Extreme Temperatures

Key findings from the Climate Change and Health Vulnerability Assessment for Waterloo Region, Wellington County, Dufferin County, and the City of Guelph

Climate Change Projections

More extreme heat and extended heat waves

Temperatures are projected to increase +5°C by the 2080s

Climate Change Projections

<table>
<thead>
<tr>
<th>Region</th>
<th>Annual days over 30°C</th>
<th>Annual nights over 20°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waterloo Region</td>
<td>Current* 10</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td>2050s* 45</td>
<td>41</td>
</tr>
<tr>
<td></td>
<td>2080s* 72</td>
<td>60</td>
</tr>
<tr>
<td>Wellington-Dufferin-Guelph</td>
<td>Annual days over 30°C</td>
<td>Annual nights over 20°C</td>
</tr>
<tr>
<td></td>
<td>Current* 7</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>2050s* 35</td>
<td>21</td>
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<tr>
<td></td>
<td>2080s* 60</td>
<td>34</td>
</tr>
</tbody>
</table>

Health Impacts

- Heat-related illness and death
- Aggravated respiratory conditions
- Aggravated cardiovascular conditions

* Projections are based on emissions scenario RCP8.5
* Baseline and projection periods: current baseline 1990s (1981-2010), 2050s (2041-2070), 2080s (2071-2100)
Vulnerable Populations

Levels of exposure, sensitivity, and lack of adaptive capacity may create more risk for:

**Older adults**
- Less able to regulate body temperature through sweating and may have reduced thirst sensation
- Older adults are the fastest growing population segment across Ontario

**Children**
- Create more heat per body mass and sweat less than adults
- More likely to rely on caregivers to prepare and protect them from extreme temperatures

**People with chronic conditions**
- Including respiratory and cardiovascular conditions, mobility limitations, and psychiatric illnesses

**People experiencing social isolation, housing insecurity, or homelessness**

**People who work, play, or attend events outdoors**

**People in urban areas**

Climate change adaptation can help to protect against risks and build resilience to thrive under new climate conditions. Adaptation is a shared responsibility that is crucial to address the health impacts of climate change. To learn more about current and possible community adaptation initiatives, see the full Climate Change and Health Vulnerability Assessment.

To view the full report or to request an alternate format of this document, please contact:

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