

What will the climate of Canada’s Capital Region look like in the future?

Climate projections use climate science and modelling to predict future changes in temperature, rain, snow and wind. The City of Ottawa and the National Capital Commission commissioned this study to understand our future climate conditions so that we can see how it might affect the region and take action to prepare for the change.

The National Capital Region will become much warmer and wetter over the coming decades with a greater chance of extreme events. The rate and extent of climate change will depend on future global greenhouse gas emissions. The table below shows what to expect in a high emissions scenario. Significant global action is required to reduce emissions below the high emission scenario.

What to expect*	2030s	2050s	2080s
Temperature			
Average temperature	↑ 1.8°C	↑ 3.2°C	↑ 5.3°C
Very hot days (above 30°C)	2.5 times more	4 times more	6.5 times more
Very cold days (below -10°C)	20% less	35% less	65% less
Seasons			
Winters shorter by	4 weeks	5 weeks	8 weeks
Springs earlier by	2 weeks	2 weeks	4 weeks
Winter freeze-thaw	↑ 15%	↑ 35%	↑ 55%
Precipitation			
Fall-winter-spring precipitation	↑ 5%	↑ 8%	↑ 12%
Intense precipitation	↑ 5%	↑ 15%	↑ 20%
Snowfall	↓ 10%	↓ 20%	↓ 45%
Extreme Events			
Possible increases in freezing rain			
Warming favours conditions conducive to storms, wildfires			

*For a high carbon emission scenario (RCP 8.5)

For more information see the Climate Projections for the National Capital Region (2020) full report at ottawa.ca/climatechange and ncc-ccn.gc.ca/our-plans/the-nccs-climate-change-adaptation-initiative

This report was prepared by CBCL Limited for the National Capital Commission and the City of Ottawa in collaboration with Environment and Climate Change Canada.