



Climate Trends and Variations Bulletin

This bulletin summarizes recent climate data and presents it in a historical context. It first examines the national average temperature for the season and then highlights interesting regional temperature information.

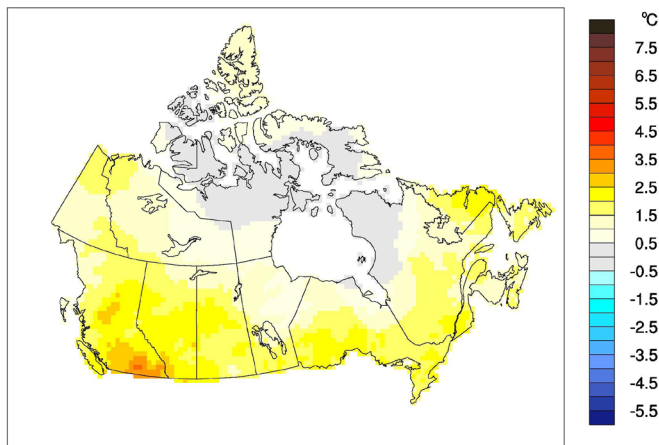
Over the past decade, precipitation monitoring technology has evolved and Environment and Climate Change Canada and its partners implemented a transition from manual observations to using automatic precipitation gauges. Extensive data integration is required to link the current precipitation observations to the long term historical manual observations. The update and reporting of historical adjusted precipitation trends and variations will be on temporary hiatus pending the extensive data reconciliation, and will resume thereafter. ECCC remains committed to providing credible climate data to inform adaptation decision making, while ensuring the necessary data reconciliation occurs as monitoring technology evolves.

NATIONAL TEMPERATURE

The national average temperature for the summer (June–August) of 2021 was 1.3°C above the baseline average (defined as the mean over the 1961–1990 reference period), based on preliminary data, which is the 5th warmest observed since nationwide recording began in 1948. The warmest summer occurred in 2012, when the national average temperature was 1.8°C above the baseline average. The coldest summer occurred in 1978, when the national average temperature was 1.0°C below the baseline average. The temperature departures map shows that most of Canada experienced temperatures at least 1.0°C above the baseline average. Central and southern British Columbia experienced temperatures more than 2.5°C above the

baseline average. Only the central region of Nunavut and northern Quebec experienced summer temperatures near the baseline average.

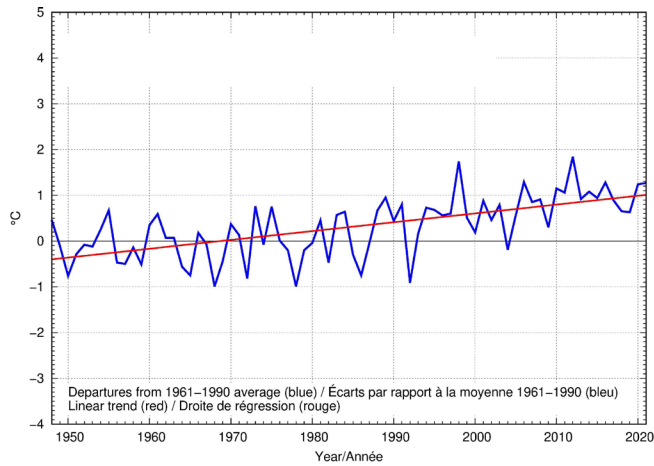
TEMPERATURE DEPARTURES FROM THE 1961–1990 AVERAGE – SUMMER 2021



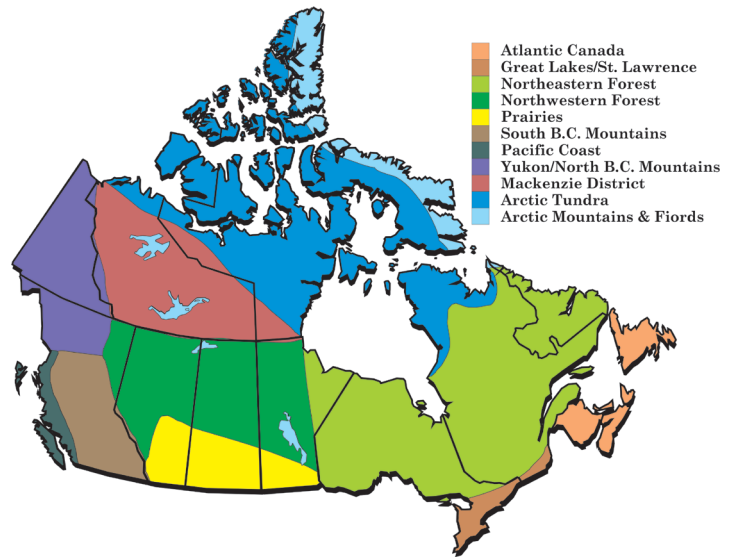
The time series graph shows that averaged summer temperatures across the country have fluctuated from year to year over the 1948–2021 period. With the exception of 2004, averaged summer temperatures have remained above the baseline average since 1993. The linear trend indicates that summer temperatures averaged across the nation have warmed by 1.5°C over the past 74 years.



SUMMER NATIONAL TEMPERATURE DEPARTURES AND LONG-TERM TREND, 1948–2021



THE MAP OF CANADIAN CLIMATE REGIONS



REGIONAL TEMPERATURE

When examined on a regional basis, average summer temperatures for 2021 were among the 10 warmest on record since 1948 for eight of the eleven climate regions. The South B.C. Mountains experienced its warmest summer (at 2.4°C above the baseline average); the regions which had their 2nd warmest summer were the Prairies (at 2.0°C above the baseline average) and the Northwestern Forest (at 1.6°C above the baseline average); the regions with their 3rd warmest summers were the Great Lakes / St. Lawrence (at 1.9°C above the baseline average) and Atlantic Canada (at 1.4°C above the baseline average); the Pacific Coast experienced its 4th warmest summer (at 1.9°C above the baseline average); the Northeastern Forest had its 5th warmest summer (at 1.6°C above the baseline average) and the Yukon/North B.C. Mountain had this summer ranked 6th warmest (at 1.5°C above the baseline average). None of the eleven climate regions experienced an average summer temperature for 2021 that ranked among the 10 coolest since 1948. All eleven climate regions exhibit positive trends for summer temperatures over the 74 years of record. The strongest trend is observed in the Mackenzie District (+1.8°C), while the weakest trend (+1.1°C) is found in the Prairies region. A table listing the regional and national temperature departures and rankings from 1948 to 2021 and a table that summarizes regional and national trends and extremes summaries are available upon request to btvc-ctvb@ec.gc.ca.

Please note that the latest generation of CANGRD is now adopted in the analyses of the Climate Trends and Variations Bulletin (CTVB). For more information, please visit the CTVB homepage.

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