

CANADA'S CHANGING CLIMATE

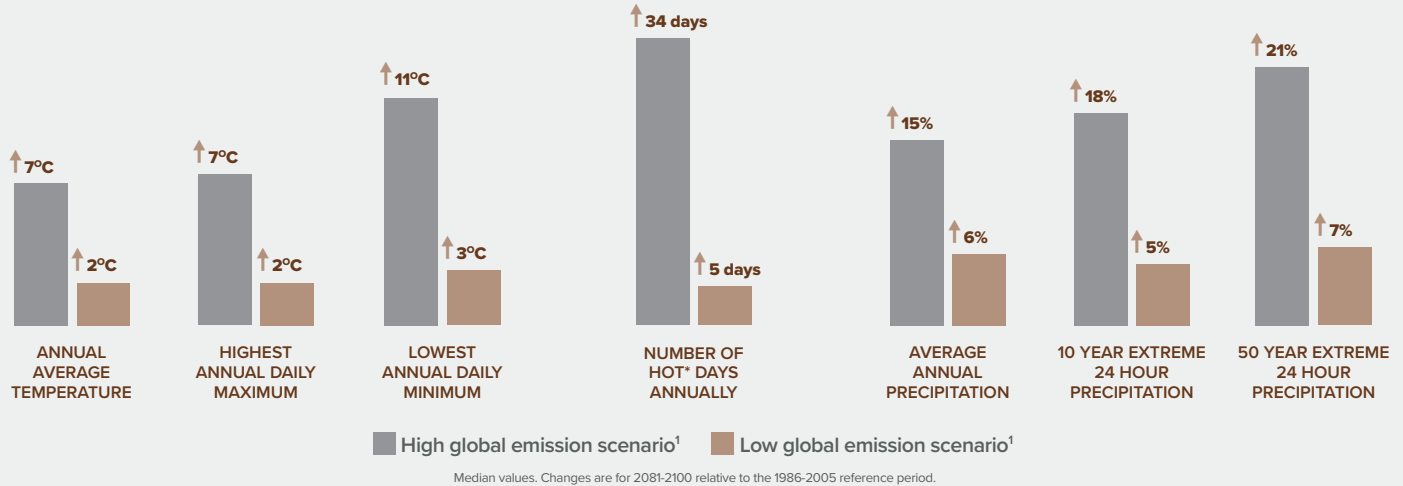
PROJECTED CHANGES THIS CENTURY FOR THE PRAIRIES



Canada's climate has warmed and will warm further in the future, driven by human influence. Global emissions of carbon dioxide from human activities will largely determine how much warming the country—and the world—will experience in the future.

HIGH VS LOW EMISSION PROJECTIONS

TWO VERY DIFFERENT FUTURES FOR THE PRAIRIES



¹ High and low global emission scenarios. The high emission scenario RCP 8.5 is associated with an increase in global average temperature of about 3.7 °C by late century relative to the 1986-2005 reference period. The low emission scenario RCP 2.6 is associated with an increase in global average temperature of about 1.0 °C by late century relative to the 1986-2005 reference period.
*Hot day = daily maximum temperature is above 30°C

THE EFFECTS OF WARMING ARE EVIDENT IN THE PRAIRIES

EFFECTS ARE PROJECTED TO INTENSIFY IN THE FUTURE



Extreme warm temperatures have become hotter and even hotter temperatures are projected for the future. This will increase the severity of heatwaves, and contribute to increased drought and wildfire risk.



In many Prairie rivers, annual peak streamflow will be earlier in spring due to earlier seasonal snowmelt. In rivers starting in mountains, summer streamflow is projected to decrease due to decreasing snow and ice cover in headwater regions.



Future droughts and deficits in soil moisture are projected to be more frequent and intense across the southern Prairies during summer and to be more prominent at the end of the century under a high emission scenario.



Local sea level is projected to fall along the Hudson Bay coastline, due to land uplift offsetting the effects of global sea level rise.



Seasonal sea ice has declined in Hudson Bay, with more persistent ice-free conditions during summer and fall projected by mid-century.



Growing seasons have already lengthened across the Prairies. Growing seasons for warm season crops could lengthen by weeks by mid-century, and potentially by more than a month by late century.

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