



West Souris River

Medium Carbon Emissions (RCP4.5)

Climate Variable	Season	1981-2010 (Baseline)	2021-2050			2051-2080		
			L	M	H	L	M	H
Mean Temperature	Annual	2.9 °C	4.1 °C	4.7 °C	5.4 °C	5.4 °C	5.9 °C	6.2 °C
	Winter	-14.2 °C	-13.1 °C	-12.1 °C	-10.9 °C	-11.6 °C	-10.5 °C	-9.5 °C
	Spring	3.1 °C	4.1 °C	4.8 °C	5.7 °C	5.0 °C	5.7 °C	6.4 °C
	Summer	18.1 °C	19.0 °C	19.6 °C	20.2 °C	20.1 °C	20.8 °C	21.3 °C
	Fall	4.4 °C	5.5 °C	6.1 °C	6.7 °C	6.7 °C	7.1 °C	7.6 °C
Precipitation	Annual	454.3 mm	444.5 mm	475.6 mm	514.3 mm	448.4 mm	477.8 mm	504.4 mm
	Winter	61.6 mm	61.1 mm	66.9 mm	72.1 mm	61.6 mm	71.1 mm	79.4 mm
	Spring	100.4 mm	101.0 mm	113.2 mm	123.8 mm	101.2 mm	115.7 mm	130.6 mm
	Summer	200.4 mm	177.7 mm	196.9 mm	220.9 mm	169.7 mm	191.0 mm	209.3 mm
	Fall	92.0 mm	85.2 mm	98.7 mm	108.8 mm	90.0 mm	99.8 mm	111.1 mm
Days ≥ 30 °C	Annual	13.8 days	18.3 days	24.5 days	30.1 days	27.7 days	34.9 days	42.2 days
Days ≤ -30 °C	Annual	8.5 days	0.8 days	4.0 days	7.1 days	0.1 days	1.9 days	3.9 days
Frost-Free Period	Annual	122.6 days	121.0 days	136.1 days	153.5 days	134.0 days	143.6 days	156.9 days
Date of First Fall Frost		Sep 19	Sep 17	Sep 25	Oct 05	Sep 20	Sep 28	Oct 06
Date of Last Spring Frost		May 19	Apr 27	May 12	May 25	Apr 29	May 08	May 17
5 °C Degree Days	Annual	17426.9	17454.0	17470.2	17481.1	17475.8	17487.3	17497.1
10 °C Degree Days	Annual	949.5	1088.9	1165.4	1235.7	1261.4	1342.2	1417.2
Freeze-Thaw Cycles	Annual	69.0 cycles	55.9 cycles	66.7 cycles	76.6 cycles	60.4 cycles	68.6 cycles	77.6 cycles
Days Precip ≥ 10 mm	Annual	11.4 days	10.1 days	11.9 days	13.8 days	10.5 days	12.1 days	13.7 days
Days Precip ≥ 20 mm	Annual	3.5 days	2.3 days	3.6 days	4.8 days	2.8 days	3.8 days	4.7 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	2.9 °C	4.3 °C	5.0 °C	5.7 °C	6.2 °C	7.2 °C	8.5 °C
	Winter	-14.3 °C	-12.7 °C	-11.4 °C	-10.2 °C	-10.5 °C	-8.9 °C	-7.3 °C
	Spring	3.1 °C	4.1 °C	4.8 °C	5.5 °C	5.5 °C	6.5 °C	7.6 °C
	Summer	18.1 °C	19.5 °C	20.1 °C	20.6 °C	21.3 °C	22.3 °C	23.3 °C
	Fall	4.4 °C	5.5 °C	6.4 °C	7.2 °C	7.5 °C	8.6 °C	9.6 °C
Precipitation	Annual	452.0 mm	450.7 mm	478.9 mm	511.7 mm	457.8 mm	494.0 mm	527.2 mm
	Winter	61.6 mm	59.5 mm	68.3 mm	77.9 mm	63.2 mm	74.7 mm	84.7 mm
	Spring	100.3 mm	99.4 mm	116.3 mm	140.7 mm	115.2 mm	132.6 mm	152.6 mm
	Summer	198.2 mm	174.0 mm	193.2 mm	211.0 mm	163.8 mm	186.6 mm	209.5 mm
	Fall	91.6 mm	83.6 mm	101.1 mm	117.6 mm	82.1 mm	100.0 mm	114.3 mm
Days ≥ 30 °C	Annual	13.6 days	22.3 days	27.8 days	34.3 days	38.9 days	49.4 days	60.7 days
Days ≤ -30 °C	Annual	8.7 days	0.3 days	3.1 days	5.9 days	0.0 days	1.1 days	2.4 days
Frost-Free Period	Annual	122.5 days	123.6 days	138.4 days	156.0 days	139.8 days	153.4 days	167.4 days
Date of First Fall Frost		Sep 18	Sep 17	Sep 25	Oct 05	Sep 22	Oct 02	Oct 10
Date of Last Spring Frost		May 19	Apr 28	May 10	May 22	Apr 22	May 02	May 12
5 °C Degree Days	Annual	17427.3	17452.0	17472.9	17495.1	17506.5	17526.0	17544.8
10 °C Degree Days	Annual	948.2	1145.2	1225.3	1314.4	1416.5	1567.9	1745.4
Freeze-Thaw Cycles	Annual	68.7 cycles	57.9 cycles	67.0 cycles	75.3 cycles	57.5 cycles	64.9 cycles	72.0 cycles
Days Precip ≥ 10 mm	Annual	11.3 days	10.5 days	12.1 days	13.6 days	10.8 days	12.8 days	14.6 days
Days Precip ≥ 20 mm	Annual	3.4 days	2.6 days	3.6 days	4.7 days	2.9 days	4.0 days	5.1 days