



Lake of the Prairies

Medium Carbon Emissions (RCP4.5)

Climate Variable	Season	1981-2010 (Baseline)	2021-2050			2051-2080		
			L	M	H	L	M	H
Mean Temperature	Annual	1.0 °C	2.2 °C	2.7 °C	3.6 °C	3.4 °C	3.9 °C	4.3 °C
	Winter	-16.4 °C	-15.3 °C	-14.1 °C	-12.8 °C	-13.5 °C	-12.5 °C	-11.5 °C
	Spring	1.0 °C	1.9 °C	2.7 °C	3.6 °C	2.9 °C	3.6 °C	4.5 °C
	Summer	16.3 °C	17.2 °C	17.8 °C	18.2 °C	18.2 °C	18.9 °C	19.4 °C
	Fall	2.6 °C	3.6 °C	4.2 °C	4.9 °C	4.8 °C	5.3 °C	5.9 °C
Precipitation	Annual	475.2 mm	474.9 mm	502.0 mm	527.7 mm	476.0 mm	503.9 mm	527.9 mm
	Winter	66.7 mm	66.8 mm	73.7 mm	81.1 mm	68.3 mm	77.6 mm	86.6 mm
	Spring	96.6 mm	95.4 mm	107.5 mm	117.6 mm	95.8 mm	111.9 mm	127.8 mm
	Summer	209.4 mm	194.7 mm	210.3 mm	228.7 mm	186.5 mm	202.0 mm	220.7 mm
	Fall	102.7 mm	101.0 mm	110.5 mm	121.1 mm	101.7 mm	112.3 mm	125.9 mm
Days ≥ 30 °C	Annual	5.1 days	4.8 days	9.8 days	14.1 days	12.0 days	17.7 days	23.8 days
Days ≤ -30 °C	Annual	16.3 days	4.2 days	9.0 days	14.7 days	1.8 days	5.5 days	8.5 days
Frost-Free Period	Annual	107.9 days	111.2 days	122.4 days	133.9 days	120.8 days	132.7 days	144.5 days
Date of First Fall Frost		Sep 13	Sep 10	Sep 19	Sep 25	Sep 15	Sep 24	Oct 02
Date of Last Spring Frost		May 28	May 10	May 20	May 31	May 06	May 14	May 23
5 °C Degree Days	Annual	17239.3	17283.5	17310.7	17335.8	17317.2	17339.4	17357.0
10 °C Degree Days	Annual	725.4	835.3	902.9	976.8	992.7	1066.6	1137.7
Freeze-Thaw Cycles	Annual	68.2 cycles	55.5 cycles	64.4 cycles	73.5 cycles	57.1 cycles	67.2 cycles	76.8 cycles
Days Precip ≥ 10 mm	Annual	10.8 days	10.2 days	12.3 days	14.4 days	10.8 days	12.2 days	13.9 days
Days Precip ≥ 20 mm	Annual	2.7 days	1.9 days	3.0 days	4.3 days	2.5 days	3.2 days	4.0 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	0.9 °C	2.4 °C	3.0 °C	3.6 °C	4.1 °C	5.2 °C	6.4 °C
	Winter	-16.5 °C	-14.8 °C	-13.6 °C	-12.3 °C	-12.6 °C	-11.0 °C	-9.5 °C
	Spring	1.0 °C	2.0 °C	2.7 °C	3.5 °C	3.3 °C	4.4 °C	5.4 °C
	Summer	16.3 °C	17.6 °C	18.2 °C	18.8 °C	19.3 °C	20.3 °C	21.3 °C
	Fall	2.6 °C	3.7 °C	4.6 °C	5.4 °C	5.8 °C	6.8 °C	7.9 °C
Precipitation	Annual	473.8 mm	468.6 mm	501.7 mm	534.1 mm	477.6 mm	511.2 mm	537.1 mm
	Winter	67.4 mm	67.1 mm	74.1 mm	83.9 mm	68.9 mm	80.2 mm	90.1 mm
	Spring	95.6 mm	93.4 mm	110.3 mm	125.5 mm	104.4 mm	122.3 mm	140.6 mm
	Summer	208.7 mm	187.7 mm	208.1 mm	224.4 mm	174.7 mm	198.4 mm	218.9 mm
	Fall	102.1 mm	96.8 mm	109.2 mm	122.5 mm	95.0 mm	110.3 mm	124.2 mm
Days ≥ 30 °C	Annual	5.3 days	6.4 days	11.5 days	16.4 days	18.5 days	27.7 days	36.8 days
Days ≤ -30 °C	Annual	16.8 days	3.0 days	7.8 days	11.9 days	0.7 days	3.5 days	6.7 days
Frost-Free Period	Annual	108.2 days	110.6 days	125.4 days	140.1 days	126.6 days	140.9 days	155.3 days
Date of First Fall Frost		Sep 13	Sep 12	Sep 20	Sep 29	Sep 18	Sep 29	Oct 08
Date of Last Spring Frost		May 28	May 07	May 18	May 31	May 03	May 11	May 20
5 °C Degree Days	Annual	17241.6	17282.7	17313.8	17350.8	17354.9	17384.9	17412.5
10 °C Degree Days	Annual	724.5	895.5	962.5	1033.7	1123.7	1271.6	1438.7
Freeze-Thaw Cycles	Annual	67.6 cycles	53.4 cycles	63.4 cycles	72.4 cycles	53.0 cycles	62.6 cycles	71.2 cycles
Days Precip ≥ 10 mm	Annual	10.8 days	10.4 days	12.1 days	13.8 days	10.8 days	12.5 days	14.3 days
Days Precip ≥ 20 mm	Annual	2.7 days	2.0 days	3.0 days	3.9 days	2.3 days	3.3 days	4.4 days