



Kelsey

Medium Carbon Emissions (RCP4.5)

Climate Variable	Season	1981-2010 (Baseline)	2021-2050			2051-2080		
			L	M	H	L	M	H
Mean Temperature	Annual	0.3 °C	1.4 °C	2.0 °C	2.8 °C	2.8 °C	3.2 °C	3.6 °C
	Winter	-18.1 °C	-17.0 °C	-15.8 °C	-14.5 °C	-15.4 °C	-14.3 °C	-13.1 °C
	Spring	0.1 °C	1.0 °C	1.7 °C	2.7 °C	2.0 °C	2.6 °C	3.3 °C
	Summer	16.6 °C	17.5 °C	18.0 °C	18.6 °C	18.6 °C	19.1 °C	19.4 °C
	Fall	2.1 °C	3.1 °C	3.8 °C	4.5 °C	4.3 °C	4.9 °C	5.5 °C
Precipitation	Annual	444.1 mm	441.3 mm	469.4 mm	490.3 mm	448.8 mm	472.6 mm	499.7 mm
	Winter	60.1 mm	59.3 mm	65.2 mm	71.0 mm	59.4 mm	67.5 mm	73.6 mm
	Spring	79.9 mm	75.6 mm	87.0 mm	96.6 mm	81.6 mm	91.0 mm	100.4 mm
	Summer	189.3 mm	174.5 mm	190.9 mm	209.9 mm	171.0 mm	185.7 mm	200.9 mm
	Fall	114.9 mm	114.3 mm	126.1 mm	136.1 mm	115.7 mm	128.4 mm	141.6 mm
Days ≥ 30 °C	Annual	3.4 days	4.2 days	7.6 days	11.1 days	8.8 days	13.7 days	19.0 days
Days ≤ -30 °C	Annual	19.8 days	5.9 days	11.7 days	17.2 days	3.5 days	7.6 days	11.9 days
Frost-Free Period	Annual	118.1 days	119.9 days	133.1 days	148.3 days	129.2 days	139.6 days	150.8 days
Date of First Fall Frost		Sep 17	Sep 16	Sep 26	Oct 07	Sep 21	Sep 30	Oct 07
Date of Last Spring Frost		May 22	May 06	May 15	May 25	May 06	May 13	May 19
5 °C Degree Days	Annual	17184.5	17219.4	17254.2	17287.7	17266.4	17285.6	17308.6
10 °C Degree Days	Annual	724.2	827.0	893.0	943.7	972.5	1036.9	1084.8
Freeze-Thaw Cycles	Annual	60.1 cycles	42.4 cycles	53.4 cycles	63.9 cycles	44.4 cycles	53.6 cycles	62.3 cycles
Days Precip ≥ 10 mm	Annual	9.3 days	8.5 days	9.9 days	11.4 days	8.4 days	10.2 days	11.9 days
Days Precip ≥ 20 mm	Annual	2.2 days	1.8 days	2.4 days	3.3 days	1.4 days	2.2 days	3.0 days

High Carbon Emissions (RCP8.5)

Climate Variable	Season	1981-2010 (Baseline)	2021-2050			2051-2080		
			L	M	H	L	M	H
Mean Temperature	Annual	0.2 °C	1.7 °C	2.4 °C	3.1 °C	3.5 °C	4.6 °C	5.9 °C
	Winter	-18.2 °C	-16.4 °C	-15.2 °C	-14.0 °C	-14.2 °C	-12.5 °C	-11.0 °C
	Spring	0.1 °C	1.0 °C	1.7 °C	2.5 °C	2.3 °C	3.5 °C	4.6 °C
	Summer	16.6 °C	17.8 °C	18.4 °C	19.0 °C	19.5 °C	20.5 °C	21.4 °C
	Fall	2.1 °C	3.1 °C	4.2 °C	5.2 °C	5.5 °C	6.4 °C	7.5 °C
Precipitation	Annual	443.1 mm	428.3 mm	467.6 mm	493.0 mm	460.6 mm	483.2 mm	505.6 mm
	Winter	60.5 mm	60.8 mm	65.8 mm	72.4 mm	60.6 mm	70.6 mm	79.8 mm
	Spring	79.4 mm	78.3 mm	89.1 mm	98.5 mm	85.8 mm	99.5 mm	111.6 mm
	Summer	189.1 mm	175.7 mm	189.1 mm	201.1 mm	165.8 mm	184.8 mm	202.9 mm
	Fall	114.0 mm	109.3 mm	123.6 mm	138.1 mm	111.6 mm	128.4 mm	140.1 mm
Days ≥ 30 °C	Annual	3.4 days	5.3 days	9.4 days	13.4 days	15.9 days	22.3 days	31.4 days
Days ≤ -30 °C	Annual	20.3 days	4.2 days	9.9 days	15.2 days	1.2 days	4.7 days	8.4 days
Frost-Free Period	Annual	118.8 days	121.8 days	137.0 days	153.7 days	134.5 days	151.1 days	163.9 days
Date of First Fall Frost		Sep 17	Sep 16	Sep 28	Oct 13	Sep 24	Oct 05	Oct 17
Date of Last Spring Frost		May 21	May 06	May 14	May 22	Apr 25	May 07	May 17
5 °C Degree Days	Annual	17186.0	17213.4	17260.8	17296.5	17308.1	17339.2	17378.6
10 °C Degree Days	Annual	726.4	886.1	946.4	1038.2	1102.8	1232.8	1395.5
Freeze-Thaw Cycles	Annual	59.7 cycles	42.4 cycles	53.3 cycles	64.2 cycles	42.9 cycles	50.8 cycles	57.1 cycles
Days Precip ≥ 10 mm	Annual	9.3 days	8.6 days	10.0 days	11.3 days	9.3 days	10.5 days	11.8 days
Days Precip ≥ 20 mm	Annual	2.2 days	1.6 days	2.3 days	3.1 days	1.5 days	2.3 days	3.1 days