Regina 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*

<table>
<thead>
<tr>
<th>Change</th>
<th>1976-2005</th>
<th></th>
<th>2051-2080</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical hottest summer day</td>
<td>35.0 °C</td>
<td>36.2 °C</td>
<td>40.1 °C</td>
<td>43.6 °C</td>
</tr>
<tr>
<td>Typical coldest winter day</td>
<td>-36.6 °C</td>
<td>-34.6 °C</td>
<td>-28.9 °C</td>
<td>-23.1 °C</td>
</tr>
<tr>
<td>Number of +30 °C days per year</td>
<td>18</td>
<td>27</td>
<td>54</td>
<td>79</td>
</tr>
<tr>
<td>Spring precipitation</td>
<td>90 mm</td>
<td>53 mm</td>
<td>109 mm</td>
<td>176 mm</td>
</tr>
<tr>
<td>Summer precipitation</td>
<td>174 mm</td>
<td>86 mm</td>
<td>172 mm</td>
<td>285 mm</td>
</tr>
<tr>
<td>Number of -30 °C days per year</td>
<td>12</td>
<td>0</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Frost-free season (days)</td>
<td>123</td>
<td>129</td>
<td>156</td>
<td>185</td>
</tr>
</tbody>
</table>

Wetter springs, drier late summers
Much warmer winters
Many more hot days

Climate Change and Canada’s Cities
Version 2.0
climateatlas.ca
March 2019
Climate Data That Supports Your Community

Regina’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 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

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* 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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