

Charlottetown

PRINCE EDWARD ISLAND



Charlottetown 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 Extreme Weather

A warmer climate may lead to more extreme weather, including even more intense rain and snowfalls, flash floods, high winds, and more damaging hurricanes. Cities must improve their planning and engineering, emergency preparedness, and water management to cultivate resilience.

Climate Change and Oceans

Sea level rise threatens to overtake low-lying areas, increase coastal erosion, worsen storm surges, and pollute freshwater resources. Ocean acidification caused by rising carbon dioxide levels threatens marine life. Reducing greenhouse gas emissions can help to mitigate these impacts, but adapting to change will be essential for coastal communities.

Climate Change and Economics

Climate change will affect all sectors of the economy, but especially resource industries such as fishing and forestry. Research makes clear that there are enormous benefits to early investment in adaptation. 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	27.7 °C	31.7 °C	34.2 °C	36.9 °C
 Typical coldest winter day	-23.4 °C	-20.1 °C	-15.2 °C	-11.3 °C
 Number of +25 °C days per year	26	48	72	96
 Number of +20 °C nights per year	1	8	25	46
 Annual precipitation	1105 mm	1032 mm	1211 mm	1400 mm
 Number of below-zero days per year	152	75	99	122
 Frost-free season (days)	170	188	215	242



**Wetter springs
and winters**

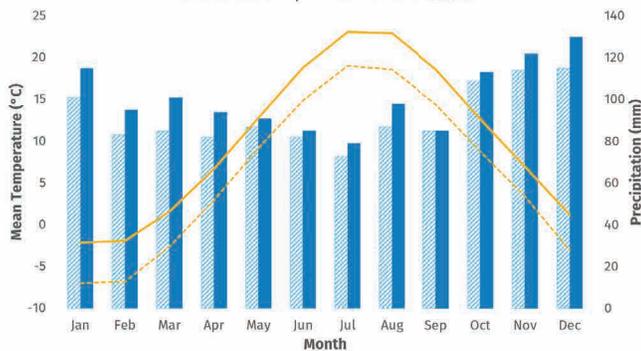


**Much warmer
summers**



**Much longer
growing season**

High-Carbon Climate Change Projections for Charlottetown, Prince Edward Island



Climate Data That Supports Your Community

Charlottetown’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.



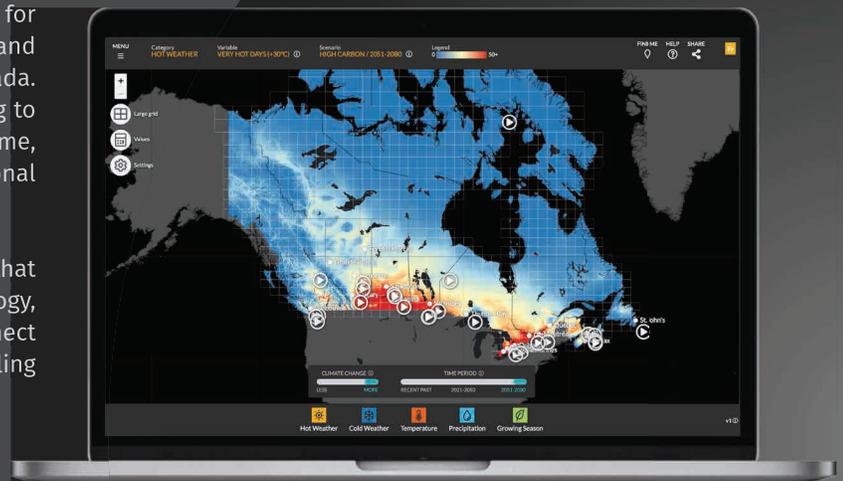
The Prairie Climate Centre is committed to making climate change meaningful and relevant to Canadians of all walks of life. We bring an evidence-based perspective to communicating the science, impacts, and risks of climate change through maps, documentary video, research reports, and plain-language training,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



* 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). 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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