# Climatography of the United States No. 20 1971-2000

National Climatic Data Center Federal Building 151 Patton Avenue Asheville, North Carolina 28801 www.ncdc.noaa.gov

**COOP ID: 237645** 

Lon: 93°56W

Station: SELIGMAN, MO

Climate Division: MO 4 NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 41.6 20.2 30.9 75+ 1995 13 39.1 1990 -20 1930 18 17.4 1977 1058 0 .0 .0 9.9 6.5 27.0 1.8 Jan 48.0 25.1 81 +1962 12 45.3 1976 -18 1996 4 25.4 1978 798 0 .0 .0 14.1 3.9 21.0 1.0 Feb 36.6 Mar 56.7 32.7 44.7 92 1929 24 49.3 1973 -6 1943 3 37.4 1975 630 0 .0 .0 23.3 .9 14.2 @ 27 47.5 1983 Apr 66.2 41.6 53.9 90+1989 60.8 1981 16+ 1957 13 339 6 .0 .1 28.4 .0 4.9 .0 May 73.8 50.1 62.0 93 1934 31 66.8 1987 27 1976 3 57.4 1976 145 50 .0 .1 30.9 .0 .2 .0 73.2 10 3.1 Jun 81.2 59.0 70.1 100 +1988 25 1994 40 +1988 66.0 1974 21 174 .1 30.0 .0 .0 .0 Jul 86.5 75.2 109 1954 14 82.0 1980 47 1997 5 72.1 1989 2 316 12.8 31.0 0. 63.8 .6 .0 .0 1992 13 86.7 62.3 74.5 110 1936 9 82.3 1980 43 +1986 30 67.9 308 .8 13.1 31.0 .0 .0 .0 Aug 7 25 84 .2 .3 Sep 78.8 54.9 66.9 102 +1947 73.4 1978 1984 30 59.4 1974 138 4.0 30.0 .0 .0 1976 278 Oct 68.8 44.0 56.4 94 1953 1 61.6 1973 16 1989 21 51.0 11 .0 .2 30.0 .0 3.8 .0 55.2 34.1 44.7 81 +1989 12 51.8 1999 -1+ 1976 30 37.6 1976 610 0 .0 .0 20.9 14.3 Nov .8 .1 Dec 45.4 24.2 34.8 76+ 1966 7 42.1 1984 -20 1989 23 20.7 1983 937 0 .0 .0 13.3 4.5 24.2 1.0 Aug Aug Dec Jan 42.7 54.2 110 1936 9 82.3 1980 -20+ 1989 23 17.4 1977 4915 1003 1.7 33.4 292.8 109.9 3.9 65.7 16.6 Ann

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 090-A

Elevation: 1,530 Feet Lat: 36°33N

<sup>+</sup> Also occurred on an earlier date(s)

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1921-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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										Pı	recipi	tation	(incl	nes)										
			P	recip	itatio	on Total	s			M	ean N	Sumbo Pays (3	_	Precipitation Probabilities (1)  Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Mea Medi					Extremes	3			Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels  These values were determined from the incomplete gamma distribution										
Month	Mean	Med- ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	2.00	1.84	2.68+	1966	1	5.18	1982	.00	1986	6.6	4.3	1.4	.4	.12	.32	.63	.93	1.24	1.58	1.98	2.47	3.13	4.23	5.29
Feb	2.31	2.24	2.86	1966	9	5.17	1990	.34	1982	6.7	4.3	1.7	.5	.48	.69	1.03	1.33	1.65	1.98	2.35	2.80	3.40	4.35	5.25
Mar	4.33	4.14	3.25	1935	10	8.51	1973	.84	1971	9.1	7.0	3.3	1.4	1.44	1.85	2.45	2.96	3.45	3.96	4.51	5.16	5.99	7.27	8.46
Apr	4.62	4.21	4.06	1965	3	11.20	1994	.63	1989	9.9	7.1	3.3	1.4	1.33	1.77	2.43	3.00	3.56	4.15	4.79	5.55	6.54	8.08	9.52
May	4.85	4.87	5.48	1956	15	8.59	1990	1.75	1994	11.8	7.9	3.7	1.3	2.23	2.65	3.24	3.72	4.17	4.61	5.09	5.64	6.32	7.36	8.30
Jun	5.56	5.26	6.30	2000	17	15.25	1995	.30	1988	9.8	7.1	3.3	1.5	1.06	1.56	2.37	3.12	3.89	4.71	5.65	6.77	8.27	10.67	12.95
Jul	3.34	2.57	4.15	1958	25	11.62	1976	.22	1980	7.8	5.3	2.2	.7	.71	1.02	1.51	1.95	2.40	2.87	3.41	4.06	4.91	6.26	7.55
Aug	3.32	2.94	6.72	1985	5	11.97	1985	.00	2000	7.4	5.4	2.2	1.0	.49	.92	1.49	1.95	2.41	2.90	3.44	4.08	4.93	6.26	7.52
Sep	4.78	4.39	4.31	1986	30	11.78	1993	.61	1981	9.0	6.1	2.7	1.4	1.03	1.47	2.17	2.81	3.45	4.12	4.89	5.81	7.02	8.94	10.77
Oct	3.81	3.31	4.93	1942	30	8.73	1983	.92	1977	8.1	5.4	2.5	1.1	1.02	1.38	1.93	2.41	2.88	3.38	3.94	4.59	5.45	6.78	8.04
Nov	4.59	4.86	5.32	1994	5	10.26	1994	.80	1989	7.8	6.1	3.2	1.7	1.13	1.56	2.23	2.82	3.41	4.04	4.73	5.56	6.64	8.35	9.95
Dec	3.39	2.54	4.53	1982	3	9.28	1984	.50	1989	6.7	5.0	2.3	1.1	.59	.89	1.38	1.85	2.32	2.84	3.42	4.14	5.08	6.62	8.08
Ann	46.90	44.80	6.72	Aug 1985	5	15.25	Jun 1995	.00+	Aug 2000	100.7	71.0	31.8	13.5	32.87	35.56	39.03	41.67	44.01	46.28	48.63	51.23	54.39	58.97	62.94

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1921-2001

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Station: SELIGMAN, MO

Climate Division: MO 4 NWS Call Sign: Elevation: 1,530 Feet Lat: 36°33N Lon: 93°56W

										Snov	w (inc	hes)													
						Sno	ow To	tals							Mean Number of Days (1)										
	Mean	s/Medi	ians (1)	)	Extremes (2)											Snow Fall >= Thresholds						Snow Depth >= Thresholds			
Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10		
Jan	4.5	3.6	1	#	11.0	1995	19	17.0	1977	11+	1995	19	5	1977	2.0	1.8	.4	.3	.0	3.8	2.2	1.3	.1		
Feb	3.2	.0	1	#	7.0	1975	24	11.5	1975	11	1975	25	4	1979	1.8	1.4	.3	.1	.0	4.2	2.5	1.9	.1		
Mar	1.4	.0	#	#	10.0	1989	6	12.0	1989	16	1999	14	2	1978	.5	.4	.1	.1	.1	.7	.2	.1	.1		
Apr	.3	.0	#	0	4.0	1971	5	4.0	1971	4	1971	5	#+	1997	.1	.1	@	.0	.0	.1	.1	.0	.0		
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Oct	#	.0	0	0	#	1989	19	#	1989	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Nov	1.7	.0	#	0	7.0	1972	19	11.0	1972	6	1975	27	1	1980	.5	.5	.2	.1	.0	.6	.3	.1	.0		
Dec	1.6	.5	#	#	8.7	2000	14	8.7	2000	9	2000	15	4	2000	1.0	.6	.2	.1	.0	1.1	.3	.2	.0		
Ann	12.7	4.1	N/A	N/A	11.0	Jan 1995	19	17.0	Jan 1977	16	Mar 1999	14	5	Jan 1977	5.9	4.8	1.2	.7	.1	10.5	5.6	3.6	.3		

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

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<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

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NWS Call Sign: Elevation: 1,530 Feet Lat: 36°33N Lon: 93°56W

				Freez	e Data							
			Spri	ng Freeze D	ates (Month	/Day)						
Tomp (F)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated(	(*)				
Temp (F)  36 32 28 24 20 16  Temp (F)  36 32 28 24 20 16  Temp (F)  36 32 28 24 20 16	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	5/17	5/11	5/07	5/04	5/01	4/27	4/24	4/20	4/14			
32	5/04	4/29	4/25	4/22	4/19	4/16	4/13	4/09	4/04			
28	4/23	4/18	4/14	4/11	4/07	4/04	4/01	3/28	3/22			
24	4/10	4/04	3/30	3/27	3/23	3/20	3/16	3/12	3/06			
20	4/04	3/27	3/22	3/17	3/12	3/08	3/03	2/25	2/17			
16	3/24	3/16	3/10	3/05	2/28	2/24	2/19	2/13	2/05			
<u> </u>			Fal	l Freeze Da	tes (Month/L	Day)		•	II.			
To (E)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)											
32	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	9/21	9/25	9/28	9/30	10/03	10/05	10/07	10/10	10/14			
32	9/24	10/01	10/06	10/10	10/13	10/17	10/21	10/26	11/01			
28	10/09	10/15	10/21	10/25	10/29	11/02	11/06	11/11	11/18			
24	10/21	10/27	10/31	11/04	11/08	11/12	11/16	11/20	11/26			
20	10/31	11/07	11/13	11/17	11/21	11/25	11/30	12/05	12/12			
16	11/08	11/16	11/21	11/26	12/01	12/05	12/10	12/15	12/23			
			1	Freeze F	ree Period	1		•	II.			
To (E)			Probability	of longer th	an indicated	freeze free p	eriod (Days)					
remp (F)	.10	.20	.30	.40	.50	.60	.70	.80	.90			
36	175	168	163	158	154	150	146	141	134			
32	204	195	188	182	177	171	165	159	149			
28	226	219	213	208	204	199	194	189	181			
24	254	246	239	234	229	224	219	212	204			
20	284	273	266	259	253	247	240	233	222			
16	306	295	287	281	274	268	262	254	243			

<sup>\*</sup> Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

**0/00** Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

Complete documentation available from:

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	1058	798	630	339	145	21	2	13	84	278	610	937	4915		
60	903	658	477	210	64	3	0	2	33	155	466	782	3753		
57	810	579	391	147	33	1	0	0	17	98	383	692	3151		
55	750	527	334	112	20	0	0	0	10	69	330	635	2787		
50	607	399	209	46	4	0	0	0	1	23	215	492	1996		
32	192	86	10	0	0	0	0	0	0	0	17	124	429		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	157	212	402	657	928	1143	1337	1317	1044	757	396	210	8560
55	2	9	13	79	235	453	624	604	364	112	20	8	2523
57	0	5	8	54	186	393	562	543	311	80	13	4	2159
60	0	0	1	27	124	306	469	452	237	44	6	0	1666
65	0	0	0	6	50	174	316	308	138	11	0	0	1003
70	0	0	0	0	13	77	178	182	68	2	0	0	520

	Growing Degree Units (2)																								
Base	Growing Degree Units (Monthly)													Growing Degree Units (Accumulated Monthly)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
40	45	113	244	456	726	944	1132	1107	836	541	226	75	45	158	402	858	1584	2528	3660	4767	5603	6144	6370	6445	
45	20	57	145	319	571	794	977	952	686	395	139	37	20	77	222	541	1112	1906	2883	3835	4521	4916	5055	5092	
50	4	27	78	200	417	644	822	797	538	261	72	13	4	31	109	309	726	1370	2192	2989	3527	3788	3860	3873	
55	0	5	35	111	273	494	667	642	398	155	31	0	0	5	40	151	424	918	1585	2227	2625	2780	2811	2811	
60	0	0	8	49	150	345	512	487	269	72	9	0	0	0	8	57	207	552	1064	1551	1820	1892	1901	1901	
Base		•		Gro	wing De	gree Unit	ts for Co	rn (Mont	thly)	•	•	•			Gr	owing D	egree Ur	its for C	orn (Acc	umulate	d Month	ly)			
50/86	38	85	162	291	452	634	770	739	545	348	145	57	38	123	285	576	1028	1662	2432	3171	3716	4064	4209	4266	

(1) Derived from the 1971-2000 Monthly Normals

(2) Derived from 1971-2000 serially complete daily data

Note: For corn, temperatures below 50 are set to 50, and temperatures above 86 are set to 86

### Notes

- a. The monthly means are simple arithmetic averages computed by summing the monthly values for the period 1971-2000 and dividing by thirty. Prior to averaging, the data are adjusted if necessary to compensate for data quality issues, station moves or changes in station reporting practices. Missing months are replaced by estimates based on neighboring stations.
- b. The median is defined as the middle value in an ordered set of values. The median is being provided for the snow and precipitation elements because the mean can be a misleading value for precipitation normals.
  - c. Only observed validated values were used to select the extreme daily values.
  - d. Extreme monthly temperature/precipitation means were selected from the monthly normals data.

Monthly snow extremes were calculated from daily values quality controlled to be consistent with the Snow Climatology.

e. Degree Days were derived using the same techniques as the 1971-2000 normals.

Compete documentation for the 1971-2000 Normals is available on the internet from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

f. Mean "number of days statistics" for temperature and precipitation were calculated from a serially complete daily data set .

Documentation of the serially complete data set is available from the link below:

g. Snowfall and snow depth statistics were derived from the Snow Climatology.

Documentation for the Snow Climatology project is available from the link under references.

### **Data Sources for Tables**

Several different data sources were used to create the Clim20 climate summaries. In some cases the daily extremes appear inconsistent with the monthly extremes and or the mean number of days statistics. For example, a high daily extreme value may not be reflected in the highest monthly value or the mean number of days threshold that is less than and equal to the extreme value. Some of these difference are caused by different periods of record. Daily extremes are derived from the station's entire period of record while the serial data and normals data were are for the 1971-2000 period. Therefore extremes observed before 1971 would not be included in the 1971-2000 normals or the 1971-2000 serial daily data set. Inconsistencies can also occur when monthly values are adjusted to reflect the current observing conditions or were replaced during the 1971-2000 Monthly Normals processing and are not reconciled with the Summary of the Day data.

- a. Temperature/ Precipitation Tables
  - 1. 1971-2000 Monthly Normals
  - 2. Cooperative Summary of the Day
  - 3. National Weather Service station records
  - 4. 1971-2000 serially complete daily data

- c. Snow Tables
  - 1. Snow Climatology
  - 2. Cooperative Summary of the Day
- d. Freeze Data Table

1971-2000 serially complete daily data

- b. Degree Day Table
  - 1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
  - 2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

### References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html

U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/usnormalsprods.html

Snow Climatology Project Description, www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html

Eischeid, J. K., P. Pasteris, H. F. Diaz, M. Plantico, and N. Lott, 2000: Creating a serially complete, national daily time series of temperature and precipitation for the Western United States. J. Appl. Meteorol., 39, 1580-1591,

www1.ncdc.noaa.gov/pub/data/special/ serialcomplete\_jam\_0900.pdf