SPRING 2023

Climate Trends and Variations Bulletin

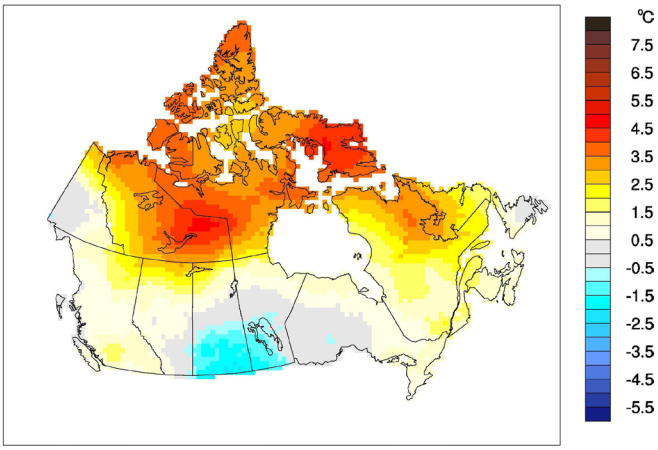
This bulletin summarizes recent climate data and presents it in a historical context. It first examines the national average temperature for the season and then highlights interesting regional temperature information.

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 spring (March-May) of 2023 was 1.9°C above the baseline average (defined as the mean over the 1961–1990 reference period), based on preliminary data, which has ranked the 7th warmest observed spring since nationwide recording began in 1948. The warmest spring occurred in 2010, when the national average temperature was 4.0°C above the baseline average. The coolest spring occurred in 1974, when the national average temperature was 2.0°C below the baseline average. The temperature departures map for the spring of 2023 shows that most of Canada experienced temperatures at least 1°C above the baseline average. Areas in most of the Northwest Territories, the entire Nunavut and northern Quebec experienced temperature departures more than 2.5°C above the baseline average. Most notably, temperatures more than 4.5°C above the baseline average were recorded in eastern Northwest Territories and northern Nunavut. Conversely, southern Saskatchewan and most of southern Manitoba experienced temperatures at least 1°C below the baseline average. The rest of the country experienced temperatures close to the baseline average within 0.5°C of differences.

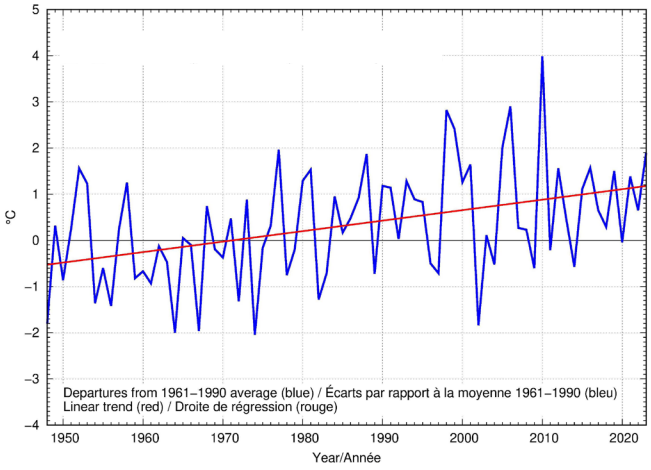
Temperature Departures from the 1961–1990 Average – Spring 2023



The time series graph shows that averaged spring temperatures across the country have fluctuated from year to year over the 1948–2023 period. However, the

linear trend indicates that spring temperatures averaged across the nation have warmed by 1.6°C over the past 76 years.

Spring National Temperature Departures and Long-term Trend, 1948–2023

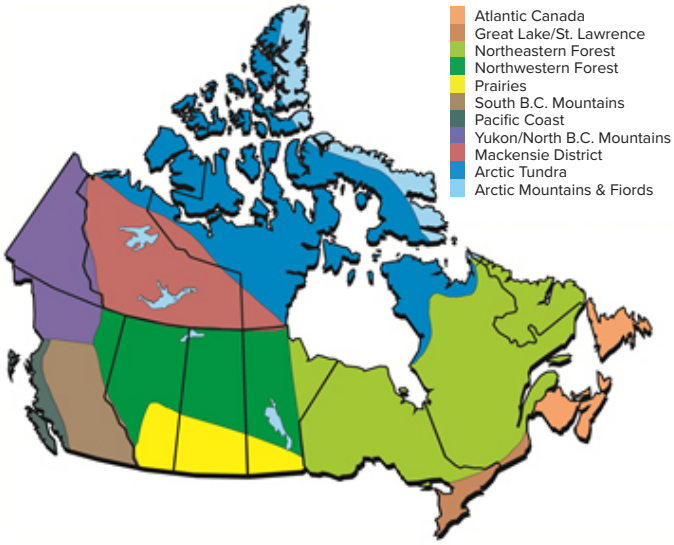


Regional Temperature

When examined on a regional basis, average spring temperatures for 2023 was ranked among the 10 warmest on record, since 1948, for three of the eleven climate regions: Arctic Tundra (3rd warmest at 3.4°C above the baseline average), Mackenzie District (4th warmest at 3.4°C above the baseline average), and Arctic Mountains and Fiords (4th warmest at 3.7°C above the baseline average). None of the eleven climate regions experienced a spring temperature for 2023 that was among the 10 coolest since 1948. The climate region that experienced the warmest spring temperature departure for 2023 was the Arctic Mountains and Fiords region (+3.7°C), whereas the climate regions that experienced the coolest spring temperature departure this year was the Prairies regions (-0.8°C). All eleven climate regions exhibit positive trends for spring temperatures over the 76 years of record. The strongest regional trend (+2.4°C) is observed in the Mackenzie District region, while the weakest trend (+0.9°C) is found in the Atlantic Canada region. A table listing the regional and national temperature departures and rankings from 1948 to 2023 and another table summarizing regional and national trends and extremes summaries are available upon request at btvc-ctvb@ec.gc.ca.

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

THE MAP OF CANADIAN CLIMATE REGIONS



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