

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

2011 SUMMARY

Month	Avg. Air	HDD ^{1/}	GDU ^{2/}	Precip	Snow	Evap. ^{3/}	Avg. Soil Temp.					Solar Radiation Langley's
	Temp. -°F -						2"	4"	8"	20"	40"	
Jan	7.7	1777.5		1.06	12.3		30.6	31.3	31.2	35.7	39.5	4842
Feb	15.0	1394.0		1.36	17.6		30.8	31.2	31.1	34.5	37.4	6625
Mar	26.9	1182.5		2.16	3.5		32.7	32.4	32.4	34.3	37.0	10465
Apr	43.8	635.0		4.46	2.6		45.7	44.4	43.9	42.5	41.4	9807
May	57.0		299.0	4.67		5.50	57.3	55.0	54.5	50.5	47.3	12463
Jun	68.6		538.5	5.19		7.84	72.2	69.5	68.5	62.6	57.1	14872
Jul	76.3		790.0	7.21		7.42	82.8	80.0	79.3	72.1	65.5	17015
Aug	70.0		616.5	0.92		5.92	80.8	78.5	77.3	74.1	39.5	15147
Sept	59.6		237.5	0.86		4.46	66.9	66.1	64.6	66.2	65.9	11197
Oct	51.3		0.0	0.44	0.0		55.0	55.1	54.0	58.1	59.8	8708
Nov	36.3	861.0		0.30	1.6		39.7	40.6	40.0	46.7	51.1	4816
Dec	24.6	1253.0		1.34	7.7		30.0	31.6	30.9	38.3	43.8	3806
Year	44.8	7103.0	2481.5	29.97	45.3	31.14	54.0	53.1	52.4	51.3	48.8	119763
Departure ^{4/} from normal	-0.2	+143.0	-90.5	-5.75	-7.5	-5.31	+4.9	+9.9	+4.4	+1.7		-782

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

^{2/} Based on the 50° - 86° F range from May 1 to the first fall frost (September 15).

^{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 .