

**UNIVERSITY OF MINNESOTA
SOUTHERN RESEARCH AND OUTREACH CENTER
35838 120TH STREET
WASECA, MN 56093-4521**

2019 SUMMARY

Month	Avg. Air Temp.	HDD ^{1/}	GDU ^{2/}	Precip	Snow	Evap. ^{3/}	Avg. Soil Temp.					Solar Radiation Langley's
	-°F -						2"	4"	8"	20"	40"	
Jan	11.9	1646.5		1.28	13.4		25.6	26.5	28.6	32.6	38.4	4263
Feb	6.7	1633.0		3.03	30.8		27.6	27.6	28.4	30.4	35.3	5987
Mar	24.5	1255.0		2.01	6.7		31.9	31.2	31.0	31.5	35.0	10266
Apr	44.4	622.0		4.25	8.5		43.1	42.4	41.2	39.4	38.2	10119
May	53.6		217.0	6.33		5.00	54.7	53.9	52.7	50.7	47.1	12201
Jun	68.4		550.0	3.32		7.00	68.3	66.3	66.5	63.3	56.7	13978
July	72.6		692.0	6.43		7.20	75.4	73.4	73.7	71.2	64.6	14521
Aug	67.4		540.5	5.34		5.93	72.2	71.1	71.9	71.0	67.3	14349
Sept	64.8		456.5	6.69		4.00	66.4	66.0	66.9	66.9	65.6	8700
Oct	44.0		72.0	5.94	0.0		47.3	48.2	49.7	53.1	58.0	6025
Nov	27.9	1112.5		2.29	12.6		34.1	35.4	36.6	40.3	46.7	3976
Dec	21.0	1369.5		1.58	4.4		32.9	33.8	34.2	36.9	42.3	3717
Year	42.3	7638.5	2528.0	48.49	76.4	29.13	48.3	48.0	48.4	48.9	49.6	108102
Departure ^{4/} from normal	-2.7	678.5	38.0	12.77	23.6	-6.08	-0.8	-0.9	0.4	-0.7		-12443

^{1/} Heating degree days based on 65° F. Total and departure excludes May - Oct.

^{2/} Based on the 50° - 86° F range from May 1 to the first fall frost (October 11th).

^{3/} Departure from normal based on evaporation from May 1 - September 30 (35.21").

^{4/} Based on 1981-2010 Normal for air temperature, growing degree units (GDU), precipitation, snow, and evaporation. Solar radiation based on 1972-2010 averages .