

Winter 2024/2025



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.

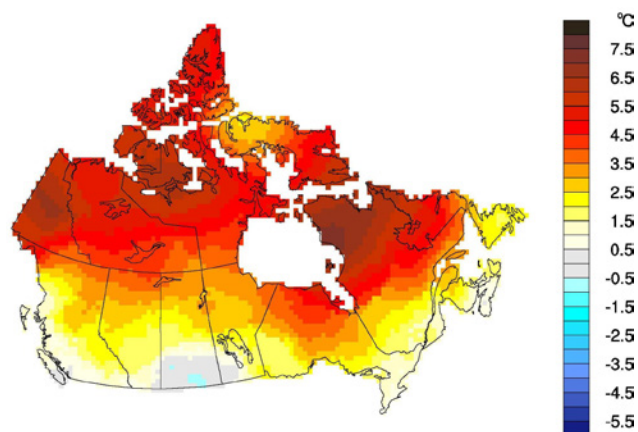
Over the past decade, precipitation monitoring technology has evolved and Environment and Climate Change Canada and its partners implemented a transition from manual observations to using automatic precipitation gauges. Extensive data integration is required to link the current precipitation observations 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 winter of 2024/2025 (December 2024–February 2025) was 3.7°C above the baseline average (defined as the mean over the 1961–1990 reference period), based on preliminary data, which was the 5th warmest winter since nationwide recording began in 1947/1948. The warmest winter on record occurred last year in 2023/2024, when the national average temperature was 5.2°C above the baseline average. The coldest winter occurred in 1971/1972 when the national average temperature was 3.6°C below the baseline average. The temperature departures map shows that most of Canada experienced temperatures at least 2°C above the baseline average.

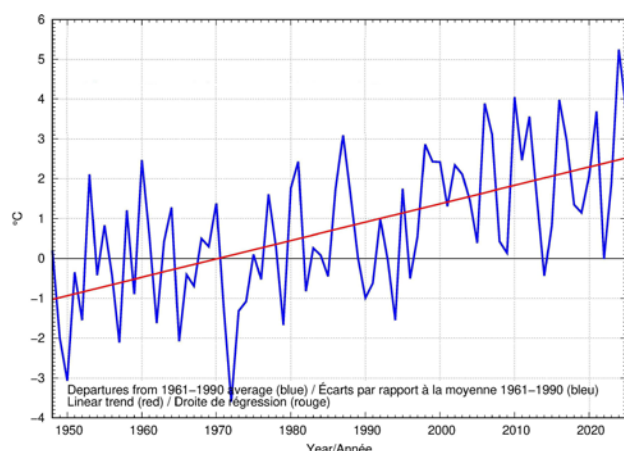
Temperature departures greater than 3.5°C above the baseline average were recorded throughout the north except for a small region in Nunavut, which recorded temperature departures between 2°C and 3°C. Meanwhile, the Maritime provinces, southern Ontario, and the west coast recorded temperature departures near the baseline average. A small region in southern Saskatchewan recorded temperatures just slightly below the baseline average.

Temperature Departures from the 1961–1990 Average – Winter 2024/2025



The time series graph shows that average winter temperatures across the country have fluctuated over the 1948–2025 period. Apart from 2012/2013, average winter temperatures have remained above the baseline average since 1995/1996. The linear trend indicates that the average winter temperature across the nation has warmed by 3.7°C over the past 78 years.

Winter National Temperature Departures and Long-term Trend, 1948–2025

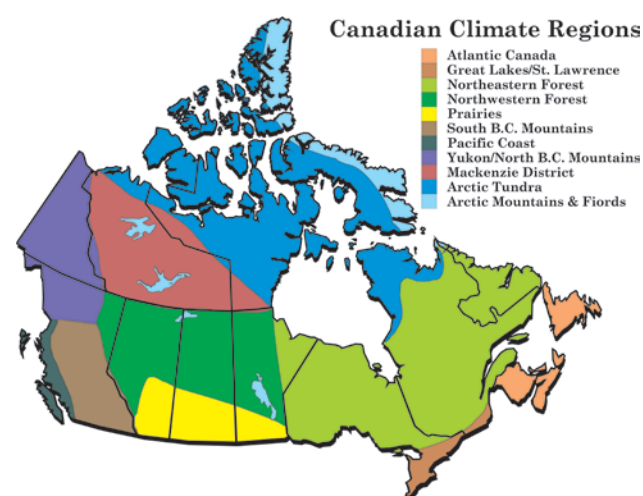


Regional Temperature

Regionally, five of the eleven climate regions experienced warmer average winter temperatures, ranking among the top 10 warmest since 1947/1948. These regions were, Arctic Tundra (the 3rd warmest at 5.2°C above the baseline average); the Arctic Mountains and Fiords (the 4th warmest at 4.6°C above the baseline average); Mackenzie District (6th warmest at 4.7°C above the baseline average); Yukon/North B.C. Mountains (7th warmest at 4.9°C above the baseline average); and the Northeastern Forest (7th warmest at 3.7°C above the baseline average). None of the eleven climate regions recorded average winter temperatures in 2024/2025 that ranked among the

10 coolest since 1947/1948. All eleven climate regions exhibited positive trends for winter temperatures over the past 78 years. The strongest trend was observed in the Yukon/North B.C. Mountains (+5.9°C), while the weakest trend was found in the Atlantic Canada region (+1.6°C). A table listing the regional and national temperature departures and rankings from 1948 to 2025 and another table summarizing regional and national trends and extremes summaries are available upon request at btvc-ctvb@ec.gc.ca.

The Map of Canadian Climate Regions



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