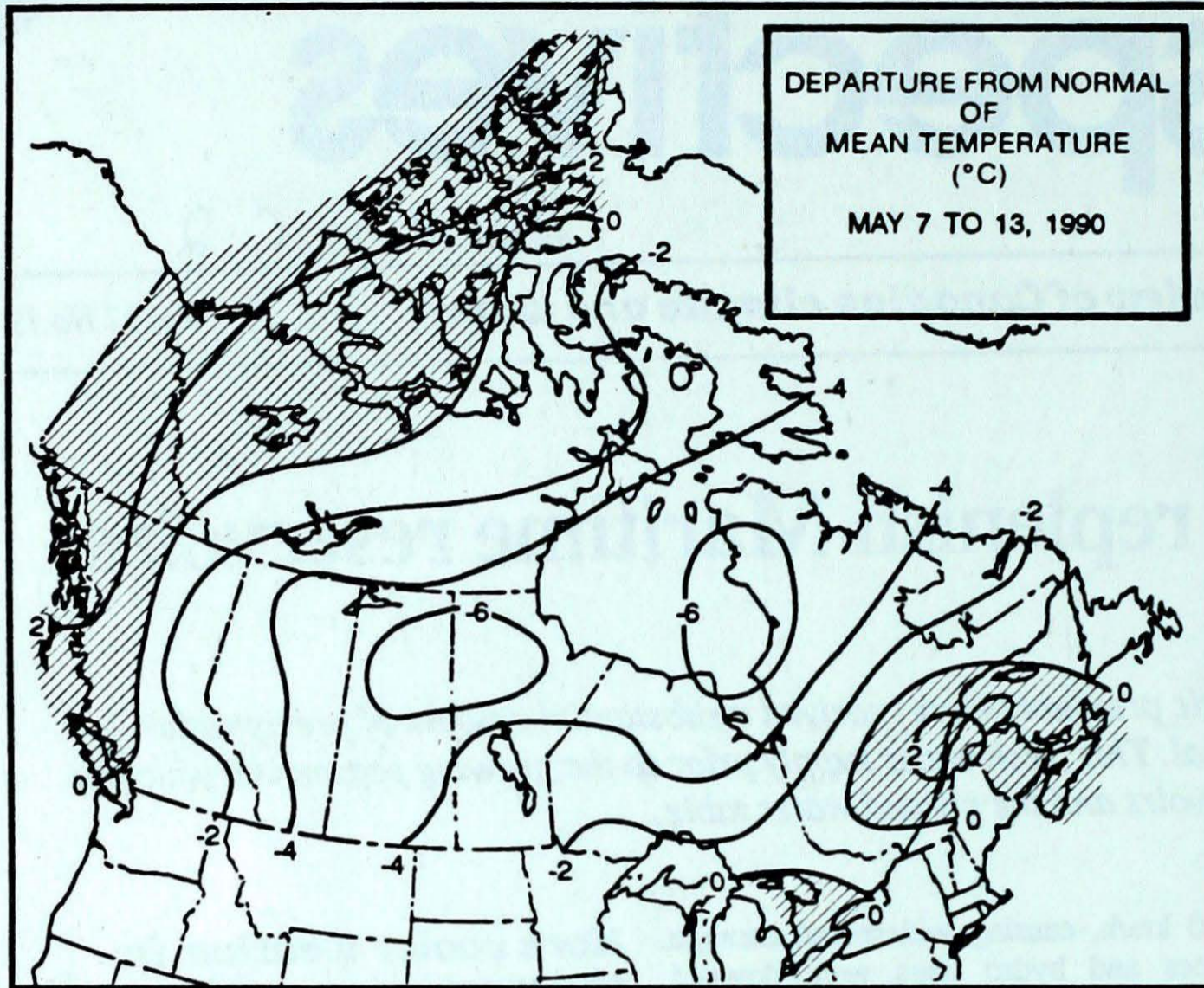
More cooler weather in the west

A trough of low pressure covering most of western Canada will bring below normal temperatures from British Columbia to Manitoba including the western Arctic for the week starting May 21. Near normal temperatures are expected from Ontario to Atlantic Canada. Eastern Arctic and northern Quebec, however, will experience above normal temperatures for the same period.

River flows in Atlantic Canada - April 1990
(deviation from median)



Recent rainfalls have contributed to increased river flows. Inland Waters Directorate



Weekly normal temperatures (°C)

| | max. | min. |
|---------------------------|------|------|
| Whitehorse A | 11.2 | -0.5 |
| Iqaluit A | -0.7 | -7.8 |
| Yellowknife A | 8.2 | -1.7 |
| Vancouver Int'l A | 15.9 | 7.5 |
| Victoria Int'l A | 15.9 | 6.3 |
| Calgary Int'l A | 15.1 | 1.6 |
| Edmonton Int'l A | 16.4 | 1.5 |
| Regina A | 16.6 | 2.5 |
| Saskatoon A | 16.9 | 2.9 |
| Winnipeg Int'l A | 15.9 | 2.8 |
| Ottawa Int'l A | 17.0 | 5.6 |
| Toronto (Pearson Int'l A) | 16.6 | 4.9 |
| Montréal Int'l A | 17.1 | 6.3 |
| Québec A | 15.4 | 3.6 |
| Fredericton A | 15.4 | 3.5 |
| Saint John A | 12.9 | 2.7 |
| Halifax (Shearwater) | 12.1 | 3.4 |
| Charlottetown A | 12.0 | 2.6 |
| Goose A | 8.4 | -0.6 |
| St John's A | 8.3 | 0.3 |

Weekly temperature and precipitation extremes

| | Maximum temperature (°C) | Minimum temperature (°C) | Heaviest precipitation (mm) |
|-----------------------|--------------------------|--------------------------|-----------------------------|
| British Columbia | Hope A 21 | Dease Lake -5 | Revelstoke A 22 |
| Yukon Territory | Whitehorse A 16 | Komakuk Beach A -11 | Watson Lake A 3 |
| Northwest Territories | Fort Simpson A 16 | Longstaff Bluff -25 | Cape Dyer A 19 |
| Alberta | Fort McMurray A 16 | Grande Prairie A -5 | Pincher Creek (aut) 23 |
| Saskatchewan | Regina A 17 | Cree Lake -10 | Estevan A 14 |
| Manitoba | Gretna (aut) 22 | Churchill A -11 | Gimli 16 |
| Ontario | Windsor A 27 | Big Trout Lake -8 | Kapuskasing A 49 |
| Québec | Montréal Int'l A 24 | Inukjuak A -16 | Chibougamau Chapais a 47 |
| New Brunswick | St-Léonard A 21 | Charlo A -3 | St Stephen (aut) 63 |
| Nova Scotia | Greenwood A 24 | Sydney A -2 | Yarmouth A 29 |
| Prince Edward Island | Charlottetown A 18 | Charlottetown A 0 | Charlottetown A 29 |
| Newfoundland | Gander Int'l A 18 | Churchill Falls A -14 | Comfort Cove 23 |

Across The Country...

| | |
|--------------------------|--------------------------|
| Highest Mean Temperature | Gretna (aut)(MAN) 15 |
| Lowest Mean Temperature | Longstaff Bluff(NWT) -14 |

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*

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) 739-4438/4436

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

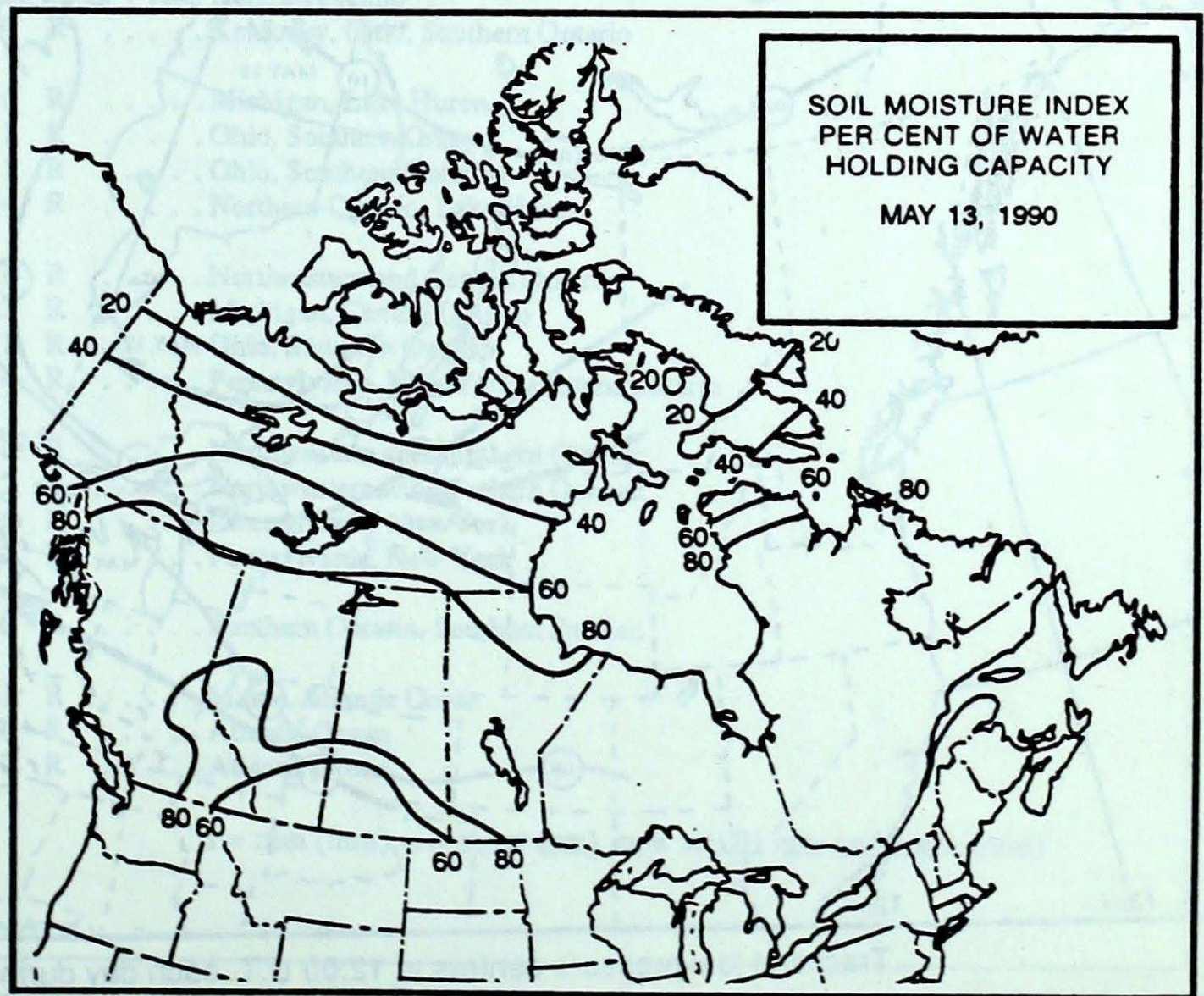
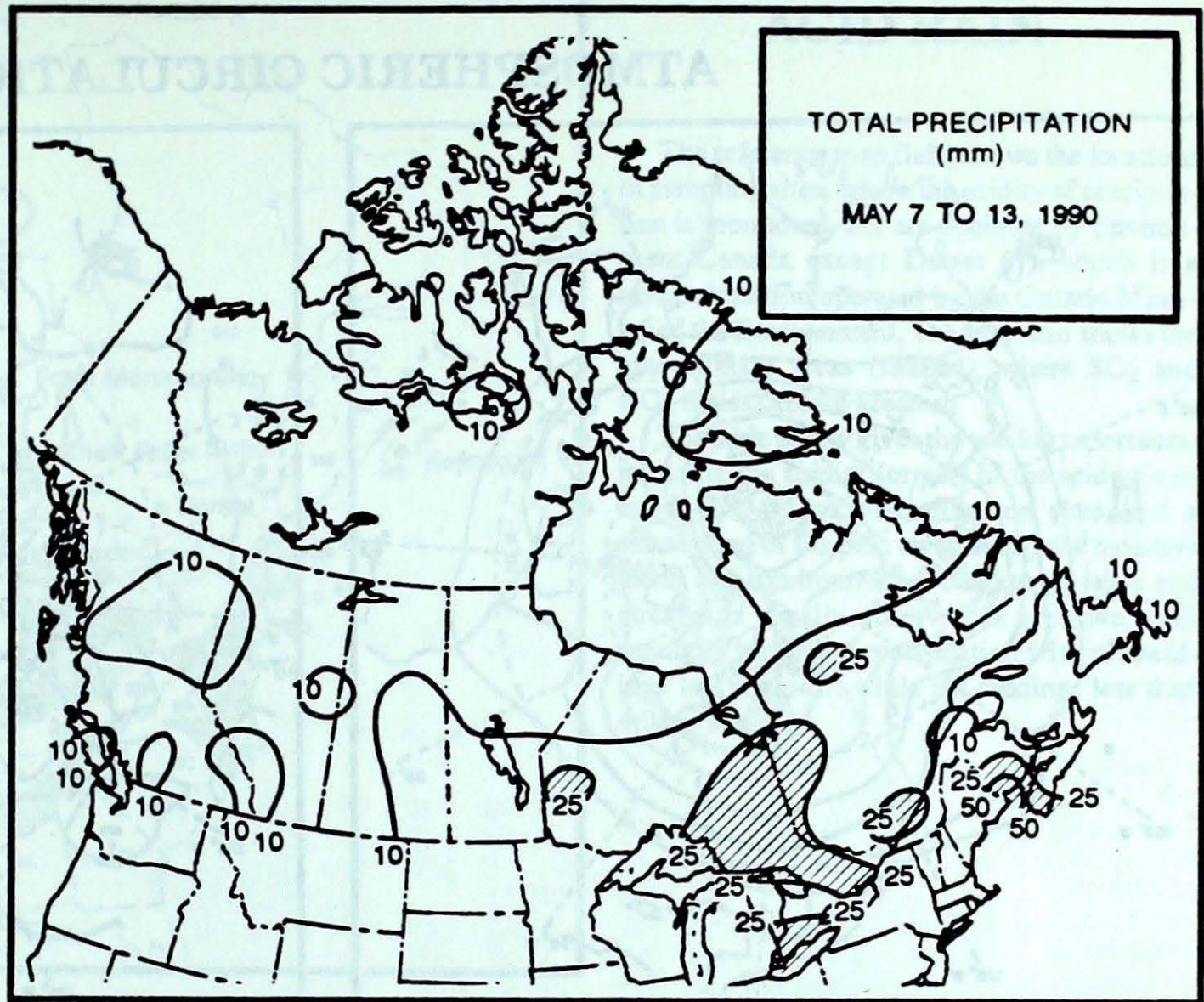
The data in this publication are based on unverified reports from approximately 225 Canadian synoptic weather stations. Information concerning climatic impacts is gathered from AES contacts with the public and from the media. Articles do not necessarily reflect the views of the Atmospheric Environment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

Annual Subscriptions

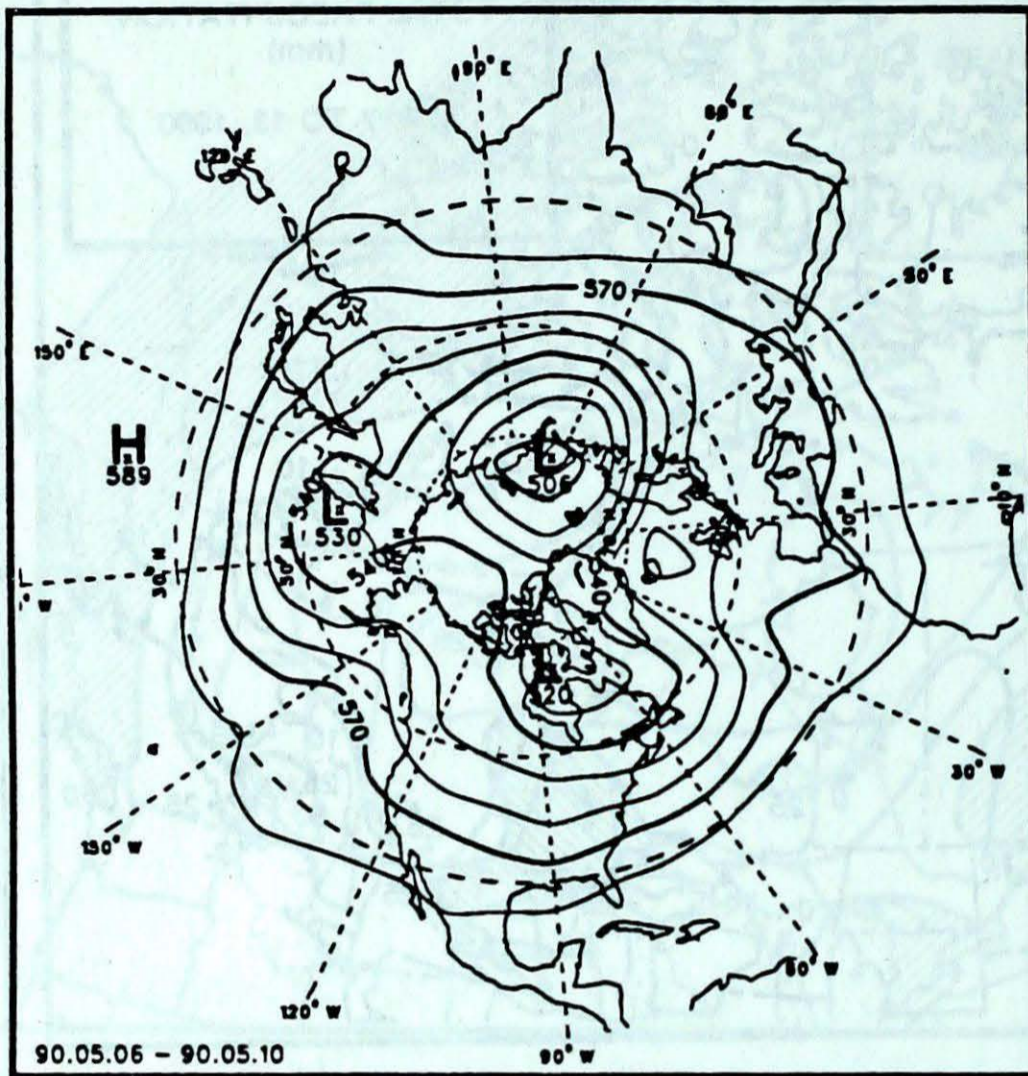
weekly and monthly : \$35.00
 foreign: \$42.00
 monthly issue: \$10.00
 foreign: \$12.00

Orders must be prepaid by money order or cheque payable to Receiver General for Canada. Canadian Government Publishing Centre, Ottawa, Ontario, Canada K1A 0S9

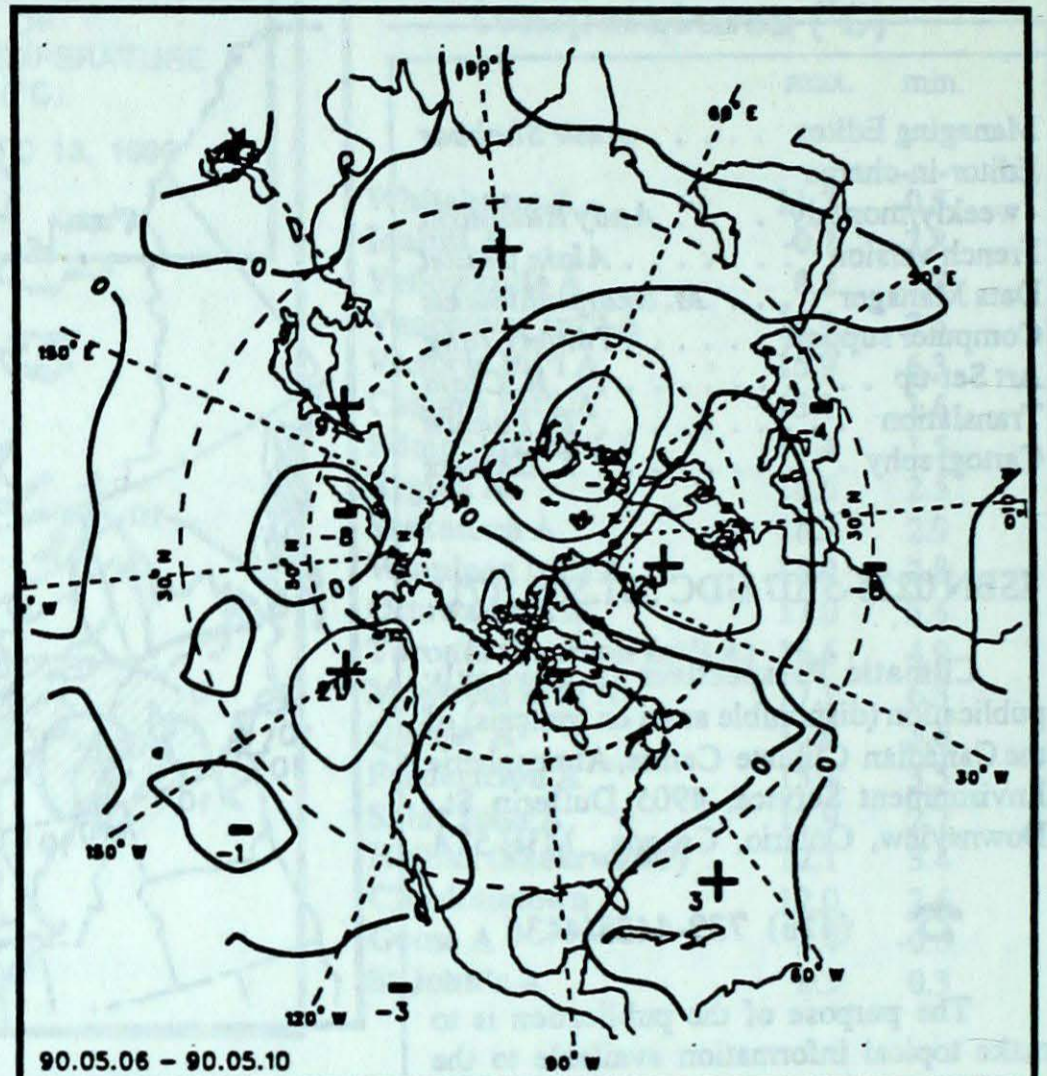
☎ (819) 997-2560



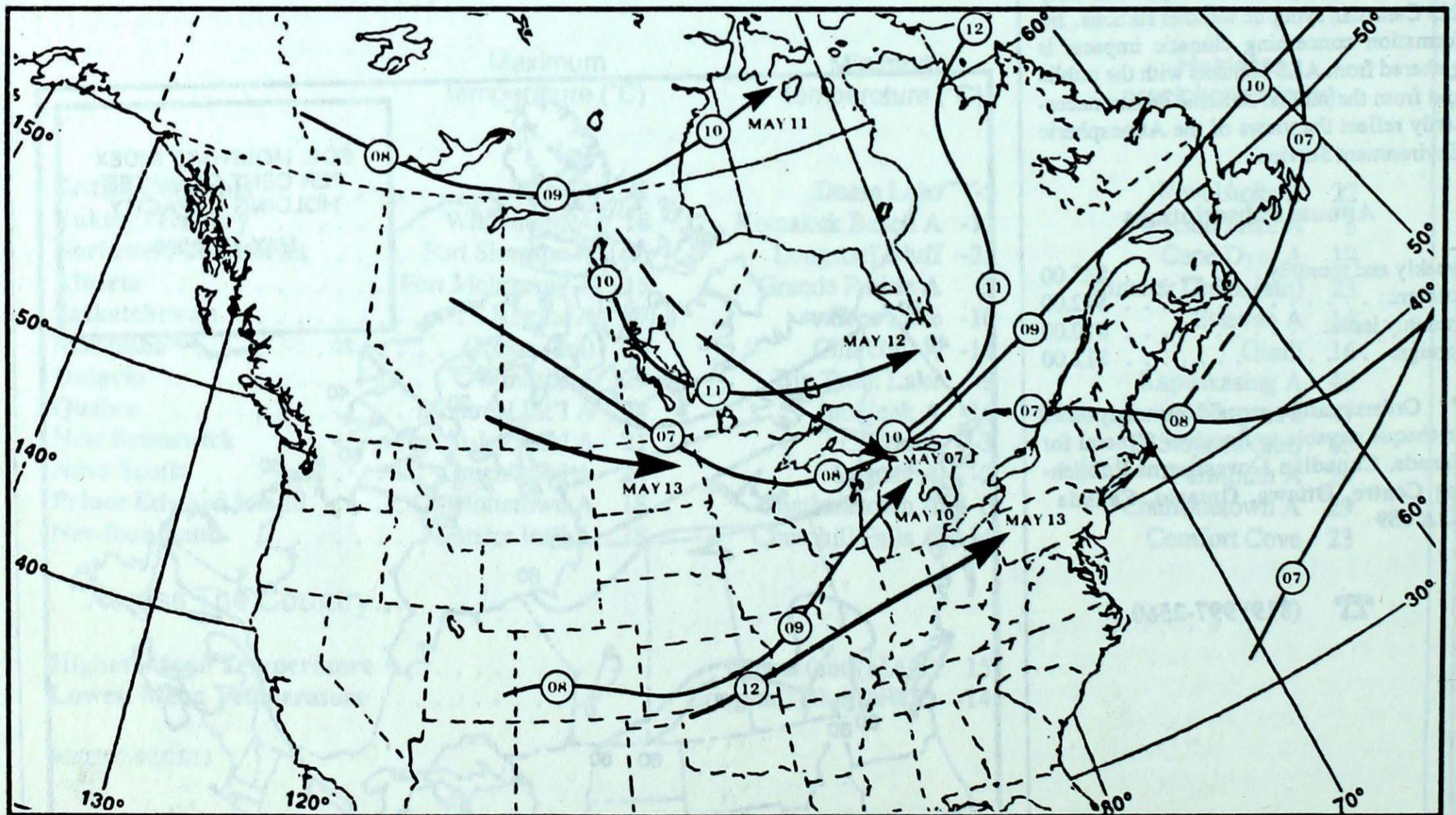
ATMOSPHERIC CIRCULATION



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



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

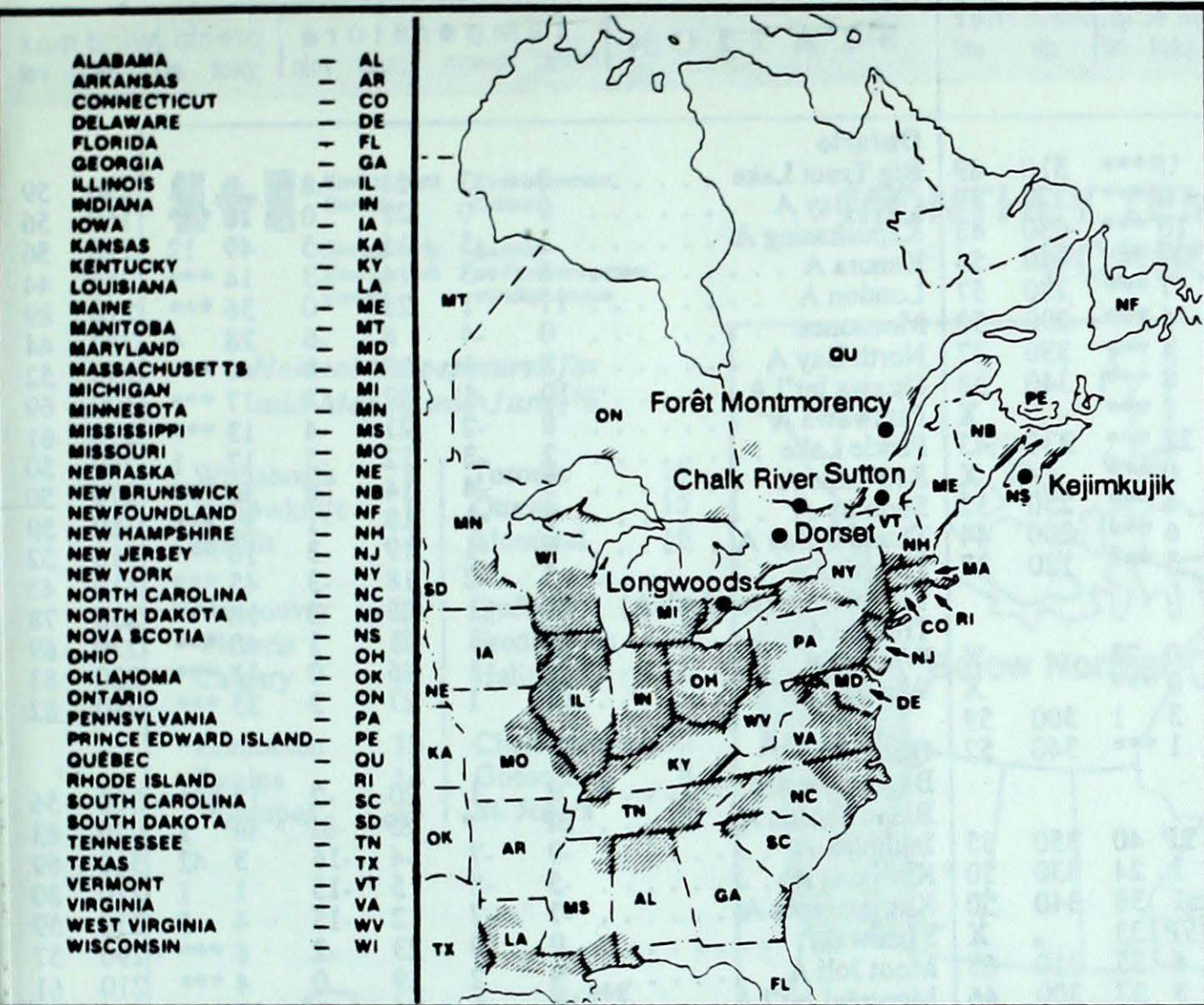


Tracks of low pressure centres at 12:00 U.T. each day during the period.

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 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 | May 6th to 12th, 1990 |
|-------------|-----|-----|--------|---|-----------------------|
| Longwoods | 9 | 5.0 | 2 R | Kentucky, Ohio | |
| | 12 | 3.9 | 27 R | Kentucky, Ohio, Southern Ontario | |
| Dorset * | 7 | 4.7 | 10 R | Michigan, Lake Huron | |
| | 8 | 5.4 | 1 R | Ohio, Southern Ontario | |
| | 9 | 4.2 | 1 R | Ohio, Southern Ontario | |
| | 10 | 4.3 | 14 R | Northern Ontario, Lake Huron | |
| Chalk River | 7 | 4.4 | 1 R | Northeastern and Central Ontario | |
| | 8 | 4.7 | 3 R | Michigan, Central Ontario | |
| | 9 | 4.0 | 1 R | Ohio, Southern Ontario | |
| | 10 | 4.4 | 4 R | Pennsylvania, New York, Eastern Ontario | |
| Sutton | 6 | 4.1 | 6 R | Northwestern and Southern Quebec | |
| | 7 | 4.3 | 2 R | Northwestern and Southern Quebec | |
| | 9 | 3.5 | 4 R | Pennsylvania, New York | |
| | 10 | 4.4 | 22 R | Pennsylvania, New York | |
| Montmorency | 8 | 4.5 | 2 R | Southern Ontario, Southern Quebec | |
| Kejimikujik | 7 | 4.6 | 1 R | Maine, Atlantic Ocean | |
| | 10 | 4.7 | 14 R | Atlantic Ocean | |
| | 11 | 4.9 | 7 R | Atlantic Ocean | |

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

| STATION | temperature | | | | precip. ptot st | wind max | | STATION | temperature | | | | precip. ptot st | wind max | | |
|------------------------------|-------------|------|-----|------|--------------------|----------|-----|----------------------------------|-------------|------|-----|-----|--------------------|----------|-----|----|
| | mean | anom | max | min | | dir | vel | | mean | anom | max | min | | dir | vel | |
| British Columbia | | | | | | | | Ontario | | | | | | | | |
| Cape St James | 9P | 0P | 13P | 5P | 1P*** | 310 | 89 | Big Trout Lake | 0 | -3 | 11 | -8 | 0 | 1 | 290 | 59 |
| Cranbrook A | 7 | -3 | 17 | -3 | 9 *** | 270 | 39 | Gore Bay A | 9 | 0 | 21 | 0 | 18 *** | 160 | 56 | |
| Fort Nelson A | 5 | -3 | 16 | -3 | 10 *** | 030 | 43 | Kapuskasing A | 3 | -3 | 15 | -5 | 49 12 | 120 | 56 | |
| Fort St John A | 6 | -4 | 14 | -2 | 20 *** | 240 | 56 | Kenora A | 6 | -3 | 14 | -3 | 14 *** | 260 | 44 | |
| Kamloops A | 13 | 0 | 21 | 5 | 7 *** | 280 | 57 | London A | 11 | 1 | 25 | 0 | 36 *** | 210 | 89 | |
| Penticton A | 13 | 0 | 20 | 4 | 4 *** | 290 | 50 | Moosonee | 0 | -4 | 8 | -6 | 28 4 | 320 | 44 | |
| Port Hardy A | 9 | 0 | 14 | 4 | 4 *** | 330 | 37 | North Bay A | 8 | -1 | 17 | 0 | 44 *** | 250 | 52 | |
| Prince George A | 6 | -2 | 15 | -4 | 8 *** | 340 | 33 | Ottawa Int'l A | 10 | -1 | 22 | 3 | 17 *** | 300 | 69 | |
| Prince Rupert A | 9 | 2 | 14 | 4 | 8 *** | | X | Petawawa A | 8 | -2 | 21 | -4 | 13 *** | 310 | 61 | |
| Revelstoke A | 10 | -1 | 18 | 3 | 22 *** | 330 | 43 | Pickle Lake | 2 | -3 | 12 | -5 | 17 1 | 260 | 50 | |
| Smithers A | 9 | 1 | 17 | 1 | 0 *** | | X | Red Lake A | 3 | -4 | 14 | -6 | 30 *** | 270 | 50 | |
| Vancouver Int'l A | 11 | -1 | 17 | 5 | 6 *** | 250 | 52 | Sudbury A | 8 | -1 | 18 | -1 | 33 *** | 180 | 59 | |
| Victoria Int'l A | 10 | -1 | 18 | 2 | 6 *** | 260 | 44 | Thunder Bay A | 6 | -1 | 19 | -3 | 16 *** | 010 | 52 | |
| Williams Lake A | 6 | -2 | 14 | -2 | 3 *** | 120 | 37 | Timmins A | 5 | -2 | 18 | -3 | 45 *** | 310 | 43 | |
| Yukon Territory | | | | | | | | Toronto (Pearson Int'l A) | | | | | | | | |
| Komakuk Beach A | -5 | 2 | 0 | -11 | 0 23 | | X | Trenton A | 10 | -1 | 21 | 1 | 40 *** | 270 | 69 | |
| Teslin (aut) | 6 | * | 15 | -2 | 0 *** | | X | Warton A | 9 | 1 | 26 | 0 | 11 *** | 220 | 83 | |
| Watson Lake A | 6 | 1 | 16 | -2 | 3 1 | 300 | 59 | Windsor A | 14 | 1 | 27 | 3 | 35 *** | 230 | 82 | |
| Whitehorse A | 8 | 2 | 16 | -1 | 1 *** | 340 | 52 | Québec | | | | | | | | |
| Northwest Territories | | | | | | | | Bagotville A | | | | | | | | |
| Alert | -11P | 3P | -6P | -17P | 2P 40 | 350 | 35 | Blanc Sablon A | 3P | * | 8P | -3P | 0P 1 | 020 | 83 | |
| Baker Lake A | -10 | -2 | -6 | -16 | 1 24 | 330 | 50 | Inukjuak A | -9 | -7 | -4 | -16 | 3 42 | 310 | 69 | |
| Cambridge Bay A | -9 | 2 | -5 | -13 | 1 38 | 340 | 50 | Kuujuuaq A | -5 | -5 | 5 | -15 | 1 1 | 270 | 80 | |
| Cape Dyer A | -10P | -3P | -2P | -17P | 19P 133 | | X | Kuujuarapik A | -7 | -7 | 2 | -15 | 4 5 | 330 | 59 | |
| Clyde A | -11 | -2 | 0 | -21 | 6 35 | 310 | 63 | Maniwaki | 9 | 0 | 23 | -2 | 8 *** | 290 | 57 | |
| Coppermine A | -7 | 2 | 0 | -13 | 3 37 | 300 | 46 | Mont Joli A | 9 | 2 | 19 | 0 | 4 *** | 210 | 61 | |
| Coral Harbour A | -10P | -2P | -5P | -19P | 9P 42 | 020 | 52 | Montréal Int'l A | 11 | -1 | 24 | 3 | 18 *** | 230 | 65 | |
| Eureka | -9 | 4 | -3 | -16 | 1 26 | 010 | 52 | Natashquan A | 3 | 0 | 10 | -3 | 9 *** | 150 | 67 | |
| Fort Smith A | 4P | -3P | 14P | -6P | 1P*** | | X | Québec A | 10 | 1 | 23 | -1 | 26 *** | 250 | 57 | |
| Hall Beach A | -12 | -2 | -3 | -24 | 3 51 | 070 | 57 | Schefferville A | -4 | -4 | 6 | -12 | 9 16 | 170 | 57 | |
| Inuvik A | -1 | 3 | 8 | -8 | 0 10 | | X | Sept-Îles A | 5 | 0 | 11 | -1 | 17 *** | 090 | 96 | |
| Iqaluit A | -9 | -5 | 2 | -16 | 11 21 | 110 | 76 | Sherbrooke A | 8P | -1P | 23P | -2P | 21P*** | 180 | 52 | |
| Mould Bay A | -9 | 4 | -4 | -15 | 0 16 | 330 | 39 | Val-d'Or A | 7 | 0 | 23 | -4 | 19 *** | 230 | 50 | |
| Norman Wells A | 4P | 1P | 14P | -3P | 3P 10 | 250 | 35 | New Brunswick | | | | | | | | |
| Resolute A | -12 | 0 | -5 | -18 | 0 33 | 020 | 52 | Charlo A | 8 | 1 | 21 | -3 | 9 *** | 090 | 54 | |
| Yellowknife A | 2 | -1 | 11 | -6 | 0 *** | 360 | 39 | Chatham A | 10 | 2 | 20 | 1 | 11 *** | 220 | 72 | |
| Alberta | | | | | | | | Fredericton A | | | | | | | | |
| Calgary Int'l A | 5 | -3 | 13 | -3 | 17 *** | 010 | 82 | Moncton A | 11 | 1 | 20 | 1 | 40 *** | 180 | 78 | |
| Cold Lake A | 5 | -5 | 15 | -5 | 10 *** | 040 | 41 | Moncton A | 10 | 2 | 18 | -1 | 12 *** | 270 | 78 | |
| Edmonton Namao A | 5 | -5 | 14 | -2 | 8 *** | 300 | 48 | Saint John A | 9 | 1 | 17 | 0 | 43 *** | 190 | 76 | |
| Fort McMurray A | 6 | -3 | 16 | -4 | 5 *** | 360 | 37 | Nova Scotia | | | | | | | | |
| High Level A | 6 | -5 | 15 | -4 | 0 *** | 090 | 70 | Greenwood A | 11 | 2 | 24 | 0 | 18 *** | 170 | 78 | |
| Jasper | 5 | -3 | 14 | -1 | 9 *** | | X | Shearwater A | 8 | 0 | 15 | 2 | 22 *** | 160 | 59 | |
| Lethbridge A | 6 | -4 | 15 | -4 | 5 *** | 260 | 96 | Sydney A | 7 | 0 | 17 | -2 | 4 *** | 190 | 74 | |
| Medicine Hat A | 5P | -6P | 16P | -5P | 4P*** | 260 | 78 | Yarmouth A | 8 | 0 | 15 | -1 | 29 *** | 170 | 78 | |
| Peace River A | 6 | -3 | 16 | -3 | 5 *** | 270 | 70 | Prince Edward Island | | | | | | | | |
| Saskatchewan | | | | | | | | Charlottetown A | | | | | | | | |
| Cree Lake | 2 | -5 | 13 | -10 | 1 1 | 070 | 50 | Summerside A | 10 | 2 | 17 | 1 | 14 *** | 200 | 83 | |
| Estevan A | 7 | -3 | 17 | -4 | 14 *** | 290 | 76 | Newfoundland | | | | | | | | |
| La Ronge A | 3 | -5 | 15 | -6 | 12 *** | 060 | 39 | Cartwright | 0 | -2 | 13 | -7 | 11 86 | 350 | 80 | |
| Regina A | 7 | -3 | 17 | -4 | 10 *** | 270 | 70 | Churchill Falls A | -2 | -3 | 7 | -14 | 21 40 | 320 | 59 | |
| Saskatoon A | 5 | -5 | 16 | -5 | 1 *** | 310 | 56 | Gander Int'l A | 4 | -1 | 18 | -3 | 22 1 | 220 | 70 | |
| Swift Current A | 5 | -5 | 15 | -6 | 10 *** | 290 | 65 | Goose A | 1 | -3 | 10 | -7 | 11 1 | 040 | 54 | |
| Yorkton A | 5P | -3P | 16P | -4P | 4P*** | 180 | 48 | Port Aux Basques | 3 | 0 | 10 | -2 | 12 197 | 090 | 93 | |
| Manitoba | | | | | | | | St John's A | | | | | | | | |
| Brandon A | 7 | -2 | 16 | -5 | 6 *** | 040 | 52 | St Lawrence | 6P | 2P | 16P | -1P | 19P*** | | X | |
| Churchill A | -6 | -3 | 4 | -11 | 3 15 | 300 | 59 | Wabush Lake A | -1 | -2 | 9 | -10 | 10 1 | 280 | 46 | |
| Lynn Lake A | -1 | -6 | 11 | -8 | 0 *** | 320 | 54 | 90/05/07-90/05/13 | | | | | | | | |
| The Pas A | 3 | -4 | 14 | -5 | 7 *** | 310 | 46 | | | | | | | | | |
| Thompson A | 0 | -6 | 12 | -8 | 0 *** | 280 | 46 | | | | | | | | | |
| Winnipeg Int'l A | 7 | -3 | 19 | -6 | 3 *** | 320 | 52 | | | | | | | | | |

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

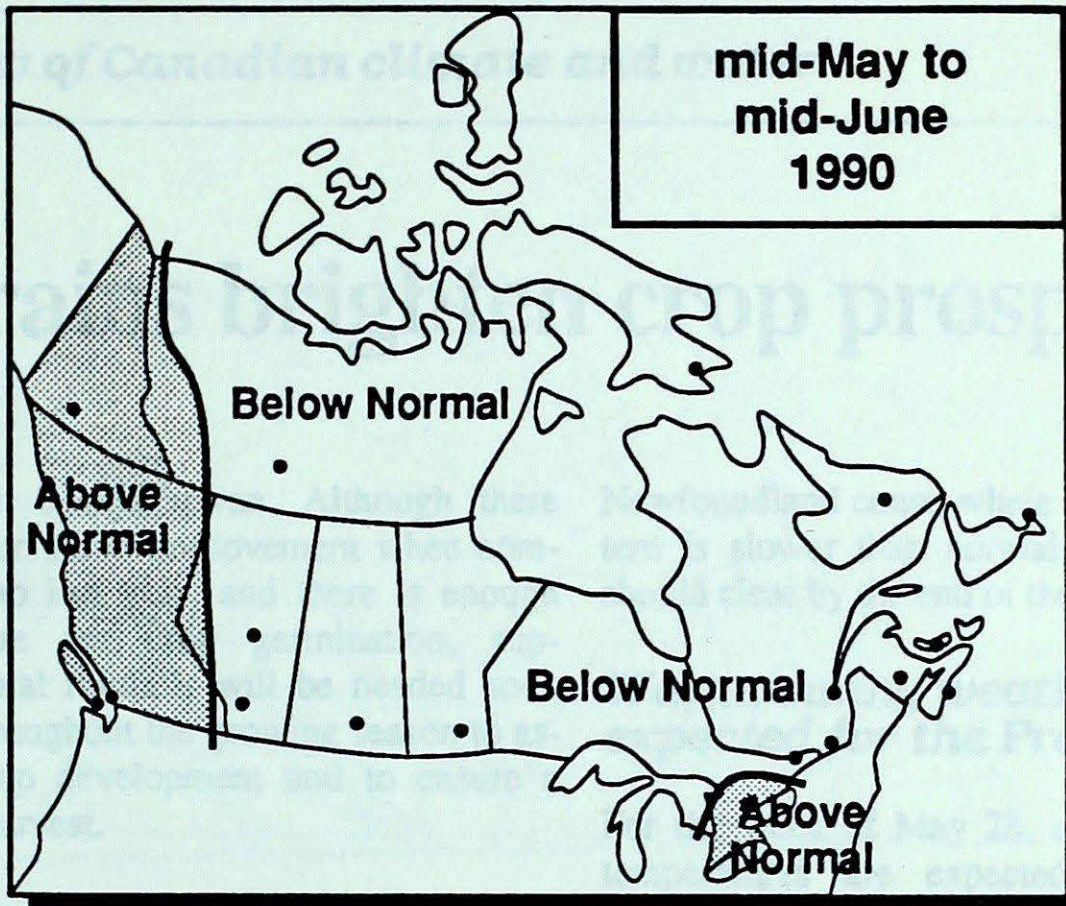
Service
de l'environnement
atmosphérique

MONTHLY TEMPERATURE FORECAST

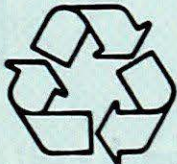
*Normal temperatures for
mid-May to mid-June, °C*

| | | | |
|-------------|----|---------------|----|
| Whitehorse | 9 | Toronto | 15 |
| Yellowknife | 9 | Ottawa | 15 |
| Iqaluit | -1 | Montréal | 16 |
| | | | |
| Vancouver | 14 | Québec | 14 |
| Victoria | 13 | Fredericton | 13 |
| Calgary | 11 | Halifax | 11 |
| | | | |
| Edmonton | 13 | Charlottetown | 12 |
| Regina | 14 | Goose Bay | 8 |
| Winnipeg | 14 | St. John's | 8 |

Canada



Think recycling



Pensez à recycler

PRINTED ON
RECYCLED PAPER

IMPRIMÉ SUR
DU PAPIER RECYCLÉ

