Threshold Recommendations based on Climate Normals for 1981-2010

The following recommendations can be used as guidelines to decide the threshold value for various variables when choosing the *Extreme Weather Event Defined by User* definition option. The values below are from the 1981-2010 climate normals published by Environment and Climate Change Canada (ECCC).

Number of days with daily temperature > or < x

The numbers below are the climate normals for each month as well as the annual value: (1)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Temperature													
Daily Average (°C)	-5.5	-4.5	0.1	7.1	13.1	18.6	21.5	20.6	16.2	9.5	3.7	-2.2	8.2

The following values can also be used to define degree days: (2)

Degree Days
Above 24 °C
Above 18 °C
Above 15 °C
Above 10 °C
Above 5 °C
Above 0 °C
Below 0 °C
Below 5 °C
Below 10 °C
Below 15 °C
Below 18 °C

Number of days with maximum temperature > or < x

The numbers below are the climate normals for each month as well as the annual value: (3)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Temperature													
Daily Maximum (°C)	-1.5	-0.4	4.6	12.2	18.8	24.2	27.1	26	21.6	14.3	7.6	1.4	13

The following values can also be used to define extreme thresholds: (4)

<= 0 °C
> 0 °C
> 10 °C
> 20 °C
> 30 °C
> 35 °C

Number of days with minimum temperature > or < x

The numbers below are the climate normals for each month as well as the annual value: (5)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Temperature													
Daily Minimum (°C)	-9.4	-8.7	-4.5	1.9	7.4	13	15.8	15.1	10.8	4.6	-0.2	-5.8	3.3

The following values can also be used to define extreme thresholds: (6)

> 0 °C
<= 2 °C
<= 0 °C
< -2 °C
< -10 °C
< -20 °C
< - 30 °C

Occurrences where periods of >5 consecutive days are >x above/below normal temperature

The numbers below are the climate normals for each month as well as the annual value: (7)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Temperature													
Daily Average (°C)	-5.5	-4.5	0.1	7.1	13.1	18.6	21.5	20.6	16.2	9.5	3.7	-2.2	8.2

Number of days with humidex >

The following values can be used to define extreme thresholds: (8)

Humidex
Days with Humidex >= 30
Days with Humidex >= 35
Days with Humidex >= 40

Number of days with wind chill <

The following values can be used to define extreme thresholds: (9)

Wind Chill
Days with Wind Chill < -20
Days with Wind Chill < -30
Days with Wind Chill < -40

Number of days with average relative humidity > or < x

The numbers below are the climate normals for each month as well as the annual value: (10)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Humidity													
Average Relative Humidity - 0600LST (%)	80.8	79.3	78.1	75.4	77.2	79.8	81.9	85.7	87.4	85.2	83.3	81.8	81.3
Average Relative Humidity - 1500LST (%)	72	68.4	61.4	54.4	53.5	54.9	53.3	55.8	58.5	62.1	69.2	72.5	61.3

Number of days with wind speed > or < x

The numbers below are the climate normals for each month as well as the annual value: (11)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Wind													
Speed (km/h)	17.6	17	16.9	16.8	14.4	13.2	12.9	11.9	12.7	14	15.7	16.7	15

The following values can also be used to define extreme thresholds: (12)

Days with Winds >= 52 km/h
Days with Winds >= 63 km/h

Number of days when daily precipitation > x

The numbers below are the climate normals for each month as well as the annual value: (13)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Precipitation													
Precipitation (mm)	51.8	47.7	49.8	68.5	74.3	71.5	75.7	78.1	74.5	61.1	75.1	57.9	785.9

The following values can also be used to define extreme thresholds: (14)

Days with Precipitation
>= 0.2 mm
>= 5 mm
>= 10 mm
>= 25 mm

Maximum number of consecutive days with daily precipitation amount > or < x

The numbers below are the climate normals for each month as well as the annual value: (15)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Precipitation													
Precipitation (mm)	51.8	47.7	49.8	68.5	74.3	71.5	75.7	78.1	74.5	61.1	75.1	57.9	785.9

The following values can also be used to define extreme thresholds: (16)

Days with Precipitation
>= 0.2 mm
>= 5 mm
>= 10 mm
>= 25 mm

Number of days with rainfall > or < x

The numbers below are the climate normals for each month as well as the annual value: (17)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Precipitation													
Rainfall (mm)	25.1	24.3	32.6	63	74.3	71.5	75.7	78.1	74.5	60.6	68	34	681.6

The following values can also be used to define extreme thresholds: (18)

Days with Rainfall
>= 0.2 mm
>= 5 mm
>= 10 mm
>= 25 mm

Number of days with snowfall > or < x

The numbers below are the climate normals for each month as well as the annual value: (19)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Precipitation													
Snowfall (cm)	29.5	24	17.7	4.5	0	0	0	0	0	0.4	7.5	24.9	108.5

The following values can also be used to define extreme thresholds: (20)

Days With Snowfall
>= 0.2 cm
>= 5 cm
>= 10 cm
>= 25 cm

Number of days with snow depth > or < x

The numbers below are the climate normals for each month as well as the annual value: (21)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Precipitation													
Average Snow Depth (cm)	6	7	3	0	0	0	0	0	0	0	0	3	2

The following values can also be used to define extreme thresholds: (22)

Days with Snow Depth
>= 1 cm
>= 5 cm
>= 10 cm
>= 20 cm

Number of days with surface air pressure > or < x

The numbers below are the climate normals for each month as well as the annual value: (23)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Pressure													
Average Station Pressure (kPa)	99.5	99.6	99.6	99.4	99.4	99.4	99.4	99.6	99.7	99.7	99.6	99.6	99.5

Number of days with sea level pressure > or < x

The numbers below are the climate normals for each month as well as the annual value: (24)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Pressure													
Average Sea Level Pressure (kPa)	101.7	101.8	101.7	101.5	101.5	101.4	101.5	101.6	101.7	101.8	101.7	101.7	101.6

Add footnote to webpage: https://climate.weather.gc.ca/climate_normals/index_e.html