



### Calgary and Climate Change

The climate determines almost everything about how we design, build, and live in our cities. As the climate changes, the safety and prosperity of our cities is put at risk. Climate change is a challenge that requires us to work together, locally, nationally, and globally. With technical know-how, political will, targeted investments, and collective commitment, we can mitigate the severity of climate change and build resilience to its impacts.

### Climate Change and Health

High temperatures in urban centres can be hazardous, especially for the elderly, the chronically ill, and those without air conditioning. High and prolonged heat can also impact air quality, facilitate the spread of harmful diseases, inhibit outdoor activities, and cause stress and anxiety. We can adapt with measures such as shaded areas, green roofs, and supports for those who need help during heat waves.

### Climate Change and Extreme Weather

A warmer climate may increase the chance of more extreme weather, including high winds, flash floods, hail, lightning, tornadoes, drought, and wildfires. Cities must improve their planning and engineering, emergency preparedness, and water management to cultivate resilience.

### Climate Change and Infrastructure

Climate change may threaten the integrity of infrastructure such as roads, bridges, water supply, and telecommunications, most of which has not been built to withstand future extremes. Emergency preparedness, planning, and construction practices for retrofits and new development that take the new climate reality into account can increase our adaptive capacity. Acting now will reduce economic risk and save on the rapidly increasing long-term damages and costs associated with climate change.

## High-Carbon Climate Change Projections\*

Change	1976-2005	2051-2080		
	Mean	Low	Mean	High
Typical hottest summer day	31.6 °C	33.0 °C	36.6 °C	40.1 °C
Typical coldest winter day	-33.2 °C	-31.7 °C	-26.0 °C	-19.5 °C
Number of +30 °C days per year	5	11	32	55
Spring precipitation	103 mm	89 mm	129 mm	199 mm
Summer precipitation	201 mm	97 mm	202 mm	333 mm
Number of below-zero days per year	193	118	144	169
Frost-free season (days)	124	133	161	192



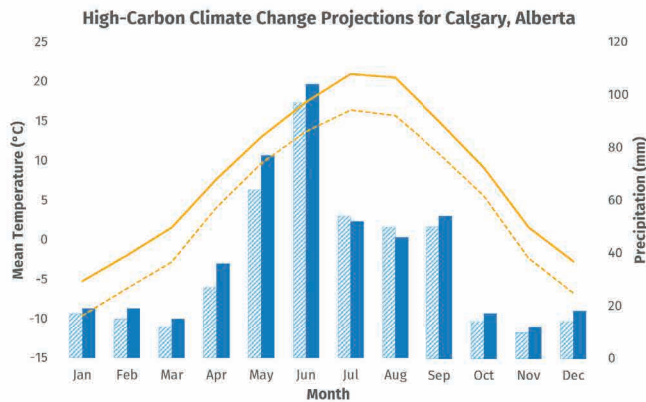
Wetter springs,  
drier summers



Soaring summer  
temperatures



Much longer  
growing season



## Climate Data That Supports Your Community

Calgary's climate is expected to change in important ways in the coming decades.

This graph shows projected monthly mean temperature and precipitation totals. **Lines** are temperature and **vertical bars** are precipitation. Dashed lines/hatched bars represent the 1976-2005 baseline period, while solid lines/bars are projections for 2051-2080 under a High Carbon scenario.\* All months are expected to become much warmer.

This warmer future will require communities to become better informed, more resilient, and increasingly committed to climate action.



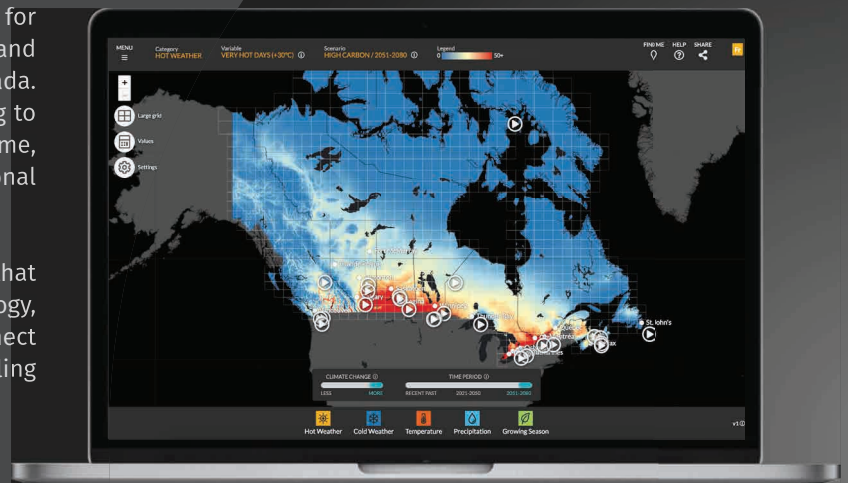
The Prairie Climate Centre is committed to making climate change meaningful and relevant to Canadians of all walks of life. We bring an evidence-based perspective to communicating the science, impacts, and risks of climate change through maps, documentary video, research reports, and plain-language training, writing, and outreach.

## The Climate Atlas Of Canada

The Climate Atlas of Canada is an interactive tool for citizens, researchers, businesses, and community and political leaders to learn about climate change in Canada. It combines climate science, mapping and storytelling to bring the global issue of climate change closer to home, and is designed to inspire local, regional, and national action and solutions.

The Atlas is one of the only tools in the world that integrates interactive web design with climatology, cinema, and cartography to geovisualize and connect scientific data with personal experience in compelling and easy-to-use ways.

Learn More at: [climateatlas.ca](http://climateatlas.ca)



\* Climate Data. The Climate Atlas of Canada includes climate change indices derived from 24 downscaled climate models obtained from the Pacific Climate Impacts Consortium (PCIC; [pacificclimate.org](http://pacificclimate.org)). For each model, two emissions scenarios, the 'Low Carbon' scenario (RCP4.5) and the 'High Carbon' scenario (RCP8.5), and two future time periods, 2021-2050 and 2051-2080, are provided. The high and low model projections indicate the 90th and 10th percentiles values for the 24 model ensemble.

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