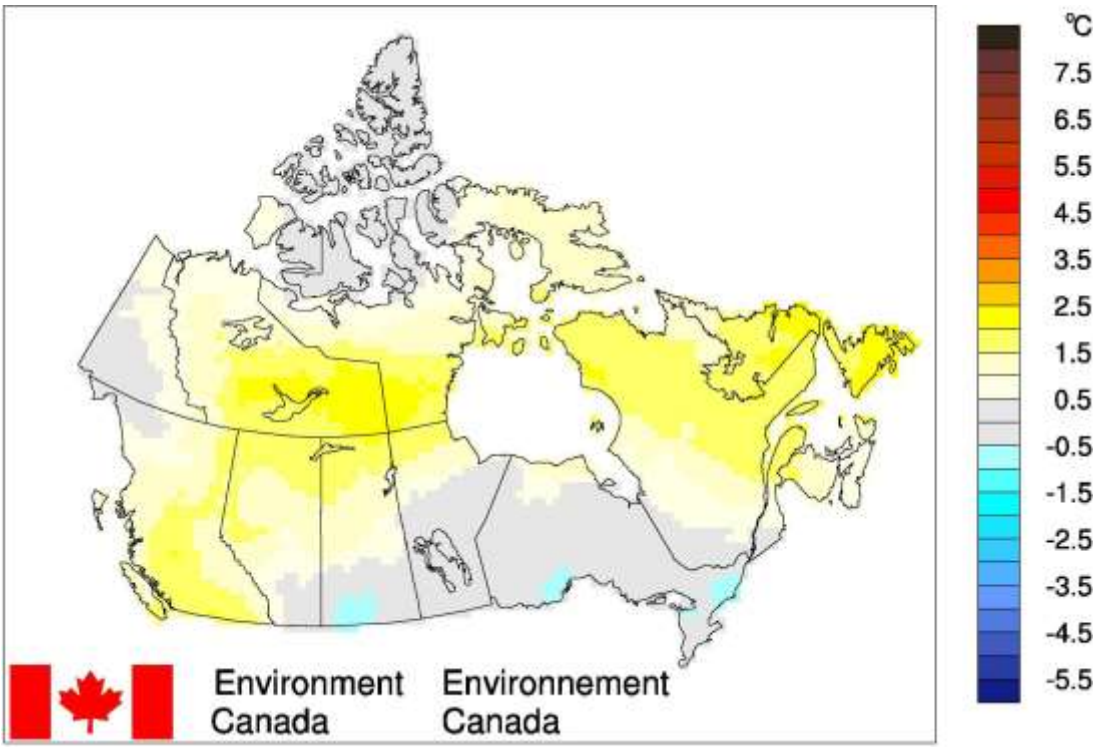
Climate Trends and Variations Bulletin – Summer 2014

This bulletin summarizes recent climate data and presents it in a historical context. It first examines the national temperature, and then highlights interesting regional temperature information. Precipitation is examined in the same manner.

National Temperature

The national average temperature for the summer of 2014 was 1.0°C above the baseline average (defined as the mean over the 1961–1990 reference period), based on preliminary data, which makes this past summer the sixth warmest observed since nationwide recording began in 1948. The warmest summer on record was 2012, when the national average temperature was 1.8°C above the baseline average. The coldest summer occurred in 1978, when temperature averaged across the country was 1.0°C below the baseline average. The temperature departures map for the summer of 2014 (below) shows that most of the Pacific Coast, southern British Columbia, northern Alberta, Saskatchewan and Manitoba, southern Northwest Territories and Nunavut, northern Quebec, and the Atlantic regions experienced temperatures above the baseline average. Temperatures near the baseline average are found in the rest of the country.

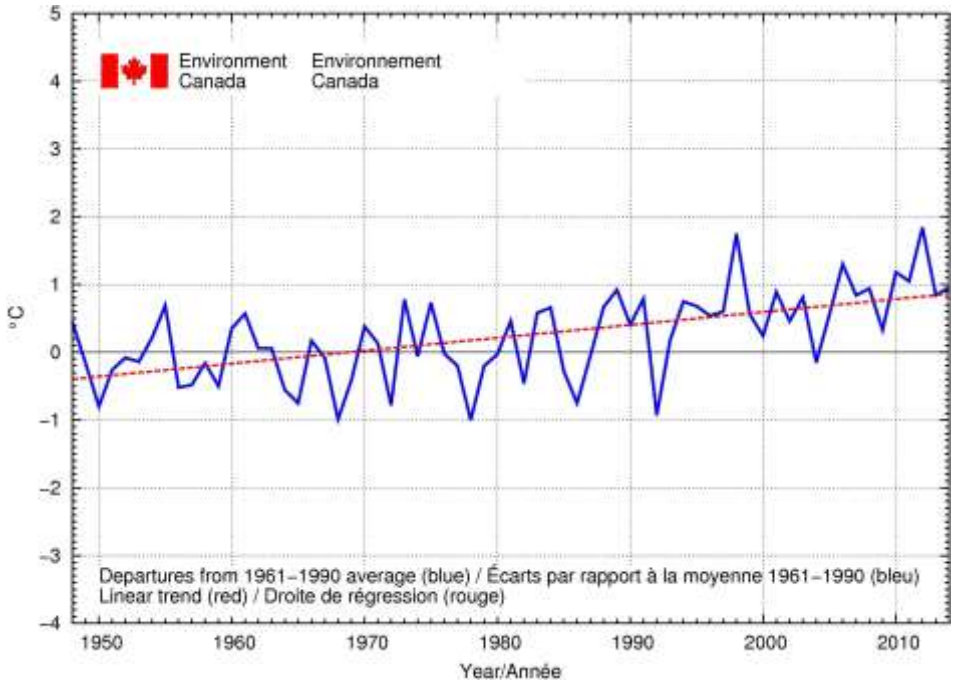
Temperature Departures from the 1961–1990 Average – Summer 2014



Canada

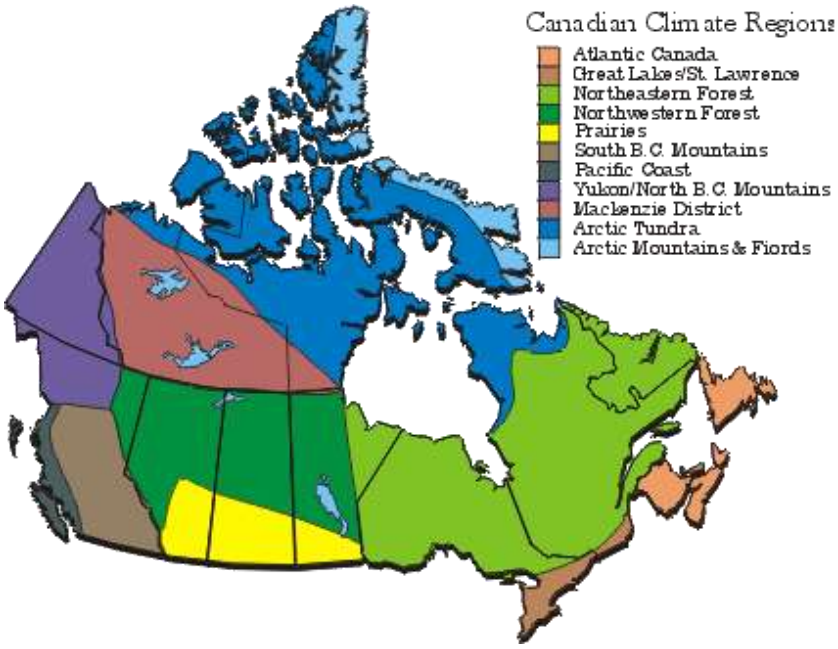
The time series graph below shows that, when averaged across the nation, summer temperatures have fluctuated from year to year over the period 1948–2014. The linear trend indicates that summer temperatures averaged across the nation have warmed by 1.4°C over the past 67 years.

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



Regional Temperature

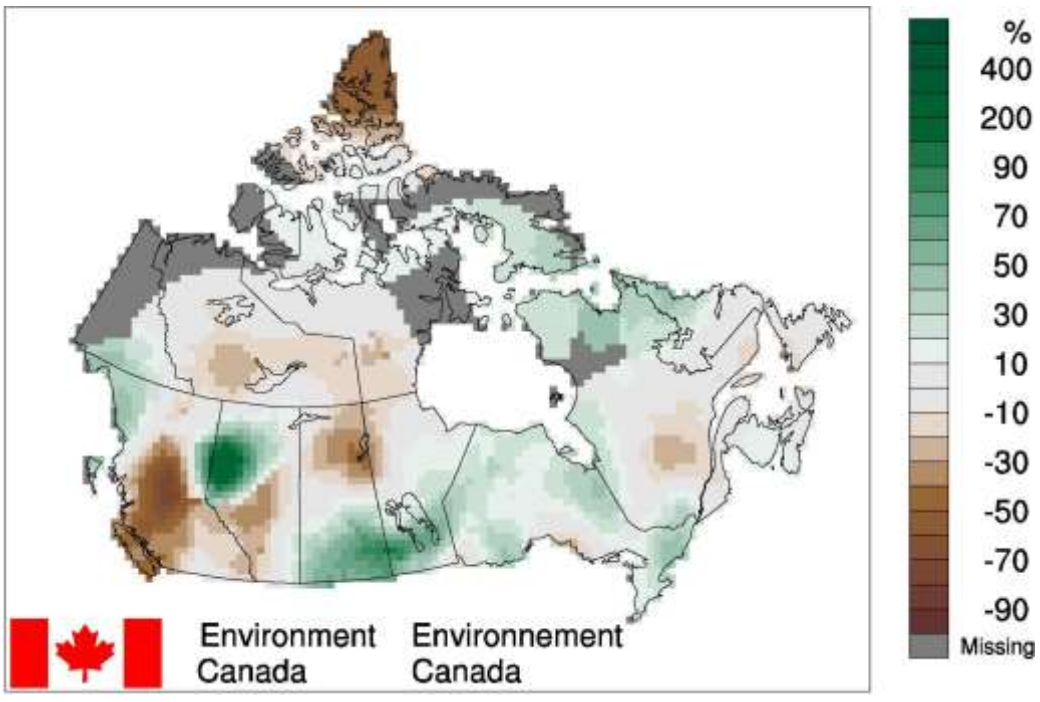
When examined on a regional basis, average summer temperatures for 2014 were among the 10 warmest on record for 5 of the 11 climate regions: the Pacific Coast (third warmest at 1.4°C above average), Atlantic Canada (fourth warmest at 1.5°C above average), South B.C. Mountains (fifth warmest at 1.5°C above average), Northwestern Forest and Mackenzie District (seventh warmest at 1.2°C and 1.6°C above average, respectively). None of the regions experienced average summer temperature for 2014 that ranked among the 10 coldest since 1948. All 11 climate regions exhibit positive trends in summer temperatures over the 67 years of record. The strongest trend is observed in the Mackenzie District (1.8°C), while the weakest trend (0.8°C) is observed in the Prairies. A table listing the regional and national summer 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 wetter-than-average summer in 2014 (6% above the baseline average), making it the 14th-wettest summer observed over the 67 years of record. The wettest summer was 2005 (15% above the baseline average), and the driest was 1958 (14% below the baseline average). The precipitation percent departure map for summer 2014 (below) shows overall conditions near the baseline average.

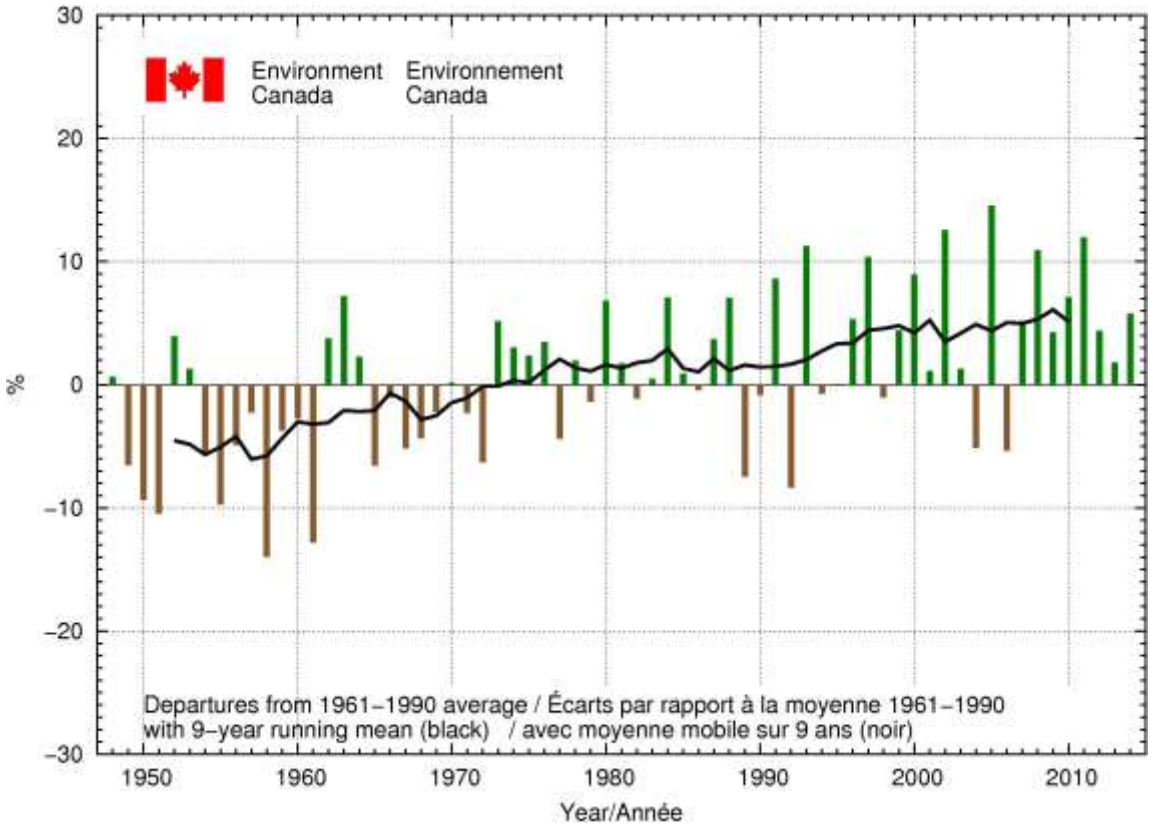
Precipitation Departures from the 1961–1990 Average – Summer 2014



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, summers have tended to be wetter than the 1961–1990 baseline average since the mid-1970s.

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



Regional Precipitation

Precipitation for the summer of 2014 was among the 10 wettest recorded since 1948 in 3 of the 11 climate regions: the Northeastern Forest (fourth wettest at 12% above average), the Prairies (seventh wettest at 30% above average), and the Great Lakes and St. Lawrence region (eighth wettest at 21% above average). Only 1 region was among the 10 driest: the Pacific Coast (seventh driest at 26% below average). A table listing the regional and national winter 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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