

FUTURE CLIMATIC PROJECTIONS

Charlottetown

December 2023

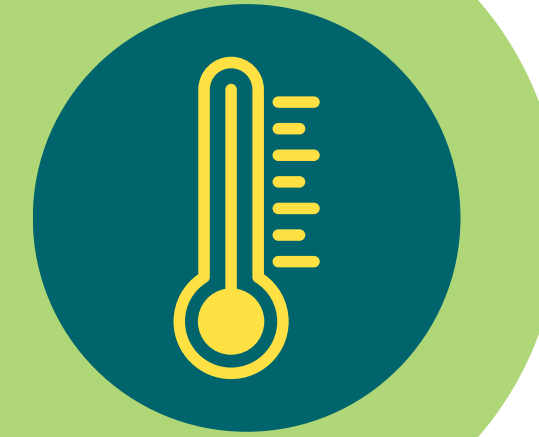
Sources: ClimateData.ca and CBC Climate Stripes.

THIS INFOGRAPHIC WAS CREATED BY ICLEI CANADA.



MEAN TEMPERATURES

The mean temperatures are projected to increase annually and in every season.

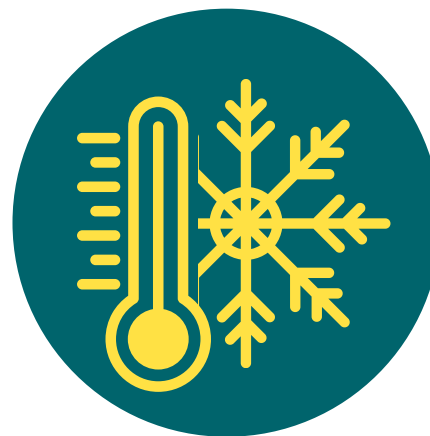


Annual



9.8°C

5.8°C

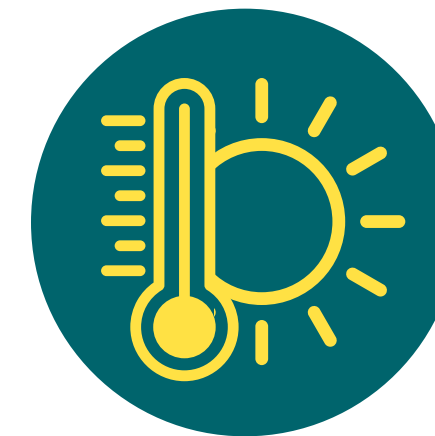


Winter
Dec - Feb



-2.4°C

-5.8°C



Summer
Jun - Aug

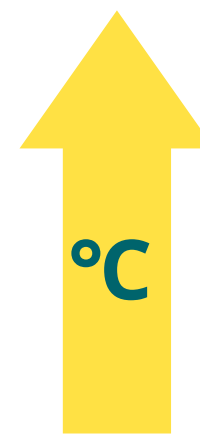


21.1°C

17.2°C

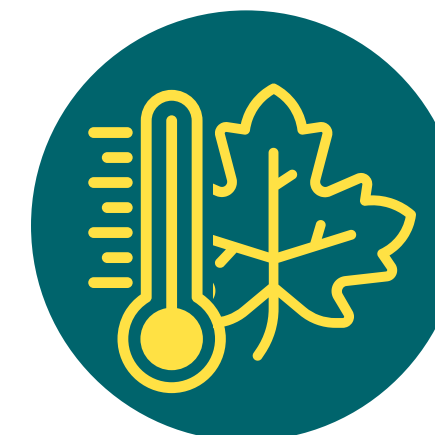


Spring
Mar - May



6.6°C

3.0°C



Fall
Sep - Nov



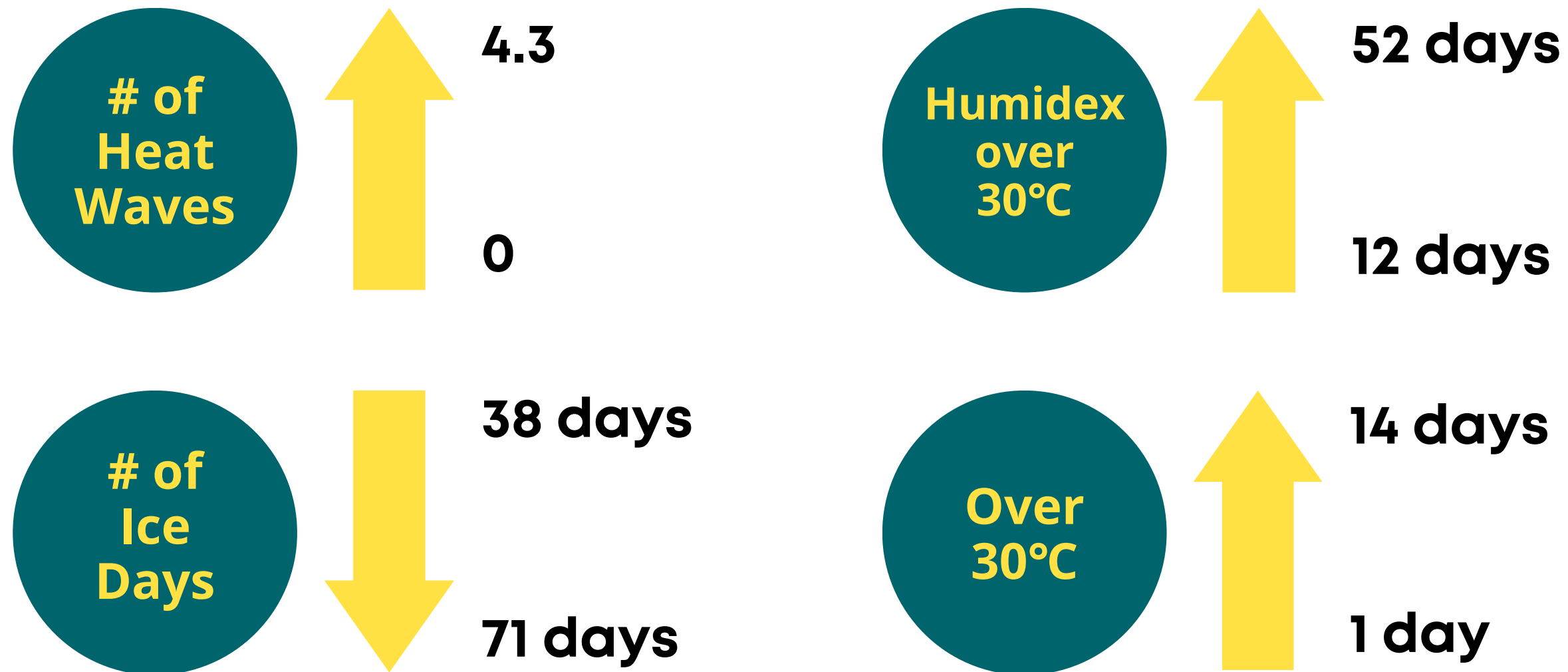
12.2°C

8.6°C

TWO TIME PERIODS: Bottom (Baseline: 1971-2000), Top (Future: 2041-2070)

TEMPERATURES EXTREMES

Extreme heat is projected to increase annually and Ice Days, days that do not exceed 0°C, are expected to decrease.



TWO TIME PERIODS: Bottom (Baseline: 1971-2000), Top (Future: 2041-2070)

GROWING SEASONS

First frost dates will be later, and last frost days will be earlier, extending the annual growing season.

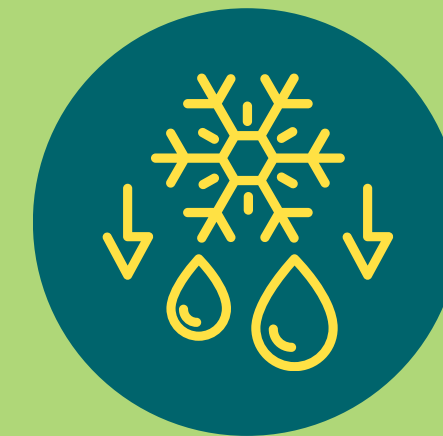


208 days

169 days

FREEZE-THAW

Freeze-thaw cycles are projected to decrease due to overall warmer temperatures.



50

68

TWO TIME PERIODS: Bottom (Baseline: 1971-2000), Top (Future: 2041-2070)

MEAN PRECIPITATION

Annual precipitation is expected to increase. All seasons are projected to get significantly wetter.



Annual



1192 mm

1085 mm

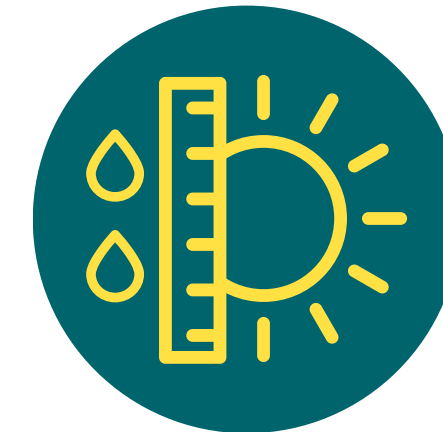


Winter
Dec - Feb



336 mm

298 mm



Summer
Jun - Aug



276 mm

248 mm

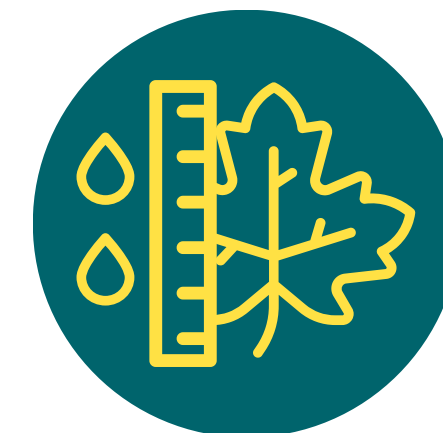


Spring
Mar - May



279 mm

247 mm



Fall
Sep - Nov



326 mm

310 mm

TWO TIME PERIODS: Bottom (Baseline: 1971-2000), Top (Future: 2041-2070)

PRECIPITATION EVENTS

Precipitation events in general are projected to become more intense and extreme, with more rain falling over a shorter period of time.



HEAVY OR EXTREME PRECIPITATION

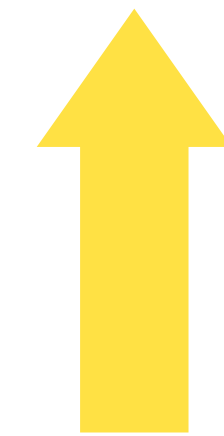
Days with precipitation over 10mm and 20mm are considered Heavy Rainfall days, and are projected to increase.



$\geq 10\text{mm}$

39 days

35 days



$\geq 20\text{mm}$

13 days

10 days

WETTEST DAYS

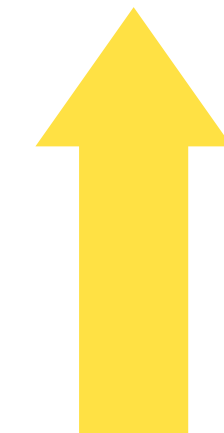
The amount of precipitation falling on the wettest single day and the wettest 5 days of the year are expected to increase.



Wettest Day

62 mm

53 mm



5 Wettest Days

142 mm

126 mm

TWO TIME PERIODS: Bottom (Baseline: 1971-2000), Top (Future: 2041-2070)

SEA LEVEL CHANGE

Climate change impacts such as melting glaciers, warmer temperatures, changes in salinity, and water storage changes have contributed significantly to changing sea levels. The projected sea level change in Charlottetown, PEI is estimated to increase by an average of 59cm by 2080.



59 cm

4 cm

TWO TIME PERIODS: Bottom (Baseline: 2006), Top (Future: 2080)

SPATIAL ANALOGUE

Charlottetown is expected to experience the indicated climatic conditions of what is currently being experienced in Stamford, Connecticut.



Coldest Day



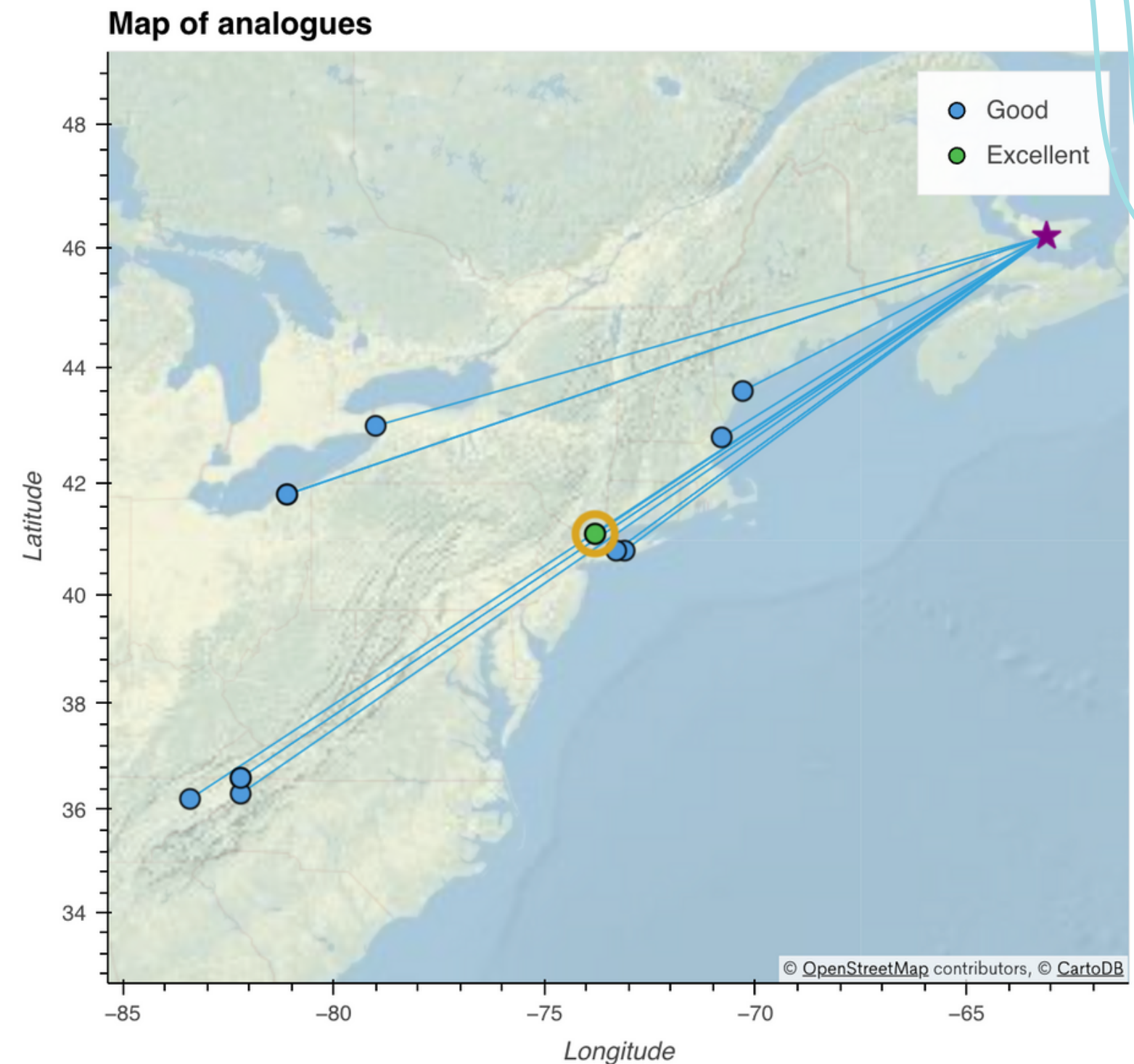
Hottest Day



Total Precipitation

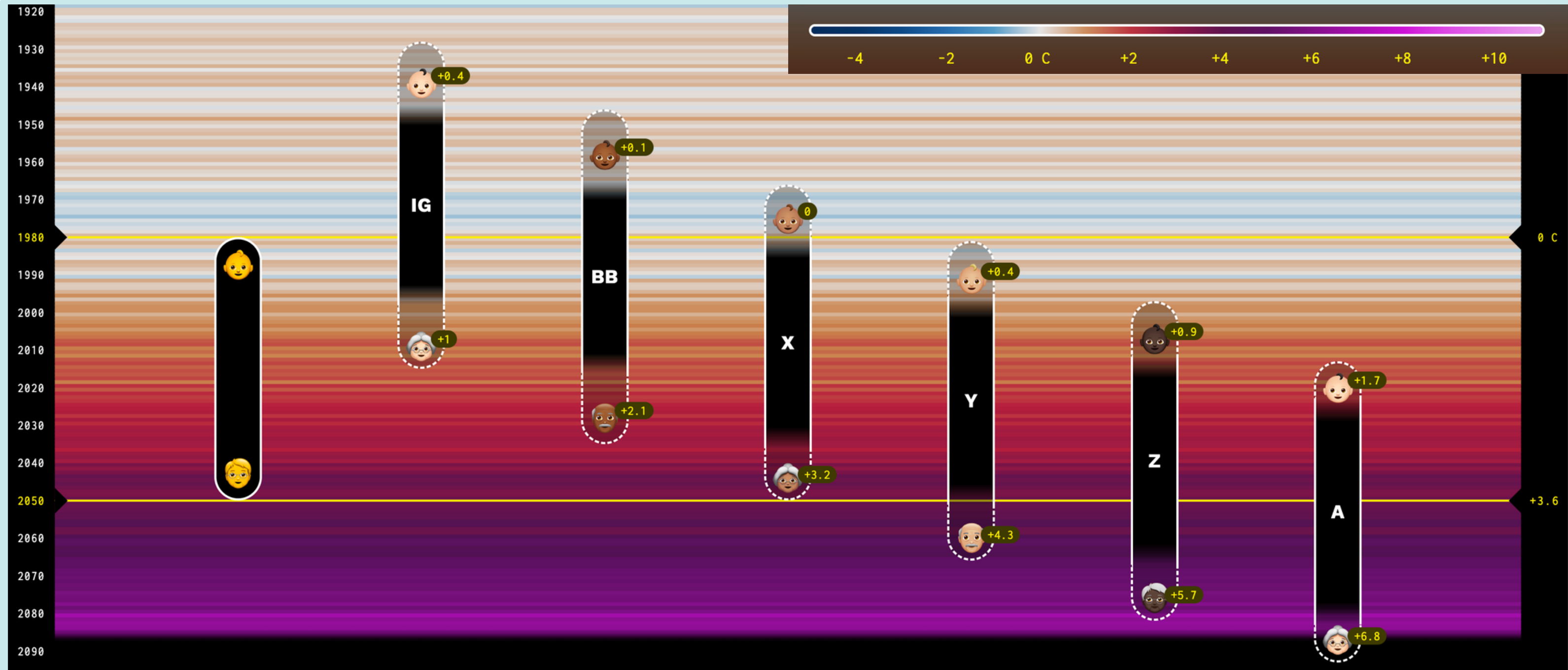
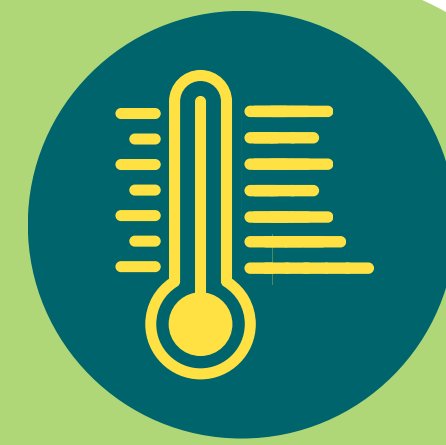


Max 5-day Precipitation



CLIMATE STRIPES VISUALIZATION

Each 'stripe' represents the average temperature change of that year from the year of 'birth'. The deeper the red/purple, the warmer that year is in comparison to the initial year.



The left axis represents the birth year. The left-most bar represents Charlottetown's average citizen, with a birth year of 1980. The bars moving to the right represent different generations from their birth year to their 70th birthday and what average temperature changes they can expect to experience.