# Climatic Perspectives 



## CLIMATIC PERSPECTIVES VOLUME 17

Managing editor
Mal Berry
Editor English version Andy Radomski French version . Alain Caillet Data manager . Mike Skarpathiotakis Computer support . Robert Eals Art layout . . . . . . . Krystyna Czaja Translation Daniel Pokorn

We would like to thank all Environment Canada regional Climate Centres for their regular contributions to Climatic Perspectives. We would also like to thank weather offices in British Columbia, the Yellowknife and Iqaluit, and the weather centres in the Yukon and Newfoundland for their submissions.

## ISSN 0225-5707

Climatic Perspectives is a weekly and monthly publication (disponible aussi en français) of the Canadian Meteorological Centre, Atmospheric Environment Service, 4905 Dufferin St., DOWNSVIEW, Ontario,
Canada M3H 5T4
бア (416) 739-4441
Fax: (416) 739-4446
Email: cp@dow.on.doe.ca

## WWW: Mosaic/Lynx:

URL http://www.dow.on.doe.ca
/climate/climate.shtml
List server for text only:
write to: majordomo@cid.aes.doe.ca include: subscribe perspectives-eng
your full name email address
FTP (anon.): 199.212.19.42/climate
The purpose of the publication is to make topical information available to the public concerning the Canadian climate and its so-cio-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 Environment Canada contacts with the public and from the media. Articles do not necessarily reflect the views of the Departement.

## Across the country

## Yukon

April produced pleasant sunny and warm weather throughout the Yukon, as the circulation aloft brought mild and dry air to the Territory. Temperatures ranged from near normal in the southwest to more than $6^{\circ} \mathrm{C}$ above normal in the central Yukon. Klondike and Old Crow were 6.3 and 5.9 degrees above the average, respectively. Mayo was the warmest location, with a mean temperature of $5.0^{\circ} \mathrm{C}$. Dawson was next at $4.4^{\circ} \mathrm{C}$. Stewart Crossing, Mayo, Dawson and Klondike all set new maximum temperature records for the month of April. The highest maximum temperature was recorded at Stewart Crossing, a reading of $28.5^{\circ} \mathrm{C}$ between April 27 to 30 . In contrast, the coldest temperatures occurred along the Dempster Highway. Eagle Plains and Ogilvie saw their temperatures plunge to $-25.0^{\circ} \mathrm{C}$ and $-26.0^{\circ} \mathrm{C}$ on April 3 and 4 , respectively.

It was very dry across the Yukon, with most stations reporting less than $40 \%$ of their normal precipitation. Surprisingly, five locations received no measurable precipitation at all this month: Klondike, Stewart Crossing, Beaver Creek, Burwash and Carcross. It was also very dry through the coastal passes. In Whitehorse, at the end of the month, the lack of precipitation saw some gardeners watering their lawns and getting their gardens ready. There was also concern about forest fires. By the end of the month, the snow had disappeared at almost all locations, except in the mountains. Due to the dry weather, spring breakup on the rivers was uneventful this year, with no flooding problems being reported.

## Northwest Territories

In the Mackenzie District, April began on a cold note. By the end of the first week the minimum temperature had registered $-36.7^{\circ} \mathrm{C}$ at Yellowknife, setting a new monthly record. The following week temperatures moderated in the south but remained cold in the northeast. Fort Liard reached a high of $12^{\circ} \mathrm{C}$ on April 12. During the third week, a snowstorm affected the southern portions of the district, dumping

| CLIMATIC EXTREMES IN CANADA - APRIL 1995 |  |  |
| :---: | :---: | :---: |
| Mean temperature: |  |  |
| Highest | Abbotsford, B.C. | $10.0{ }^{\circ} \mathrm{C}$ |
| Coldest | Eureka, N.W.T. | $-19.3{ }^{\circ} \mathrm{C}$ |
| Highest temperature: | Abbotsford, B.C. | $23.5{ }^{\circ} \mathrm{C}$ |
| Lowest temperature: | Eureka, N.W.T. | $-37.3{ }^{\circ} \mathrm{C}$ |
| Heaviest precipitation: | Amphitrite Point, B.C. | 187.9 mm |
| Heaviest snowfall: | Sept-Îles, Qué. | 61.4 cm |
| Deepest snow on the ground April 30, 1995: | Cartwright, Nfld. | 112 cm |
| Greatest number of bright sunshine hours: | Eureka, N.W.T. | 400 hours |

11 cm of snow on Yellowknife. In the final week of the month, Inuvik established two new record maximums of $10.7^{\circ} \mathrm{C}$ and $13.5^{\circ} \mathrm{C}$ on the 23 rd and 26 th, respectively. Norman Wells set a new record maximum of $19.7^{\circ} \mathrm{C}$ on the 27 th.

In the Keewatin, blizzards were common at the beginning of the month. Gradually, during the second week, skies became sunny and temperatures climbed to near normal values. The latter part of the month saw variable weather conditions, which included freezing precipitation during the final week.

Relatively mild air pushed into the Arctic during the second week of the month and persisted until the end of the period. Eureka reported a daily record maximum temperature reading of $-15.5^{\circ} \mathrm{C}$ on the 8 th. More maximum temperature records were broken at Eureka on the 16 th and 17 th, $-9.8^{\circ} \mathrm{C}$ and $-7.2^{\circ} \mathrm{C}$, respectively. The temperature at Alert managed to climb to $-5.6^{\circ} \mathrm{C}$ on the 17 th.

## British Columbia

April began on rather an unsettled note, but towards the third week of the month spring
and even summer-like conditions predominated. By the end of the month, fine weather was replaced by more unsettled conditions once again. Overall, mean temperatures averaged from near to above normal.

Precipitation across the northern half of the province was near normal, but as one moved south through the central interior it was an entirely different story. In this part of the province, amounts were as much as two to three times the normal. Prince George set a new April precipitation record with 72.2 mm . (old record 57.4 mm set in 1966). Surprisingly, this new record was established by the 9 th of the month. A mixed snow and rain event on April 9, produced a record 27.8 mm .

April snowfall was double the average at Williams Lake and up to $230 \%$ of normal at Prince George. On the 9th, Prince George received 17.8 cm of heavy, wet snow. Although this was not a daily record snowfall, some local areas did receive 25 to 30 centimetres of the white stuff that day. The Kootenays were another area which received significant snowfalls. Cranbrook received 260\% its normal, but

in actual amounts this translates to only 6 to 11 centimetres.

Sunshine was more or less plentiful along the coastal areas and in the southern Okanagan. Across the rest of the province, sunshine was slightly below average.


#### Abstract

Alberta At the beginning of the month, it felt rather summer-like across southern Alberta, as temperatures climbed to $20^{\circ} \mathrm{C}$. But this was only a deception and not representative of what was still to come. By the middle of the first week, an Arctic air mass had covered the whole province, dropping temperatures to the minus twenties in the north. On April 3 and 4, 10 to 25 centimetres of snow fell across central Alberta and the foothills. On the weekend of the 8th and 9th, up to 15 cm covered parts of southern Alberta. On April 11 and 13, small hail associated with thunderstorms affected the Edmonton area. Temperatures on the 13th reached $20^{\circ} \mathrm{C}$. The Easter weekend saw another disturbance leave behind an additional 15 to 20 centimetres of snow on the southwestern foothills. Sunshine early on Easter Sunday gave way to afternoon clouds and showers, which persisted for the


next few days. Light snowfalls were reported in the northeast. On the 24th, heavy snowfalls were reported in the Rockies. The final weekend of the month in southern Alberta saw Lethbridge receive another 12 cm of snow, making this the 3rd snowy weekend out of the last five. The daytime temperature at Lethbridge hovered near $3^{\circ} \mathrm{C}$; surprisingly, daytime readings in northern Alberta at the same time were much warmer, generally in the $10^{\circ} \mathrm{C}$ to $12^{\circ} \mathrm{C}$ range.

## Manitoba and Saskatchewan

April was a cool month across the Prairies, with daytime temperatures averaging 2 to 4 degrees below normal. The cool weather has delayed the start of the growing season, with cumulative growing degree-day totals for southern locations being half of what is normal at this time of the year. Four major storms tracked across the southern half of the region, producing large amounts of snow. The hardest hit areas were in eastern Saskatchewan and western Manitoba, where total snowfalls exceeded 40 cm . In these areas, melting snow combined with the already soggy ground from last autumns precipitation has lead to flooding. In the more western portions of the Prai-
ries, there was less precipitation recorded this spring, although storms did pass through. Soil moisture in these areas is low due to the fact that the fall was dry and there was little precipitation received during the winter.

## Ontario

Stubbornly cool and cloudy weather persisted across Ontario, with monthly mean temperatures two degrees below normal across southern Ontario, making this the coldest April in Toronto since 1975. In northern Ontario, Timmins recorded its coldest April since records began there in 1955, while in Thunder Bay it was the coldest April since 1950. Afternoon temperatures failed to reach even the occasional high teens at most locals. Trenton, for example, recorded a high for the month of only $16^{\circ} \mathrm{C}$ - the lowest extreme daily maximum temperature for any April in the last 50 years.

Precipitation was infrequent during the first half of the month, but a rainy (snowy in the north) final two weeks pushed April totals above average in northeastern Ontario, as well as in southern and central Ontario west of Trenton. Windsor and London's 110 mm of total precipitation ( including 10-15 centimetres of snow greatest since 1982) was 40 percent more than usual, while Sudbury's 108 mm was 65\% above normal. Heavy rains on April 21 ( 45 mm in Muskoka) were the primary reason for the excess. In contrast, eastern Ontario was relatively dry, with only 50 to 80 percent of normal April moisture, and northwestern regions were quite dry with only 15-75 percent of accustomed April amounts. Pickle Lake with a meager 8 mm of precipitation (mostly in the form of snow) was Ontario's driest site.

Sunshine was scarce, adding to the April gloom. Total hours of sun were as much as 70 hours shy of normal. In Thunder Bay for example, the sun shone for only 156 hours whereas 224 hours is the norm.

Over all, April was a disappointment for many, failing to fulfil the promise suggested by the summer-like afternoon tem-
peratures during the March school break. The combination of cold temperatures and cloudy skies has resulted in a late spring. Poor drying conditions in the agricultural areas of southwestern Ontario has kept most farmers off the land and behind schedule. Meanwhile in suburbia, barbecues remain covered and garden centres quiet as all residents wait for a stretch of sunny and warm weather.

## Quebec

Mean temperatures were well-below normal across western Quebec. In fact, Roberval set a new low mean temperature record for April. Heaviest precipitation was reported in the St. Lawrence Valley, with more than 100 mm in some locations. The Gaspé received the most snow -61 cm , while Mont-Joli, Sept-Iles and La Grande IV all received more than 50 cm . For the most part, it was a cloudier than normal April throughout most of the province.

## Maritimes

April was generally cool but sunny. Strong westerly winds gusting to more than $100 \mathrm{~km} / \mathrm{h}$, brought record-low temperatures on the 5th and 6th. A minimum reading of $-13.6^{\circ} \mathrm{C}$ at Charlottetown, P.E.I., on the 5th was the lowest temperature ever recorded at that location in April. In Nova Scotia, Greenwood, Halifax and Yarmouth also set record-low minimum temperatures for the month of April.

Precipitation averaged on the low side, in some cases less than half the normal. Charlottetown's 55 mm was $59 \%$ of their normal monthly allotment. Total monthly snowfall varied throughout the region. Most locations in southern New Brunswick received below normal amounts. Moncton reported only 13 cm , which is approximately one third of their normal monthly snowfall. Coastal communities in northeastern New Brunswick recorded up to 50

cm of snow. On P.E.I., Charlottetown recorded $25 \mathrm{~cm}, 7 \mathrm{~cm}$ below the April normal. Snowfall across mainland Nova Scotia ranged from 25 cm at Greenwood to only 3 cm at Yarmouth. Up to 40 cm fell in parts of northern Cape Breton Island.

All areas, except northeastern New Brunswick had above normal amounts of sunshine. Moncton, N.B., recorded 174 hours of sunshine, which is 17 hours greater than normal. Shearwater, N.S., recorded 193 hours of bright sunshine, which is 35 hours more than the April normal.

## Newfoundland and Labrador

April was rather an uneventful month on the Island. There were no major storms or disruptions to public transportation. Snowfall ranged from 29 cm at Deer Lake ( 15 cm above normal) to 41 cm at Comfort Cove ( 16 cm below normal). The southern
part of the Island received below-normal precipitation amounts. Hours of bright sunshine were approximately 25 hours greater than normal at St. John's and Gander.

In Labrador, a series of low pressure systems moving south of the district resulted in a persistent easterly flow over southern Labrador. As a result, temperatures averaged well-above normal. The mean temperature was $3.6^{\circ} \mathrm{C}$ above normal at Mary's Harbour and $4.1^{\circ} \mathrm{C}$ above normal at Cartwright. On a negative note, the combination of the on-shore flow and the proximity of the passing disturbances resulted in greater than normal precipitation and significantly less sunshine. Cartwright recorded only 58.8 hours of bright sunshine, which is 69 hours less than normal for April.


SEASONAL TOTAL OF HEATING
DEGREE-DAYS TO END OF APRIL


| Kapuskasing | 5427 | 6299 | 5930 |
| :--- | :--- | :--- | :--- |
| London | 3568 | 4065 | 3834 |
| Ottawa | 4034 | 4723 | 4411 |
| Sudbury | 4673 | 5481 | 5049 |
| Thunder Bay | 4883 | 5685 | 5295 |
| Toronto | 3530 | 4115 | 3843 |
| Windsor | 3129 | 3609 | 3412 |
| QUEBEC | 5284 | 5761 | 5471 |
| Baie Comeau | 4022 | 4609 | 4276 |
| Montréal | 4555 | 5163 | 4804 |
| Québec | 5565 | 6040 | 5576 |
| Sept-Iles | 4461 | 4996 | 4850 |
| Sherbrooke | 5405 | 6234 | 5690 |
| Val-d'Or | 4277 | 4572 | 4370 |
| NEW BRUNSWICK | 4316 | 4591 | 4335 |
| Fredericton | 3466 | 3693 | 3637 |
| Moncton |  |  |  |
| NOVA SCOTIA | 4216 | 4455 | 4218 |
| Yarmouth |  |  |  |
| PRINCE EDWARD | 4211 | 4450 | 4188 |
| ISLAND | 4881 | 4475 |  |
| Charlottetown |  |  |  |
| NEWFOUNDLAND |  |  |  |
| AND LABRADOR |  |  |  |
| Gander |  |  |  |
| St. John's |  |  |  |

SEASONAL SNOWFALL TOTALS (cm) TO END OF APRIL

## BRITISH COLUMBIA

| Kamloops | 33 | 43 | 91 |
| :--- | ---: | ---: | ---: |
| Port Hardy | 55 | 37 | 72 |
| Prince George | 181 | 240 | 236 |
| Vancouver | 26 | 14 | 60 |
| Victoria | 6 | 23 | 50 |

YUKON TERRITORY
Whitehorse
NORTHWEST
TERRITORIES

| Iqaluit | 123 | 160 | 222 |
| :--- | ---: | ---: | ---: |
| Inuvik | 156 | 167 | 162 |
| Yellowknife | 186 | 148 | 132 |
| ALBERTA |  |  |  |
| Calgary | 80 | 85 | 142 |
| Edmonton Mun. | 65 | 139 | 129 |
| Grande Prairie | 143 | 205 | 176 |
| SASKATCHEWAN |  |  |  |
| Estevan | 103 | 167 | 114 |
| Regina | 100 | 107 | 119 |
| Saskatoon | 95 | $*$ | 111 |

MANITOBA

| Brandon | 166 | 74 | 115 |
| :--- | ---: | ---: | ---: |
| The Pas | 153 | 140 | 164 |
| Winnipeg | 92 | 82 | 123 |

ONTARIO

| Kapuskasing | 255 | 253 | 310 |
| :--- | ---: | :--- | :--- |
| London | 153 | 117 | 209 |
| Ottawa | 152 | 284 | 226 |
| Sudbury | 160 | 224 | 245 |
| Thunder Bay | 199 | 198 | 209 |
| Toronto | 89 | 116 | 131 |
| Windsor | 100 | 140 | 117 |
| QUEBEC |  |  |  |
| Baie Comeau | 432 | 348 | 368 |
| Montréal | 187 | 281 | 223 |
| Québec | 298 | 448 | 343 |
| Sept-Îles | 523 | 422 | 421 |
| Sherbrooke | 252 | 427 | 291 |
| Val-d'Or | 239 | 288 | 307 |
| NEW BRUNSWICK |  |  |  |
| Fredericton | 255 | 245 | 289 |
| Moncton | 314 | 321 | 339 |
| NOVA SCOTIA |  |  |  |
| Sydney | 226 | 317 | 313 |
| Yarmouth | 130 | 288 | 207 |
| PRINCE EDWARD |  |  |  |
| ISLAND |  |  |  |
| Charlottetown | 313 | 339 | 329 |
| NEWFOUNDLAND |  |  |  |
| AND LABRADOR | 530 | 517 | 389 |
| Gander | 441 | 320 | 347 |
| St. John's |  |  |  |

## 50-kPa ATMOSPHERIC CIRCULATION

April 1995


Mean geopotential heights 6-decametre interval


Normal geopotential heights for the month 6-decametre interval


Mean geopotential height anomaly 6-decametre interval


Mean height difference $w / r$ to previous month 6-decametre interval


APRIL 1995

| STATION | Temperoture C |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{array}{\|l\|l} \mathbf{5} \\ \hline \mathbf{y y} \\ \hline \end{array}$ |  |  | $\begin{array}{\|l\|} \hline \text { E } \\ \hline \overrightarrow{~ E ~} \\ \text { E } \\ \hline \end{array}$ |  |  |  |  |  |  |  |  |  |
| EDMONTON INT'L A |  | -. 1 |  |  |  |  |  |  |  |  |  |  |  |
| EDMONTON MUNICIPAL | 3.9 | -. 3 | 16.5 | -14.7 | 5.8 | 78 | 21.2 | 98 | 0 | 8 | 169 | 74 | 4422.5 |
| EDSON A | 2.5 | -. 7 | 15.8 | -11.6 |  | * |  |  |  |  |  |  |  |
| FORT MCMURRAY A GRANDE PRAIRIE A | 1.4 3.5 | -. 7 | 15.3 17.5 | -25.2 -1.8 | 16.8 | 124 | 24.0 | 117 | 0 | 7 | 167 | 72 | 497.0 |
| HIGHLEVELA | $\begin{array}{r} \\ \\ \hline\end{array}$ | -1.8 | 17.3 15.9 | -10.8 -32.0 | 13.7 | 94 | 28.3 | 72 | 0 | 8 | 217 | 88 | 529.5 |
| JASPER | 4.5 | 1.2 | 16.7 | -6.7 | 1.2 | 11 | 12.2 | 54 | 0 | 4 | 169 | ${ }^{\circ}$ |  |
| LETHBRIDGE A | 4.0 | -. 9 | 19.2 | -8.9 | 34.2 | 124 | 40.5 | 95 | 4 | 10 | 200 | 101 | 421.7 |
| Medicine hat a PEACE RIVER A | 4.7 3.1 | -. 1.0 | 19.9 16.1 | -10.5 -15.8 | 19.9 8.7 | 108 92 | 28.9 10.8 | ${ }_{76}^{96}$ | 0 | 8 | 206 | 103 | 401.8 447.6 |
| RED DEERA | 2.6 | -. 5 | 15.4 | -11.7 | 1.8 | 11 | 26.4 | 100 | 0 | 8 | : | : | 462.1 |
| ROCKY MTN HOUSE A SLAVE LAKE A | 2.2 | -. 8 | 15.4 | -10.5 -18.3 | : | : | 22.4 | 127 | : | : | : | : |  |
| WHITECOURT A | 3.2 | . 5 | 17.2 | -14.0 | 35.4 | 202 | 42.1 | 156 | 0 | 10 | * | - | 445.0 |
| SASKATCHEWAN |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Broadview | . 5 | -2.1 | \% | , | \% | 7 | 40.8 | 131 | * | \% | * |  |  |
| ESTEVANA KINDERSLEY | 2.4 1.6 | -1.7 -2.2 | 14.6 14.9 | -15.9 -16.5 | 12.4 | 77 | 35.0 13.6 | 95 64 | 0 | 7 | 172 | 82 | 469.9 492.4 |
| La Ronge a | -2.1 | -3.1 | . |  | . | - | 46.4 | 236 | * | * | - | * |  |
| meadow lake a | -. 4 |  | 15.3 | -23.8 | 34.0 | - | 52.4 | - | 0 | 7 | 202 | - | 548.7 |
| MOOSE JAII A | 2.1 | -2.1 | 14.9 | -16.1 | 7.0 | 53 | 13.3 | 44 | 0 | 4 | 166 | 76 | 476.3 |
| nIpamina | -2.2 |  | 10.6 | -23.7 | 15.8 | 5 | 22.2 | 4 | 0 | 7 | 211 | \% | 609.5 |
| NORTH BAT TLEFORD A PRINCE ALBERT A | - -1.1 | -2.2 | 15.0 14.4 | -20.2 -23.1 | 6.0 21.4 | 56 191 | 31.3 51.0 | 148 232 | 0 | 4 | 207 | 92 | 516.8 572.9 |
| REGINA A | 2.0 | -1.3 | 14.1 | -17.0 | 11.0 | 101 | 31.7 <br> 31.7 | 134 | 0 | 6 | 181 | 88 | 516.9 481.4 |
| SASKATOON A | . 1.9 | -2.6 -1.6 | 14.9 | -19.5 | 17.2 | 181 | 34.0 34.0 | 160 120 | 0 | 7 | 201 | : | 518.9 483.2 |
| YORKTON A | -2.2 | -4.4 | 9.4 | -22.3 | 35.6 | 272 | 45.2 | 204 | 0 | 10 | 247 | 110 | 605.5 |
| MANITOBA |  |  |  |  |  |  |  |  |  |  |  |  |  |
| BRANDON A CHURCHILL A DAUPHIN A GILLAM A GIMLI | $\begin{array}{r} -.9 \\ -11.2 \\ -2.0 \\ -4.6 \\ -.4 \end{array}$ | -3.7 -1.1 -4.3 -0.5 | $\begin{array}{r} 14.7 \\ 8.1 \end{array}$ | -20.7 | $\begin{array}{r} 32.8 \\ 25.4 \end{array}$ | 290 | $\left\lvert\, \begin{array}{r} 31.5 \\ 17.6 \\ 40.1 \\ 22.6 \\ 12.1 \end{array}\right.$ | 93 77 126 92 : | 2 | 6 <br> 8 <br> $\mathbf{8}$ | 210 | - | 565.3 877.0 600.5 677.5 550.9 |



agroclimatological stations


