



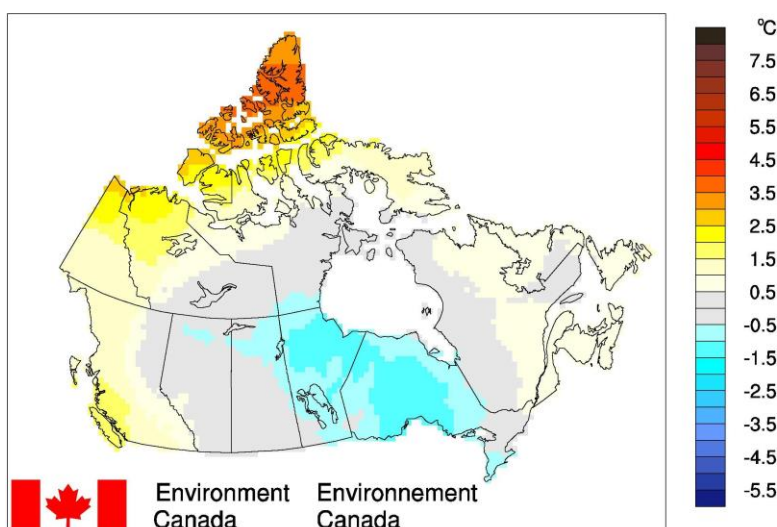
Climate Trends and Variations Bulletin – Autumn 2014

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. Precipitation is examined in the same manner.

National Temperature

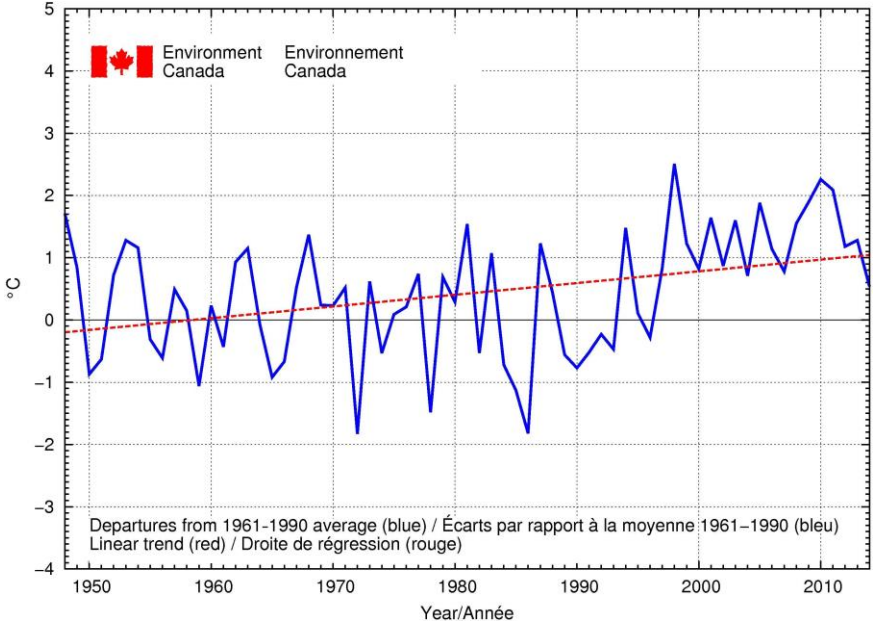
The national average temperature for autumn 2014 was 0.5°C above the baseline average (defined as the mean over the 1961–1990 reference period), based on preliminary data, which makes this past autumn the 33rd warmest observed since nationwide recording began in 1948. The warmest autumn on record was 1998, when the national average temperature was 2.5°C above the baseline average. The coldest autumn occurred in 1972, when temperature averaged across the country was 1.8°C below the baseline average. The temperature departures map for autumn 2014 (below) shows that most of British Columbia, Yukon, the northern Northwest Territories, northern Nunavut, and some areas in Quebec and in the Atlantic regions experienced temperatures above the baseline average. Below-average temperatures were mainly recorded in Manitoba and Ontario. Temperatures near the baseline average were found in the rest of the country.

Temperature Departures from the 1961–1990 Average – Autumn 2014



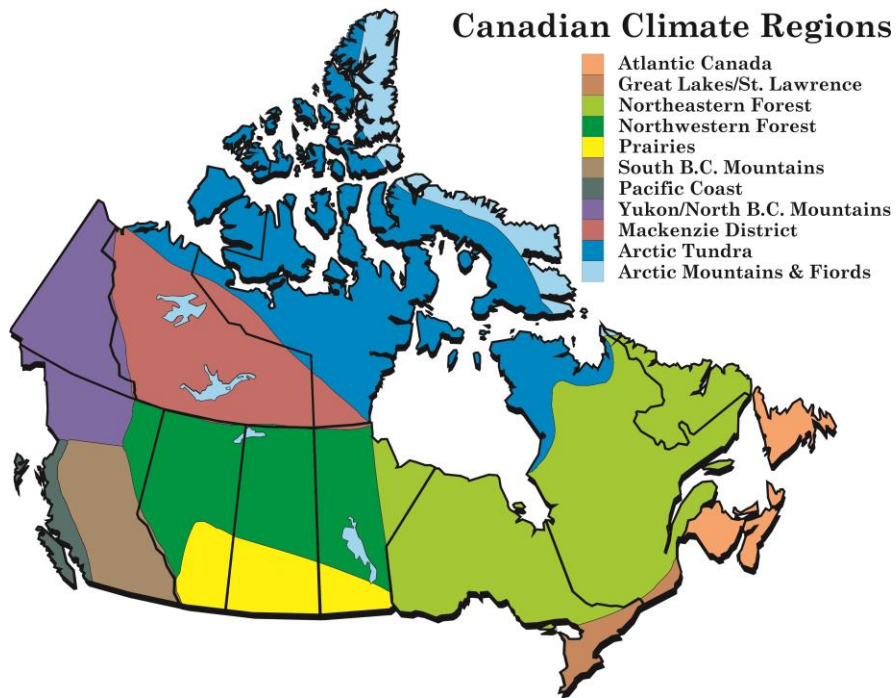
The time series graph below shows that, when averaged across the nation, autumn temperatures have fluctuated from year to year over the period 1948–2014. The linear trend indicates that autumn temperatures averaged across the nation have warmed by 1.5°C over the past 67 years.

Autumn National Temperature Departures and Long-term Trend, 1948–2014



Regional Temperature

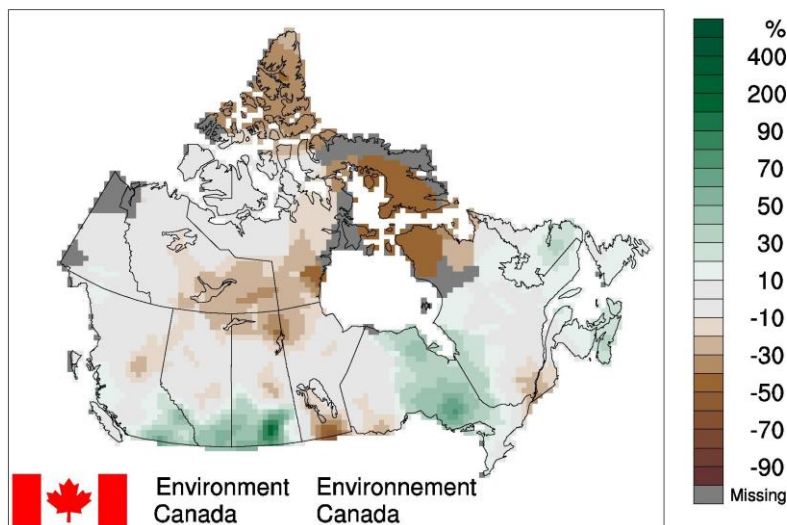
When examined on a regional basis, average autumn temperatures for 2014 were among the 10 warmest on record for only one of the eleven climate regions: the Pacific Coast (1st warmest at 1.6°C above average). None of the regions experienced an average autumn temperature for 2014 that ranked among the 10 coldest since 1948. All eleven climate regions exhibit positive trends in autumn temperatures over the 67 years of record. The strongest trend (2.3°C) is observed in the Arctic Tundra and Arctic Mountains and Fiords regions, while the weakest trend (0.5°C) is observed in three regions: the Great Lakes/St. Lawrence Lowlands, the Prairies and the South British Columbia Mountains. A table listing the regional and national autumn temperature departures and rankings from 1948 to 2014 and a table that summarizes regional and national trends and extremes are available on request to CTVB@ec.gc.ca.



National Precipitation

As a whole, Canada experienced a slightly drier than average autumn in 2014 (2% below the baseline average) making it the 30th driest autumn observed over the 67 years of record. The wettest autumn was 2010 (15% above the baseline average) and the driest was 1952 (23% below the baseline average). The precipitation percent departure map for autumn 2014 (below) shows overall conditions near the baseline average. Wetter than average conditions were concentrated in two areas: southern British Columbia, Saskatchewan and Alberta, and eastern Ontario–western Quebec. Drier than average conditions are found mostly in the north, including the Northwest Territories and Nunavut.

Precipitation Departures from the 1961–1990 Average – Autumn 2014

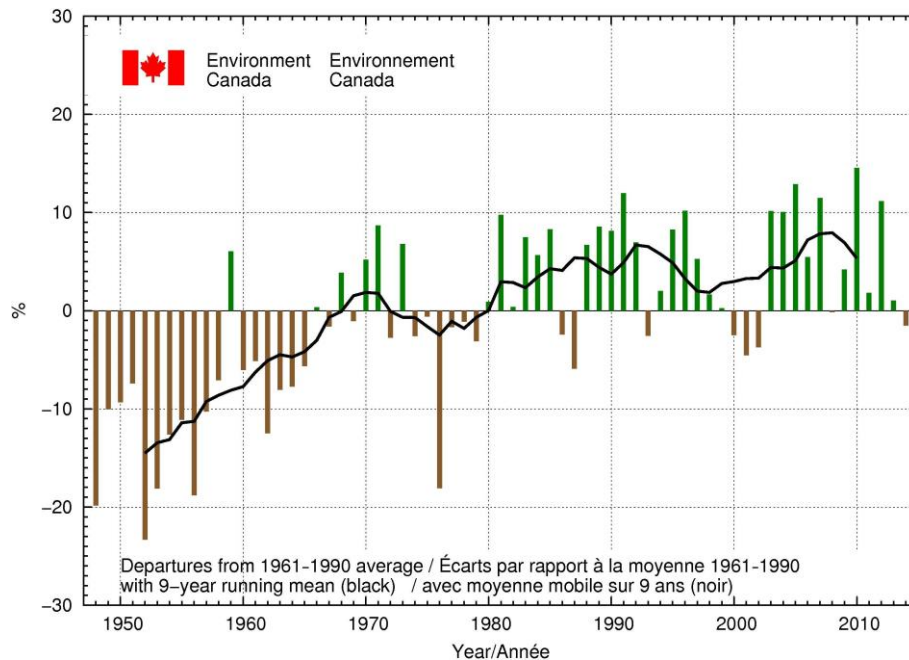


It should be noted that "average" precipitation in northern Canada is generally much less than it is in southern Canada, and hence a percent departure in the north represents much less precipitation than the same percentage in the south.

The national precipitation rankings are therefore often skewed by the northern departures and do not necessarily represent rankings for the volume of water falling on the country.

The precipitation percent departures graph below shows that, when averaged across the nation, autumns have tended to be wetter than the 1961–1990 baseline average since the mid-1970s.

Autumn National Precipitation Departures with Nine-year Running Mean, 1948–2014



Regional Precipitation

Precipitation for autumn 2014 was among the 10 wettest recorded since 1948 in only one of the eleven climate regions: the Atlantic (10th wettest at 16% above average). Three regions were among the 10 driest: the Mackenzie District (9th driest at 14% below average), the Arctic Tundra (10th driest at 21% below average), and the Arctic Mountains and Fiords (2nd driest at 37% below average). A table listing the regional and national autumn precipitation departures and rankings from 1948 to 2014 and a table that summarizes regional and national extremes are available on request to CTVB@ec.gc.ca.

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