



Environment
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Climatic Perspective



May 21 to 27, 1990

A weekly review of Canadian climate and water

Vol.12 No.21

Ontario farmers await warmer, drier weather

May until now has been an unsettled, wet month in Ontario. Sunshine has been scarce and seasonally warm temperatures have been lacking.

Field work has ground to a halt in a number of Ontario counties after two weeks of rainy, overcast weather caused many fields to become waterlogged. Drying conditions have been poor, and it is only now that the situation is beginning to improve. Since the beginning of May, southern farming communities have received anywhere from 85 to 130 millimetres of rain. This is already approximately 50 mm above normal, when compared to a full month's total, making this the wettest May since 1983 or 1984. Meanwhile in central Ontario, Sudbury has recorded 141 mm of precipitation this month, making this the wettest May in 38 years.

The wet weather has delayed the planting of corn and soybeans, and farmers now have to also catch up on spraying their crops. Early planted corn has emerged, but is yellow due to the lack of warmth. Grains and cereals are doing reasonably well, but the cool weather has slowed their growth. Because of the rain, pastures are lush in the south and farmers are anticipating harvesting a good first hay crop once it dries out, but in the more central areas of the

province, where it has been cooler, pastures have shown little growth.

Heavy rains swell Alberta rivers

A number of southern Alberta rivers have overflowed their banks this week, as a combination of heavy rain and increased mountain snowmelt has swelled flood water levels. Heaviest rainfalls, in some cases more than 100 mm, fell in the foothills of southwestern Alberta. In the Rocky Mountain community of Canmore, a dam burst, sending a three-metre wall of water hurtling down a normally tranquil creek. A significant amount of rain was also recorded in the dry southeast portions of the province, improving the soil moisture situation and crop prospects somewhat.

Cool weather expected for the most of the country...

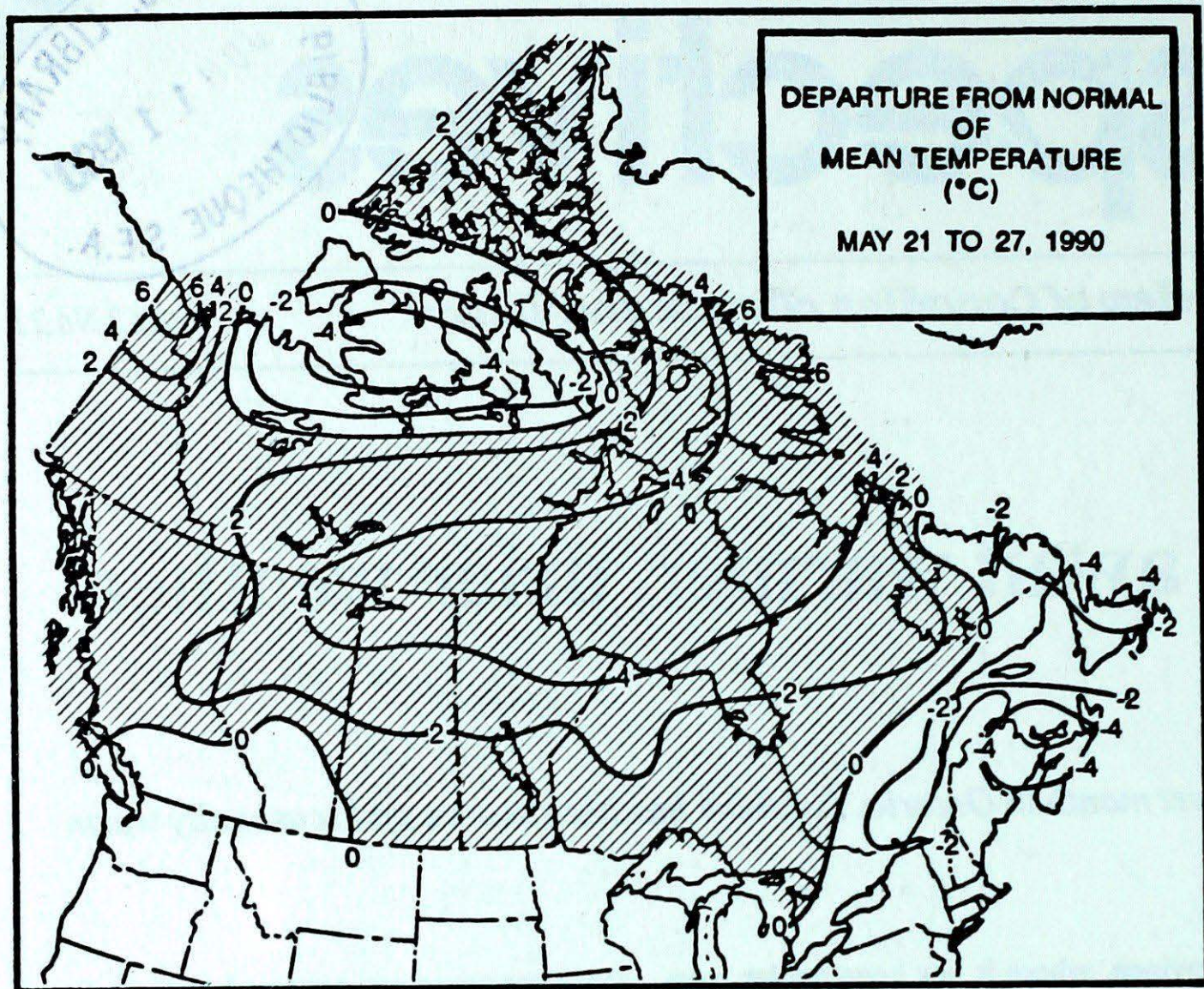
For the week of June 4, below-normal temperatures are forecast across Manitoba, Ontario, Quebec, and the Atlantic provinces. The greatest below nor-

mal departures are expected over northern Ontario. Elsewhere, above-normal conditions, especially across the high Arctic, are expected, as a strong upper ridge dominates British Columbia, the Yukon and the Northwest Territories.

Total precipitation April 30 to May 27, 1990

| Location | Actual | Average |
|-----------|----------|---------|
| Windsor | 115.2 mm | 65.0 mm |
| London | 122.4 mm | 61.6 mm |
| Toronto | 85.8 mm | 61.4 mm |
| Trenton | 114.0 mm | 67.4 mm |
| North Bay | 160.6 mm | 58.6 mm |
| Sudbury | 143.1 mm | 60.9 mm |

In the last four weeks, heavy precipitation was recorded across the southern half of Ontario.



Weekly normal temperatures (°C)

| | max. | min. |
|---------------------------|------|------|
| Whitehorse A | 14.3 | 1.8 |
| Iqaluit A | 1.1 | -5.2 |
| Yellowknife A | 12.4 | 2.5 |
| Vancouver Int'l A | 17.1 | 8.6 |
| Victoria Int'l A | 17.0 | 7.3 |
| Calgary Int'l A | 18.0 | 4.5 |
| Edmonton Int'l A | 19.3 | 5.2 |
| Regina A | 20.6 | 6.1 |
| Saskatoon A | 20.4 | 6.4 |
| Winnipeg Int'l A | 20.6 | 7.0 |
| Ottawa Int'l A | 20.6 | 8.6 |
| Toronto (Pearson Int'l A) | 20.2 | 7.4 |
| Montréal Int'l A | 20.2 | 9.0 |
| Québec A | 18.2 | 6.3 |
| Fredericton A | 18.8 | 5.6 |
| Saint John A | 15.6 | 4.8 |
| Halifax (Shearwater) | 14.6 | 5.6 |
| Charlottetown A | 14.9 | 4.8 |
| Goose A | 10.9 | 0.8 |
| St John's A | 10.9 | 1.9 |

Weekly temperature and precipitation extremes

| | Maximum temperature (°C) | Minimum temperature (°C) | Heaviest precipitation (mm) |
|-----------------------|--------------------------|--------------------------|-----------------------------|
| British Columbia | Revelstoke A 24 | Dease Lake -3 | Penticton A 39 |
| Yukon Territory | Beaver Creek A 24 | Burwash A -5 | Whitehorse A 13 |
| Northwest Territories | Fort Smith A 27 | Coppermine A -20 | Fort Reliance 11 |
| Alberta | Fort McMurray A 29 | Banff (aut) -3 | Pincher Creek (aut) 89 |
| Saskatchewan | Meadow Lake A 29 | Cree Lake -2 | Estevan A 17 |
| Manitoba | Thompson A 29 | Churchill A -2 | Gimli 10 |
| Ontario | Timmins A 30 | Lansdowne House -2 | Sioux Lookout A 10 |
| Québec | Bagotville A 27 | Schefferville A -5 | Mont Joli A 39 |
| New Brunswick | St-Léonard A 25 | Moncton A -1 | Moncton A 65 |
| Nova Scotia | Greenwood A 22 | Greenwood A -1 | Greenwood A 42 |
| | | Turo -1 | |
| Prince Edward Island | Summerside A 19 | Charlottetown A 1 | Summerside A 43 |
| Newfoundland | Wabush Lake A 21 | Nain A -9 | Gander Int'l A 66 |

Across The Country...

| | |
|--------------------------|--------------------------|
| Highest Mean Temperature | Fort McMurray A(ALTA) 17 |
| Lowest Mean Temperature | Cambridge Bay A(NWT) -12 |

90/05/21-90/05/27

CLIMATIC PERSPECTIVES
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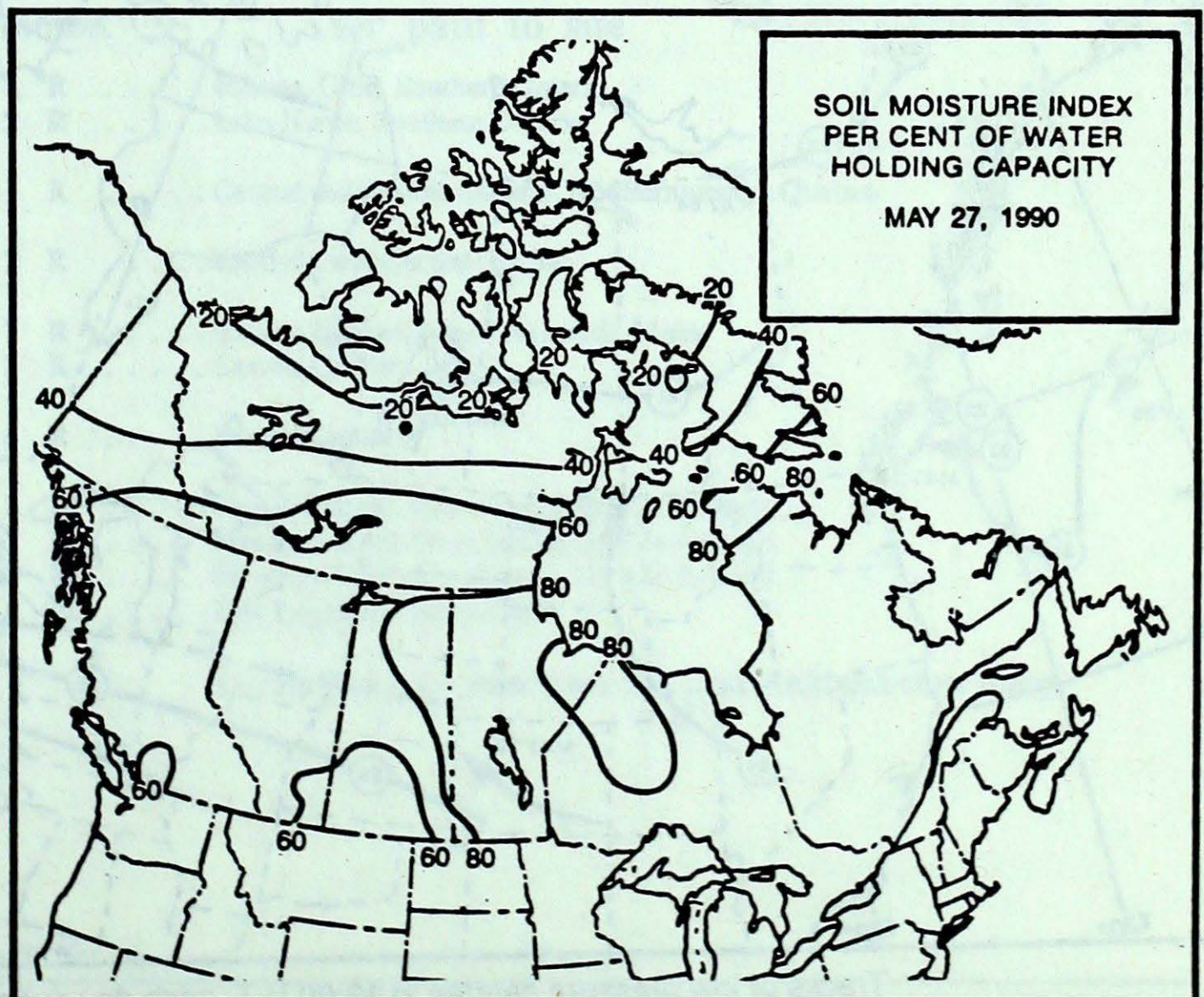
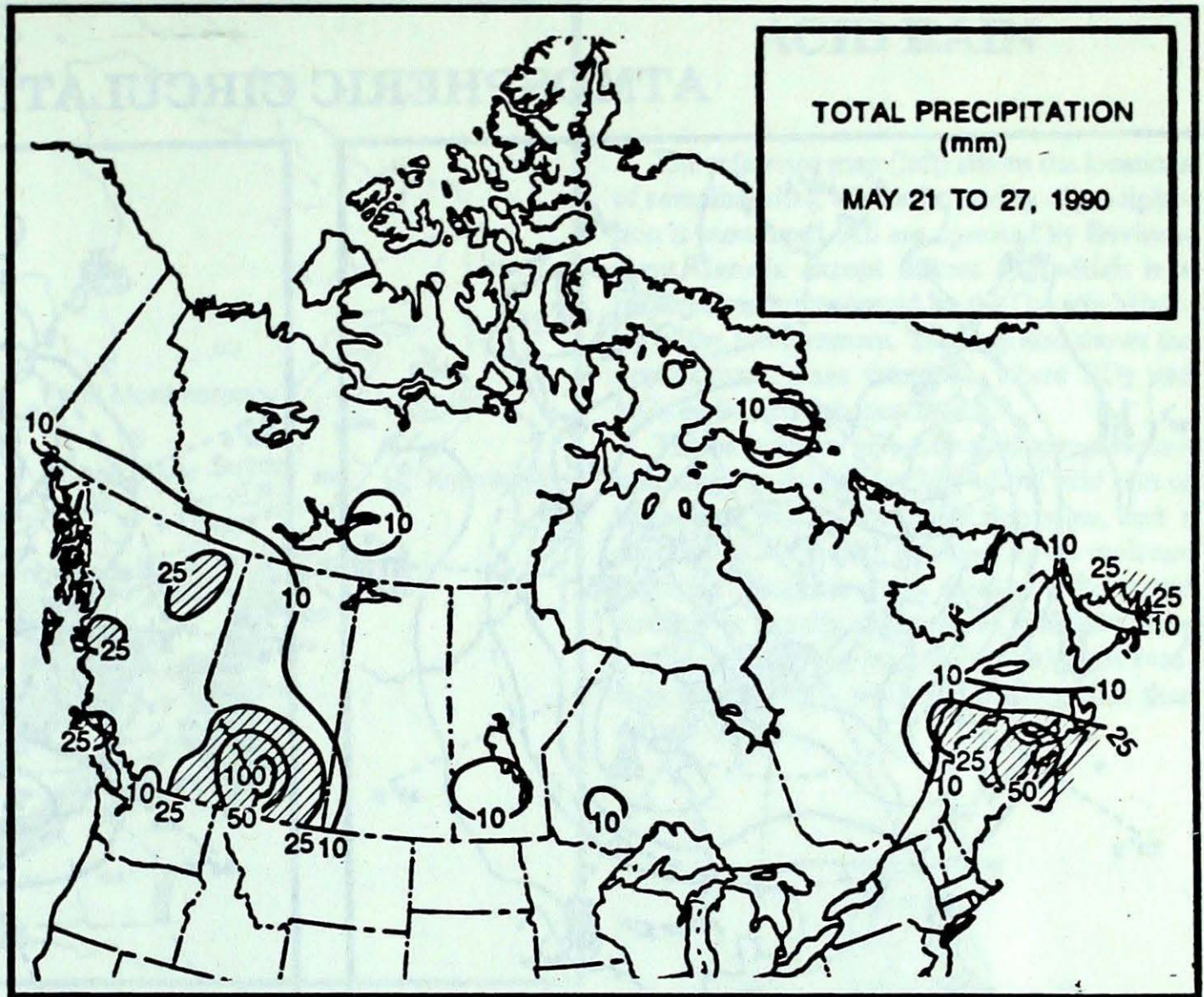
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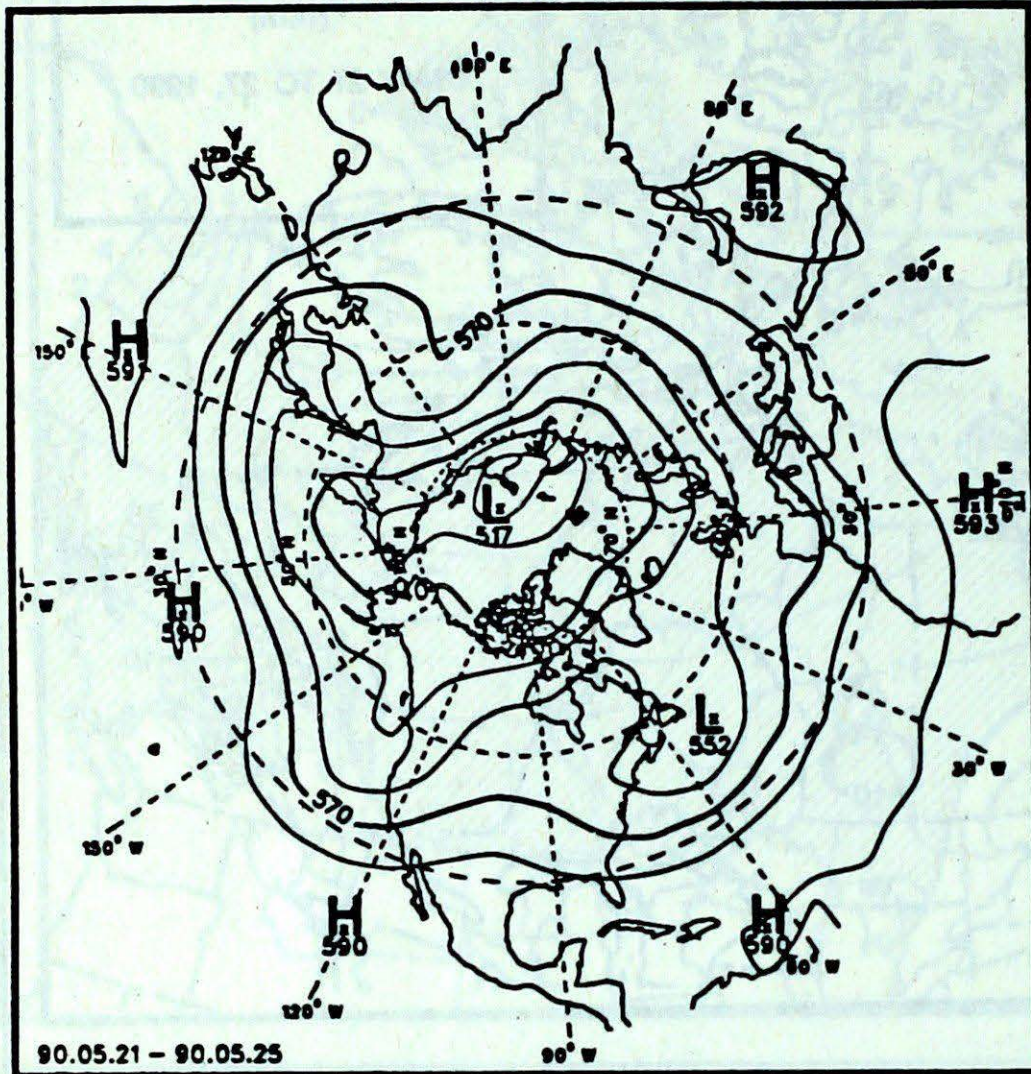
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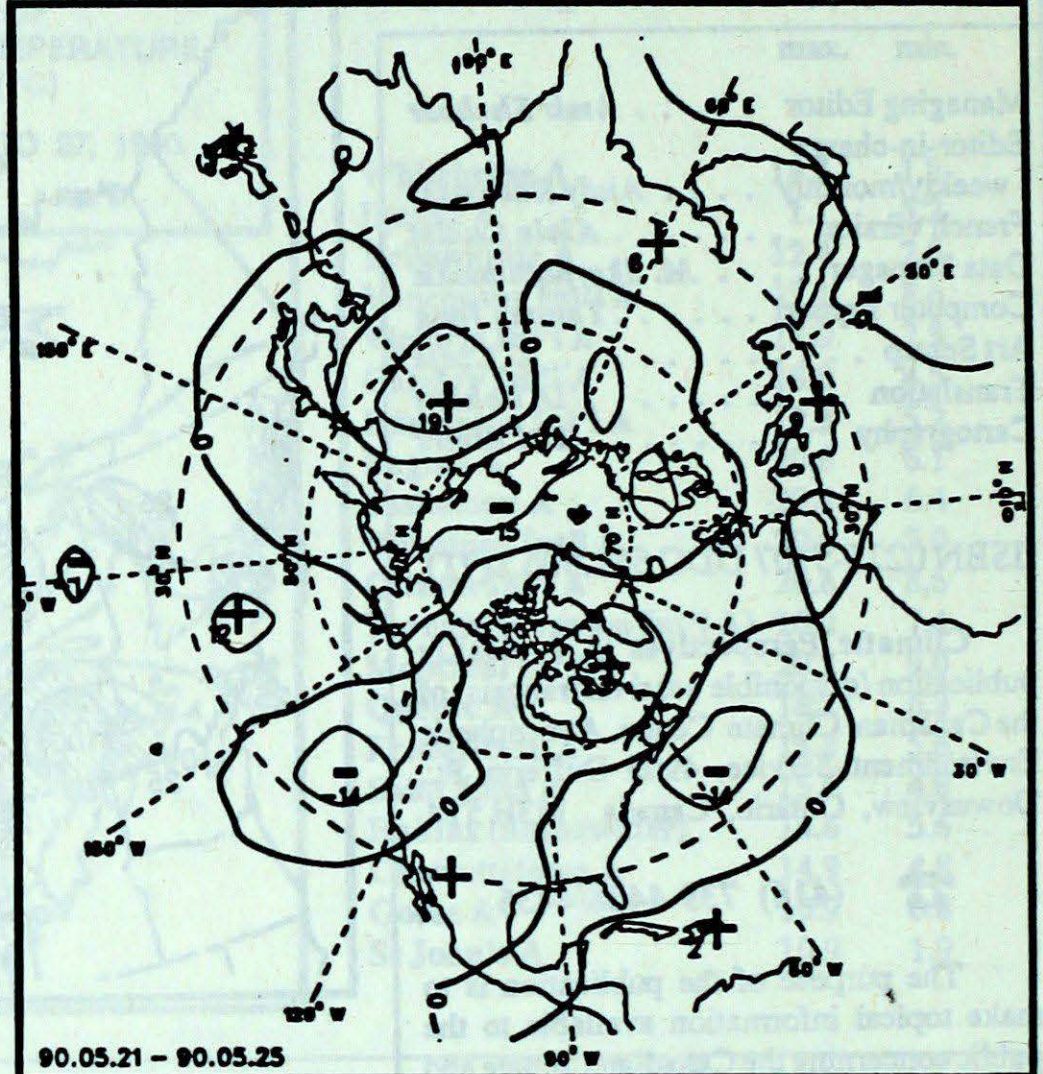
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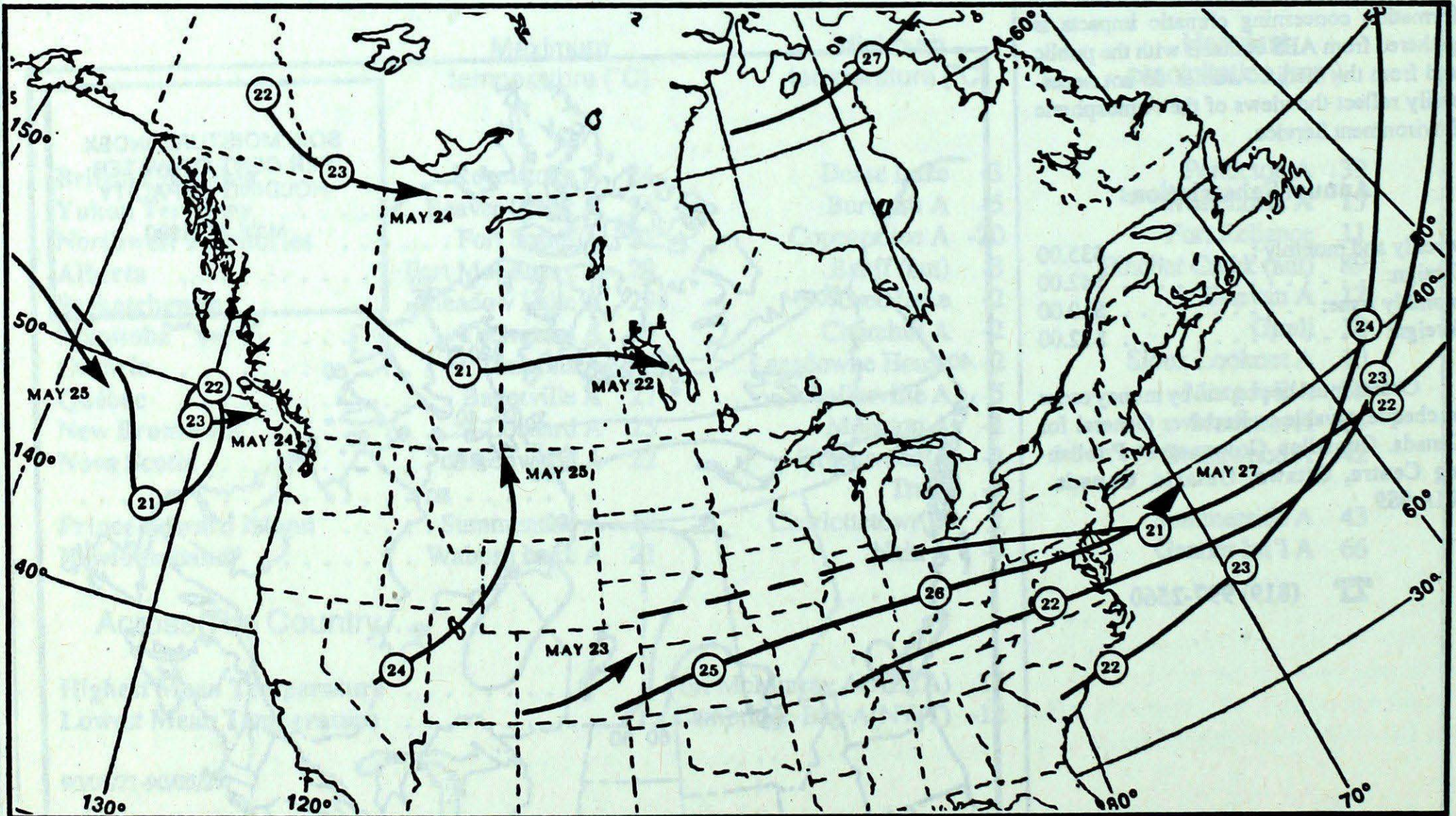
ATMOSPHERIC CIRCULATION



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



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

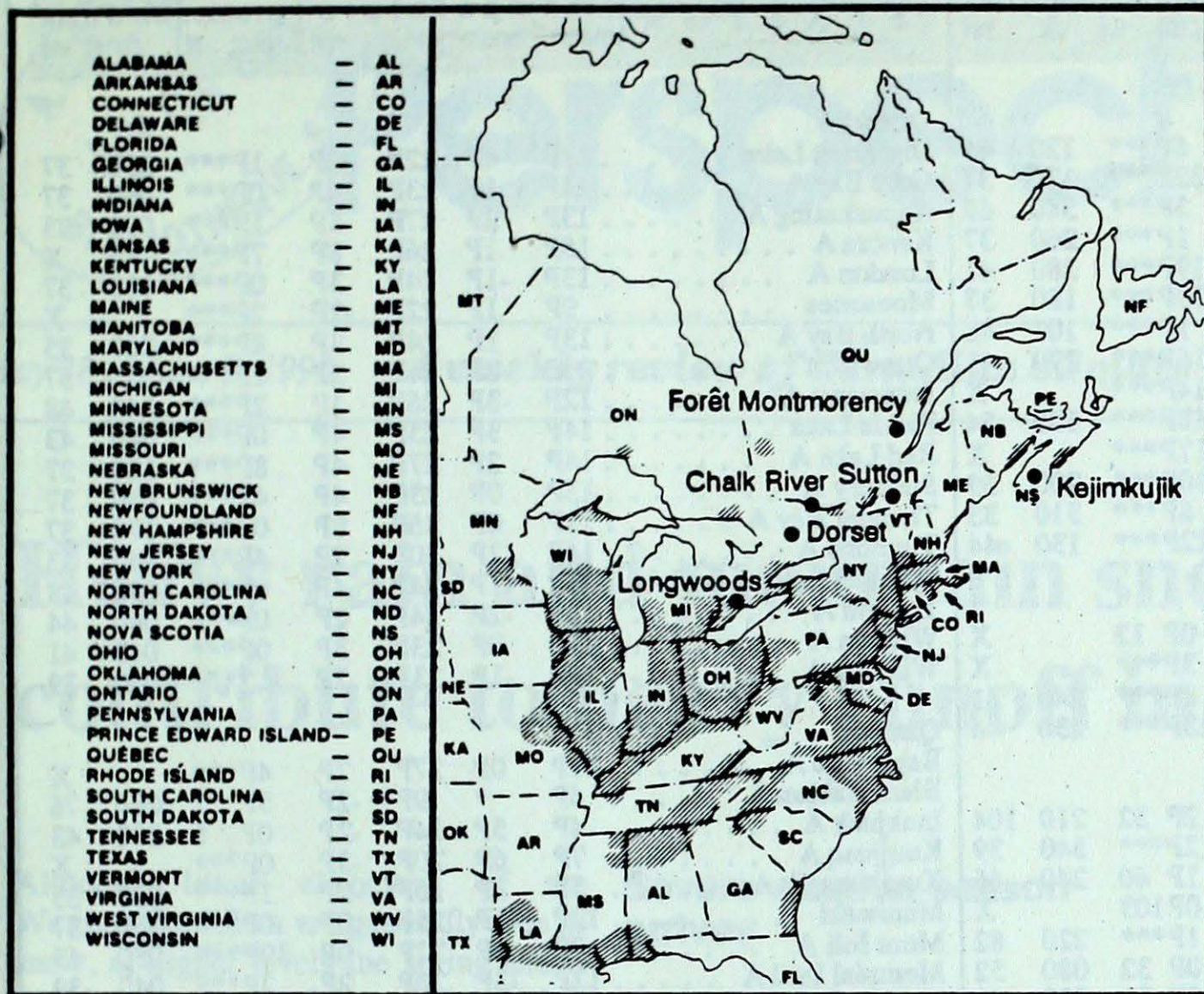


Tracks of low pressure centres at 12:00 U.T. each day during the period.

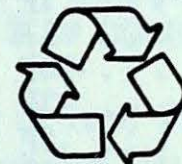
ACID RAIN

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 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.



Think recycling



Pensez à recycler

| Site | day | pH | amount | air path to site | May 20th to 26th, 1990 |
|-------------|-----|-----|--------|---|------------------------|
| Longwoods | 20 | 3.5 | 8 R | Indiana, Ohio, Southern Ontario | |
| | 23 | 4.1 | 2 R | Lake Huron, Southern Ontario | |
| Dorset * | 20 | 4.6 | 11 R | Central and Eastern Ontario, Northernwestern Quebec | |
| Chalk River | 20 | 4.2 | 2 R | Southern and Central Quebec | |
| Sutton | 20 | 4.6 | 7 R | Eastern Quebec, New Brunswick, Maine | |
| | 21 | 4.5 | 1 R | Eastern Quebec | |
| Montmorency | 21 | 5.2 | 6 R | Eastern Quebec | |
| Kejimkujik | 21 | 4.5 | 3 R | Newfoundland, Nova Scotia, Gulf St. Laurent | |
| | 22 | 4.9 | 17 R | Newfoundland, Nova Scotia, Gulf St. Laurent | |
| | 23 | 5.2 | 13 M | Newfoundland, Nova Scotia, Gulf St. Laurent | |
| | 24 | 5.4 | 4 P | Newfoundland, Nova Scotia | |

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 | 11P | 2P | 16P | 7P | 6P*** | 120 | 65 | Big Trout Lake | 11P | 4P | 22P | 0P | 1P*** | 330 | 37 | | |
| Cranbrook A | 11P | -1P | 21P | 3P | 32P*** | 170 | 37 | Gore Bay A | 13P | 1P | 23P | 4P | 0P*** | 060 | 37 | | |
| Fort Nelson A | 13P | 2P | 23P | 2P | 5P*** | 340 | 69 | Kapuskasing A | 13P | 2P | 27P | 5P | 1P*** | 090 | 33 | | |
| Fort St John A | 12P | 1P | 23P | 2P | 1P*** | 260 | 37 | Kenora A | 15P | 1P | 26P | 8P | 7P*** | X | X | | |
| Kamloops A | 14P | -1P | 23P | 5P | 19P*** | 280 | 41 | London A | 13P | -1P | 24P | 3P | 0P*** | 010 | 37 | | |
| Penticton A | 13P | -2P | 22P | 3P | 39P*** | 180 | 37 | Moosonee | 9P | 1P | 22P | -2P | 2P*** | X | X | | |
| Port Hardy A | 11P | 1P | 18P | 3P | 1P*** | 101 | 48 | North Bay A | 13P | 1P | 24P | 3P | 8P*** | 080 | 35 | | |
| Prince George A | 12P | 2P | 23P | 5P | 16P*** | 170 | 41 | Ottawa Int'l A | 13P | -2P | 26P | 2P | 1P*** | 340 | 57 | | |
| Prince Rupert A | 10P | 2P | 20P | 2P | 14P*** | | X | Petawawa A | 12P | -3P | 26P | 1P | 2P*** | 340 | 48 | | |
| Revelstoke A | 13P | 1P | 24P | 6P | 18P*** | 170 | 54 | Pickle Lake | 14P | 3P | 25P | 4P | 0P*** | 080 | 43 | | |
| Smithers A | 9P | -1P | 19P | 0P | 17P*** | | X | Red Lake A | 14P | 2P | 27P | 4P | 8P*** | 120 | 37 | | |
| Vancouver Int'l A | 14P | 1P | 20P | 7P | 10P*** | 200 | 39 | Sudbury A | 13P | 0P | 23P | 4P | 4P*** | 030 | 37 | | |
| Victoria Int'l A | 12P | 0P | 18P | 4P | 6P*** | 310 | 33 | Thunder Bay A | 11P | 0P | 26P | 0P | 0P*** | 170 | 37 | | |
| Williams Lake A | 10P | 0P | 19P | 3P | 12P*** | 130 | 44 | Timmins A | 14P | 2P | 30P | 2P | 4P*** | 040 | 33 | | |
| Yukon Territory | | | | | | | | Toronto (Pearson Int'l A) | | | | | | | | | |
| Komakuk Beach A | 1P | 4P | 9P | -4P | 0P | 12 | X | Trenton A | 12P | -2P | 24P | 2P | 0P*** | 040 | 44 | | |
| Teslin (aut) | 7P | * | 17P | -1P | 3P*** | | X | Warton A | 12P | 0P | 23P | 3P | 0P*** | 040 | 41 | | |
| Watson Lake A | 10P | 2P | 22P | -1P | 8P*** | 240 | 61 | Windsor A | 14P | -1P | 23P | 7P | 2.2*** | 020 | 39 | | |
| Whitehorse A | 9P | 1P | 19P | 0P | 13P*** | 230 | 46 | Québec | | | | | | | | | |
| Northwest Territories | | | | | | | | Bagotville A | | | | | | | | | |
| Alert | -2P | 7P | 0P | -10P | 2P | 32 | 104 | Blanc Sablon A | 4P | * | 9P | -2P | 5P | 1 | 080 | 76 | |
| Baker Lake A | -1P | 3P | 5P | -10P | 2P*** | 340 | 39 | Inukjuak A | 4P | 5P | 14P | -2P | 0P | 6 | 200 | 43 | |
| Cambridge Bay A | -12P | -6P | -1P | -20P | 1P | 40 | 240 | Kuujuuaq A | 7P | 6P | 20P | -3P | 0P*** | | X | | |
| Cape Dyer A | 1P | 5P | 7P | -7P | 0P | 103 | X | Kuujuarapik A | 5P | 2P | 15P | -2P | 1P*** | 020 | 35 | | |
| Clyde A | -1P | 5P | 7P | -6P | 1P*** | 220 | 82 | Maniwaki | 12P | -1P | 25P | 0P | 0P*** | 360 | 37 | | |
| Coppermine A | -10P | -7P | 6P | -20P | 0P | 32 | 080 | Mont Joli A | 7P | -3P | 22P | 0P | 39P*** | 050 | 63 | | |
| Coral Harbour A | -2P | 2P | 2P | -6P | 0P | 31 | 020 | Montréal Int'l A | 12P | -3P | 26P | 2P | 2P*** | 040 | 39 | | |
| Eureka | -5P | 2P | 2P | -10P | 2P | 19 | 160 | Natashquan A | 6P | 0P | 15P | 0P | 0P*** | 080 | 57 | | |
| Fort Smith A | 16P | 6P | 27P | 0P | 7P*** | 270 | 59 | Québec A | 9P | -3P | 26P | 1P | 8P*** | | X | | |
| Hall Beach A | -6P | 1P | 2P | -14P | 9P | 50 | 170 | Schefferville A | 4P | 2P | 19P | -5P | 0P | 1 | X | | |
| Inuvik A | 7P | 4P | 19P | -4P | 0P*** | 130 | 35 | Sept-Îles A | 6P | -1P | 16P | -1P | 1P*** | 240 | 35 | | |
| Iqaluit A | 1P | 3P | 7P | -7P | 10P | 9 | 320 | Sherbrooke A | 9P | -3P | 25P | -1P | 5P*** | | X | | |
| Mould Bay A | -7P | 2P | -2P | -12P | 1P | 14 | X | Val-d'Or A | 13P | 2P | 25P | 2P | 1P*** | 010 | 33 | | |
| Norman Wells A | 8P | 0P | 24P | -2P | 6P*** | 130 | 50 | New Brunswick | | | | | | | | | |
| Resolute A | -10P | -2P | -2P | -18P | 1P | 35 | 030 | Charlo A | 7P | -2P | 23P | -1P | 22P*** | 110 | 39 | | |
| Yellowknife A | 10P | 3P | 21P | -7P | 2P*** | 161 | 41 | Chatham A | 6P | -5P | 22P | -1P | 26P*** | 060 | 52 | | |
| Alberta | | | | | | | | Fredericton A | | | | | | | | | |
| Calgary Int'l A | 11P | 0P | 24P | 0P | 43*** | 350 | 54 | Moncton A | 6P | -5P | 21P | -1P | 65P*** | 030 | 54 | | |
| Cold Lake A | 15P | 3P | 27P | 4P | 2P*** | 140 | 43 | Saint John A | 6P | -5P | 22P | 1P | 58P*** | 020 | 52 | | |
| Edmonton Namao A | 16P | 3P | 24P | 6P | 20P*** | 130 | 56 | Nova Scotia | | | | | | | | | |
| Fort McMurray A | 17P | 5P | 29P | 0P | 0P*** | 200 | 37 | Greenwood A | 8P | -5P | 22P | -1P | 42P*** | 050 | 43 | | |
| High Level A | 15P | 4P | 26P | 4P | 9*** | | X | Shearwater A | 7P | -3P | 21P | 1P | 33P*** | 090 | 43 | | |
| Jasper | 11P | 1P | 22P | -1P | 13*** | | X | Sydney A | 5P | -4P | 19P | 1P | 22P*** | 320 | 50 | | |
| Lethbridge A | 12P | -1P | 25P | 0P | 35*** | 250 | 93 | Yarmouth A | 7P | -4P | 15P | 1P | 32P*** | 360 | 46 | | |
| Medicine Hat A | 14P | 0P | 25P | 4P | 31*** | 240 | 56 | Prince Edward Island | | | | | | | | | |
| Peace River A | 15P | 4P | 26P | 4P | 13*** | 150 | 37 | Charlottetown A | 6P | -4P | 18P | 1P | 37P*** | 020 | 46 | | |
| Saskatchewan | | | | | | | | Summerside A | | | | | | | | | |
| Cree Lake | 12P | 3P | 28P | -2P | 0P*** | 180 | 46 | 6P | -5P | 19P | 1P | 43P*** | 020 | 61 | | | |
| Estevan A | 15P | 1P | 26P | 4P | 16P*** | 120 | 72 | Newfoundland | | | | | | | | | |
| La Ronge A | 15P | 4P | 26P | 1P | 0P*** | 120 | 39 | Cartwright | 0P | -4P | 4P | -4P | 10P | 45 | 350 | 54 | |
| Regina A | 15P | 2P | 25P | 5P | 9P*** | 130 | 72 | Churchill Falls A | 4P | 2P | 18P | -5P | 0P | 8 | 060 | 33 | |
| Saskatoon A | 14P | 1P | 25P | 3P | 9P*** | 100 | 56 | Gander Int'l A | 2P | -5P | 10P | -2P | 66*** | 320 | 56 | | |
| Swift Current A | 13P | 1P | 24P | 5P | 2P*** | 110 | 70 | Goose A | 4P | -2P | 18P | -4P | 0P | 1 | 060 | 43 | |
| Yorkton A | 14P | 1P | 25P | 4P | 4P*** | 120 | 57 | Port Aux Basques | 6P | 1P | 12P | -1P | 1P*** | 270 | 57 | | |
| Manitoba | | | | | | | | St John's A | | | | | | | | | |
| Brandon A | 15P | 2P | 26P | 5P | 7P*** | 220 | 48 | 3P | -4P | 14P | -1P | 38*** | 020 | 48 | | | |
| Churchill A | 5P | 4P | 19P | -2P | 0P | 1 | 320 | 41 | 7P | 2P | 16P | 0P | 2P*** | | X | | |
| Lynn Lake A | 14P | 4P | 27P | 3P | 0P*** | 160 | 41 | Wabush Lake A | 6P | 2P | 21P | -5P | 0P*** | 040 | 33 | | |
| The Pas A | 15P | 3P | 25P | 3P | 0P*** | 150 | 46 | 90/05/21-90/05/27 | | | | | | | | | |
| Thompson A | 14P | 4P | 29P | 1P | 0P*** | 070 | 43 | | | | | | | | | | |
| Winnipeg Int'l A | 16P | 2P | 28P | 4P | 9P*** | 090 | 56 | | | | | | | | | | |

| | | |
|--------------------------------------|---|--|
| mean = mean weekly temperature, °C | ptot = weekly precipitation total in mm | Annotations |
| max = maximum weekly temperature, °C | st = snow thickness on the ground in cm | X = no observation |
| min = minimum weekly temperature, °C | dir = direction of max wind, deg. from north. | P = less than 7 days of data |
| anom = mean temperature anomaly, °C | vel = wind speed in km/h | * = missing data when going to printing. |